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## User Guide

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This report contains a wide range of useful information about the kidney transplant program at University of Utah Medical Center (UTMC). 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. As part of this comparison, we provide a measure of how certain we are that this program is performing as expected or significantly better or worse than expected. These statements of certainty are provided as footnotes to the figures, so please interpret the numbers in the figures carefully after considering the information in the footnotes. 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 center 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

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was higher than the expected rate. However, the level of uncertainty must be considered when interpreting these numbers. The 95% confidence interval is also shown on Figure B2. This confidence interval provides a range within which the true ratio of observed to expected transplant rates is likely to be. If this 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 transplant rate at this program was 43.6 per 100 person-years, and this was higher than would be expected with a 95% confidence interval of [1.79, 2.60] for the ratio of observed to expected transplant rates. 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. Transplant rates are also presented excluding transplants from a living donor (Table B4D and Figures B1D-B3D). 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 confidence 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 07/01/2010 and 12/31/2015. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this center was 0.8 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 06/30/2016 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



## University of Utah Medical Center

Center Code: UTMC

Transplant Program (Organ): Kidney

Release Date: January 5, 2017

Based on Data Available: October 31, 2016

SRTR Program-Specific Report

Feedback?: [SRTR@SRTR.org](mailto:SRTR@SRTR.org)

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

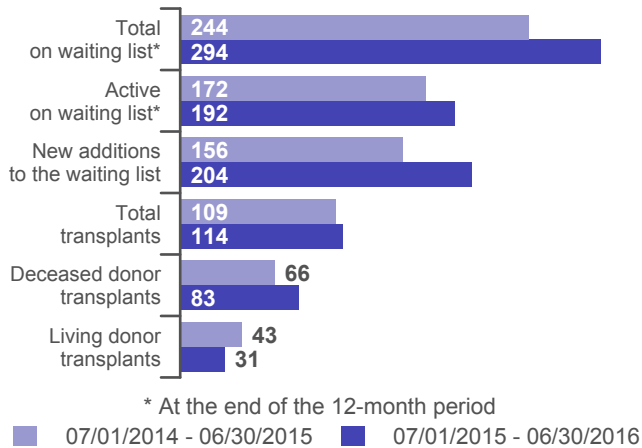
Additional information regarding the technical methods and the risk adjustment models used to estimate expected event rates is available on the SRTR website at <http://www.srtr.org>. We welcome and encourage feedback on these reports. Please feel free to share feedback with the SRTR at the following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

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## A. Program Summary

**Figure A1. Waiting list and transplant activity**

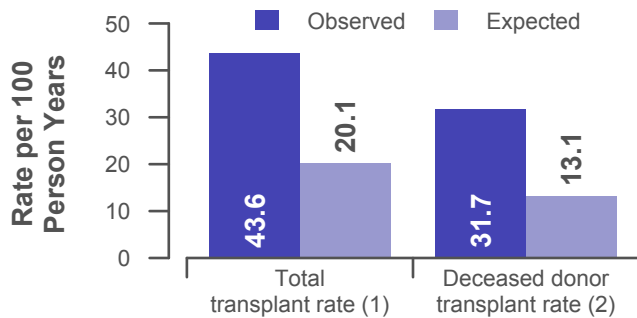


**Table A1. Census of transplant recipients**

Recipients	07/01/2014-06/30/2015	07/01/2015-06/30/2016
Transplanted at this center	109	114
Followed by this center*	644	735
...transplanted at this program	629	717
...transplanted elsewhere	15	18

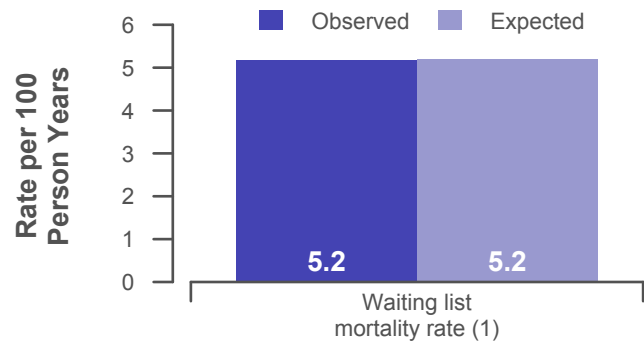
\* Recipients followed are transplant recipients for whom the center has submitted a post-transplant follow-up form for a transplant that took place before the 12-month interval for each column.

**Figure A2. Transplant rates 07/01/2015 - 06/30/2016**



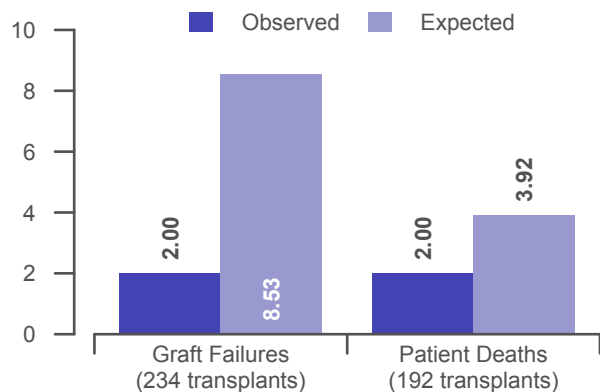
(1) Statistically higher ( $p < 0.01$ )  
(2) Statistically higher ( $p < 0.01$ )

**Figure A3. Waiting list mortality rates 07/01/2015 - 06/30/2016**



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

**Figure A4. First-year adult graft and patient survival: 07/01/2013 - 12/31/2015**



**Figure A5. First-year pediatric graft and patient survival: 07/01/2013 - 12/31/2015**

This center did not perform any transplants relevant to this figure during 07/01/2013-12/31/2015

## B. Waiting List Information

**Table B1. Waiting list activity summary: 07/01/2014 - 06/30/2016**

Waiting List Registrations	Counts for this center		Activity for 07/01/2015 to 06/30/2016 as percent of registrants on waiting list on 07/01/2015		
	07/01/2014-06/30/2015	07/01/2015-06/30/2016	This Center (%)	OPTN Region (%)	U.S. (%)
<b>On waiting list at start</b>	216	244	100.0	100.0	100.0
<b>Additions</b>					
New listings at this center	156	204	83.6	28.0	34.0
<b>Removals</b>					
Transferred to another center	3	2	0.8	0.9	1.5
Received living donor transplant*	40	31	12.7	3.7	5.2
Received deceased donor transplant*	65	83	34.0	10.4	12.0
Died	12	12	4.9	4.2	4.0
Transplanted at another center	3	2	0.8	2.0	2.6
Deteriorated	3	9	3.7	3.0	4.3
Recovered	0	0	0.0	0.1	0.2
Other reasons	2	15	6.1	3.8	5.6
<b>On waiting list at end of period</b>	244	294	120.5	99.8	98.5

\* 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 07/01/2015 and 06/30/2016

Demographic Characteristic	New Waiting List Registrations 07/01/2015 to 06/30/2016 (%)			All Waiting List Registrations on 06/30/2016 (%)		
	This Center (N=204)	OPTN Region (N=6,209)	U.S. (N=36,177)	This Center (N=294)	OPTN Region (N=22,127)	U.S. (N=104,931)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ethnicity/Race (%)*</b>						
White	64.7	28.8	44.0	67.0	23.4	36.4
African-American	2.9	11.2	28.4	3.1	12.8	33.6
Hispanic/Latino	22.5	39.1	18.4	19.4	40.5	19.5
Asian	7.4	17.7	7.7	7.1	20.4	8.9
Other	2.5	3.1	1.6	3.4	2.9	1.6
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Age (%)</b>						
<2 years	0.0	0.3	0.2	0.0	0.2	0.1
2-11 years	0.0	1.0	1.1	0.0	0.6	0.5
12-17 years	0.5	1.8	1.6	0.7	1.1	0.8
18-34 years	12.3	12.9	11.1	11.6	12.6	11.4
35-49 years	24.5	25.3	25.9	21.4	27.6	28.7
50-64 years	43.1	42.1	41.7	43.5	44.1	43.4
65+ years	19.6	16.7	18.4	22.8	13.8	15.1
Other (includes prenatal)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Gender (%)</b>						
Male	59.3	62.2	62.0	62.6	61.2	60.8
Female	40.7	37.8	38.0	37.4	38.8	39.2

\* 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 07/01/2015 and 06/30/2016

Medical Characteristic	New Waiting List Registrations 07/01/2015 to 06/30/2016 (%)			All Waiting List Registrations on 06/30/2016 (%)		
	This Center (N=204)	OPTN Region (N=6,209)	U.S. (N=36,177)	This Center (N=294)	OPTN Region (N=22,127)	U.S. (N=104,931)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Blood Type (%)</b>						
O	50.5	51.3	49.0	52.0	54.4	52.7
A	32.4	30.2	32.7	33.3	27.2	28.0
B	13.2	14.6	14.6	12.9	15.9	16.6
AB	3.9	3.8	3.7	1.7	2.5	2.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Previous Transplant (%)</b>						
Yes	11.8	11.9	13.2	15.0	11.3	14.7
No	88.2	88.1	86.8	85.0	88.7	85.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Initial CPRA (%)</b>						
0-9%	81.9	79.4	81.4	79.3	83.3	81.6
10-79%	9.8	13.2	11.2	9.5	11.0	10.9
80+%	8.3	7.4	7.2	11.2	5.7	7.4
Unknown	0.0	0.0	0.3	0.0	0.0	0.1
<b>Primary Disease (%)*</b>						
Glomerular Diseases	25.5	20.2	20.1	22.1	19.0	19.2
Tubular and Interstitial Diseases	4.9	3.2	3.7	7.5	2.7	3.4
Polycystic Kidneys	7.4	5.9	7.8	10.9	5.7	7.0
Congenital, Familial, Metabolic	3.4	2.4	2.1	2.7	1.6	1.6
Diabetes	33.8	37.4	32.5	35.0	41.2	34.1
Renovascular & Vascular Diseases	0.0	0.1	0.2	0.3	0.1	0.1
Neoplasms	0.0	0.5	0.3	0.0	0.3	0.3
Hypertensive Nephrosclerosis	9.8	14.6	20.8	11.2	16.8	23.7
Other	14.2	15.1	11.8	9.2	11.9	10.0
Missing*	1.0	0.6	0.5	1.0	0.7	0.5

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.



## B. Waiting List Information

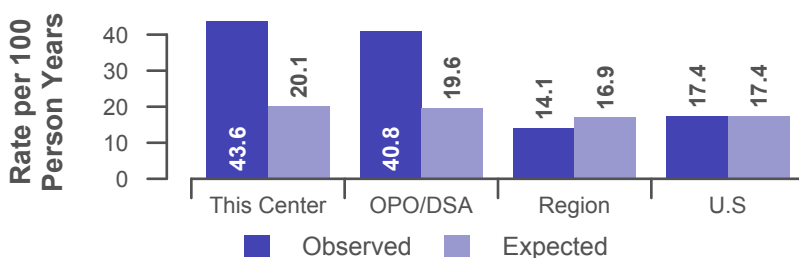
**Table B4. Transplant rates: 07/01/2015 - 06/30/2016**

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	244	486	22,133	106,312
Person Years**	261.6	494.5	22,112.0	105,587.4
Removals for Transplant	114	202	3,112	18,373
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	244	484	21,875	105,340
Person Years**	260.6	490.7	21,815.6	104,480.9
Removals for transpant	114	189	3,014	17,613
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	2	258	972
Person Years**	1.0	3.9	296.4	1,106.5
Removals for transplant	0	13	98	760

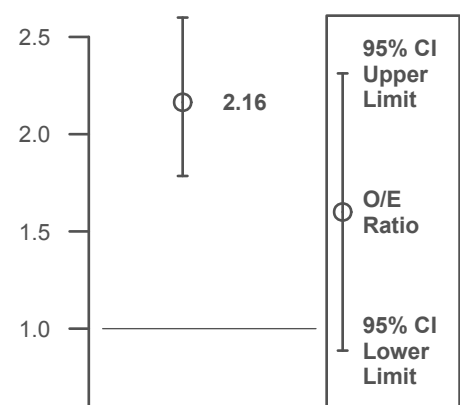
\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of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

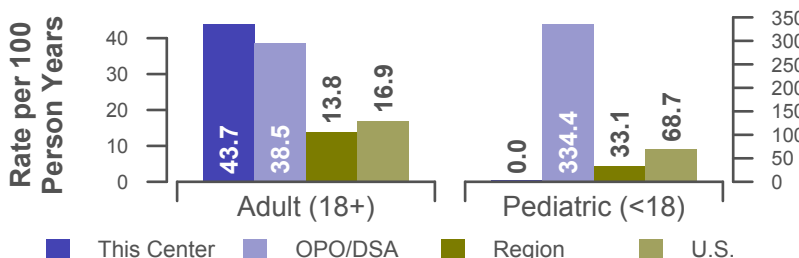
**Figure B1. Observed and expected transplant rates: 07/01/2015 - 06/30/2016**



**Figure B2. Ratio of observed to expected transplant rates**



**Figure B3. Observed adult (18+) and pediatric (<18) transplant rates: 07/01/2015 - 06/30/2016**



(1) Higher than expected  
( $p < 0.01$ , 95% CI = [1.79, 2.60])

## B. Waiting List Information

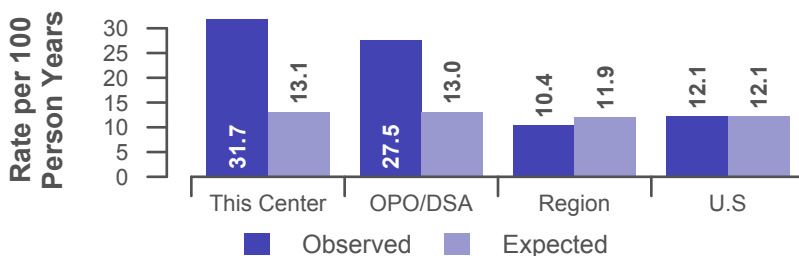
**Table B4D. Deceased donor transplant rates: 07/01/2015 - 06/30/2016**

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	244	486	22,133	106,312
Person Years**	261.6	494.5	22,112.0	105,587.4
Removals for Transplant	83	136	2,296	12,800
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	244	484	21,875	105,340
Person Years**	260.6	490.7	21,815.6	104,480.9
Removals for transplant	83	131	2,233	12,303
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	2	258	972
Person Years**	1.0	3.9	296.4	1,106.5
Removals for transplant	0	5	63	497

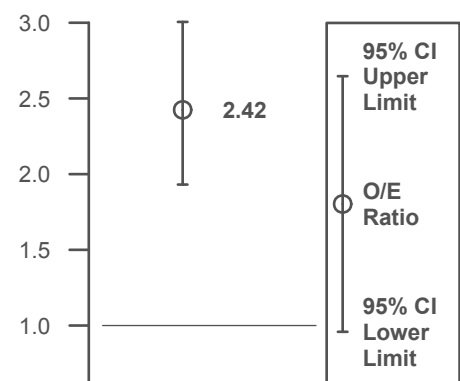
\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of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

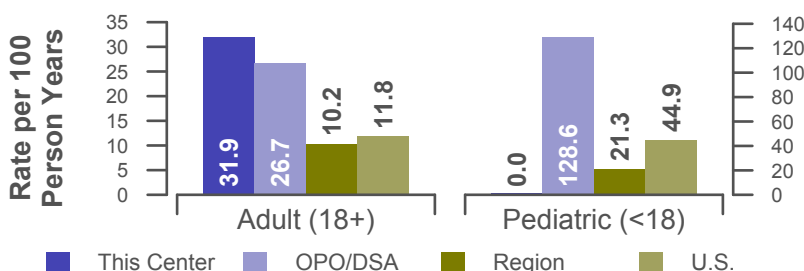
**Figure B1D. Observed and expected deceased donor transplant rates: 07/01/2015 - 06/30/2016**



**Figure B2D. Ratio of observed to expected deceased donor transplant rates**



**Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2015 - 06/30/2016**



(1) Higher than expected  
( $p < 0.01$ , 95% CI=[1.93, 3.01])

## B. Waiting List Information

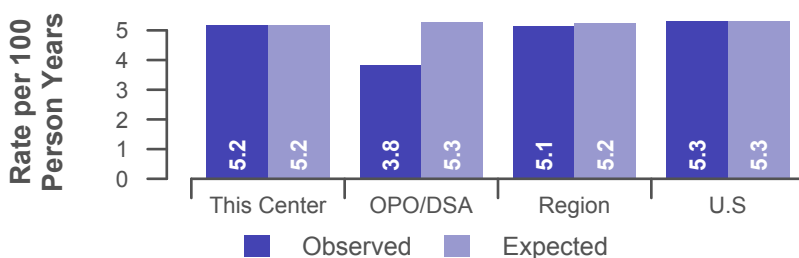
**Table B5. Waiting list mortality rates: 07/01/2015 - 06/30/2016**

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	244	486	22,133	106,312
Person Years**	271.5	524.3	22,767.7	110,274.6
Number of deaths	14	20	1,167	5,835
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	244	484	21,875	105,340
Person Years**	270.6	520.4	22,469.7	109,138.7
Number of deaths	14	20	1,165	5,821
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	2	258	972
Person Years**	1.0	3.9	297.9	1,135.9
Number of deaths	0	0	2	14

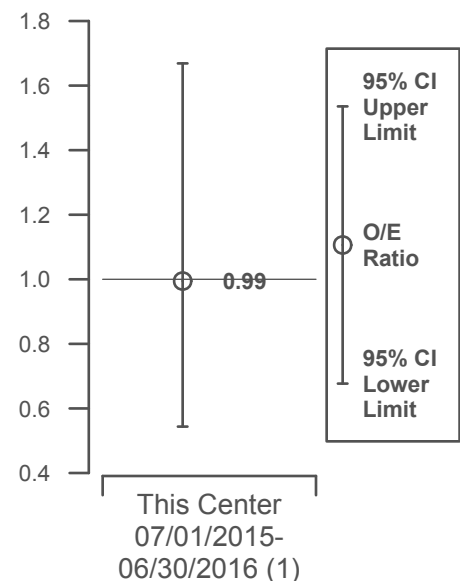
\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of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

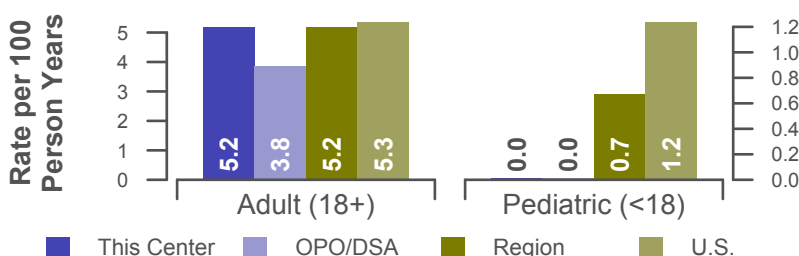
**Figure B4. Observed and expected waiting list mortality rates: 07/01/2015 - 06/30/2016**



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



**Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2015 - 06/30/2016**



(1) Not significantly different  
(p=0.999, 95% CI=[0.54, 1.67])

## B. Waiting List Information

**Table B6. Waiting list candidate status after listing**  
Candidates registered on waiting list between 01/01/2014 and 12/31/2014

Waiting list status (survival status)	This Center (N=146)			U.S. (N=37,046)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	70.5	54.1	40.4	83.7	71.7	61.7
<b>Died on the waiting list without transplant (%)</b>	0.7	2.7	4.8	1.4	2.6	3.7
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	0.0	0.7	1.4	0.8	1.6	2.6
Condition improved (status unknown)	0.0	0.0	0.0	0.1	0.1	0.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.0	0.1	0.2
Other	0.7	0.7	1.4	0.6	1.5	2.7
<b>Transplant (living donor from waiting list only) (%):</b>						
Functioning (alive)	15.8	19.2	15.1	5.8	8.8	7.5
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	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.0	0.1	0.1
Status Yet Unknown**	0.0	0.0	6.8	0.0	0.4	3.4
<b>Transplant (deceased donor) (%):</b>						
Functioning (alive)	11.6	19.9	23.3	6.0	9.5	9.3
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	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.2	0.3	0.5
Status Yet Unknown*	0.7	0.7	4.8	1.0	2.3	6.3
<b>Lost or Transferred (status unknown) (%)</b>	0.0	2.1	2.1	0.3	1.0	1.7
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.7	2.7	4.8	1.6	2.9	4.3
Total % known died or removed as unstable	0.7	3.4	6.2	2.3	4.5	6.9
Total % removed for transplant	28.1	39.7	50.0	13.0	21.4	27.1
Total % with known functioning transplant (alive)	27.4	39.0	38.4	11.8	18.3	16.8

\* 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 07/01/2010 and 06/30/2013

Characteristic	N	Percent transplanted at time periods since listing								
		This Center				United States				
		30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
<b>All</b>	215	4.7	21.4	39.1	55.8	90,740	2.0	10.1	16.5	22.6
<b>Ethnicity/Race*</b>										
White	140	5.0	22.9	42.1	58.6	37,752	2.5	12.2	19.5	25.9
African-American	4	0.0	0.0	25.0	50.0	28,700	1.4	8.4	14.2	20.3
Hispanic/Latino	50	6.0	22.0	34.0	56.0	15,903	2.0	9.3	15.2	20.8
Asian	8	0.0	12.5	37.5	50.0	6,981	1.3	7.8	13.9	19.5
Other	13	0.0	15.4	30.8	30.8	1,404	1.3	8.0	14.0	20.4
Unknown	0	--	--	--	--	0	--	--	--	--
<b>Age</b>										
<2 years	0	--	--	--	--	140	5.7	40.7	62.1	70.7
2-11 years	0	--	--	--	--	739	9.1	52.4	66.7	73.2
12-17 years	0	--	--	--	--	1,332	10.0	51.1	63.7	68.6
18-34 years	37	5.4	27.0	54.1	73.0	9,383	1.4	7.8	14.8	22.3
35-49 years	63	4.8	19.0	31.7	52.4	23,394	1.5	8.2	14.0	20.4
50-64 years	77	5.2	24.7	41.6	58.4	39,731	2.0	9.4	15.6	21.4
65+ years	38	2.6	13.2	31.6	39.5	16,021	1.7	10.1	17.0	22.6
Other (includes prenatal)	0	--	--	--	--	0	--	--	--	--
<b>Gender</b>										
Male	122	4.9	20.5	38.5	55.7	55,124	2.0	9.9	16.2	22.2
Female	93	4.3	22.6	39.8	55.9	35,616	1.9	10.4	17.0	23.3

\* 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 07/01/2010 and 06/30/2013

Characteristic	N	Percent transplanted at time periods since listing				N	United States			
		This Center					United States			
		30 day	1 year	2 years	3 years		30 day	1 year	2 years	3 years
<b>All</b>	215	4.7	21.4	39.1	55.8	90,740	2.0	10.1	16.5	22.6
<b>Blood Type</b>										
O	113	5.3	14.2	25.7	48.7	44,613	1.8	8.6	13.3	18.7
A	87	3.4	31.0	56.3	63.2	29,155	2.3	12.4	21.3	28.9
B	10	10.0	20.0	50.0	70.0	13,597	1.3	7.3	12.4	17.0
AB	5	0.0	20.0	20.0	60.0	3,375	3.3	21.4	34.9	43.2
<b>Previous Transplant</b>										
Yes	46	8.7	32.6	45.7	60.9	13,489	1.8	10.8	17.5	23.5
No	169	3.6	18.3	37.3	54.4	77,251	2.0	10.0	16.4	22.5
<b>Peak PRA/CPRA</b>										
0-9%	158	5.7	19.6	39.2	57.0	75,465	2.0	9.7	16.0	22.0
10-79%	28	3.6	28.6	46.4	64.3	8,984	1.5	11.7	19.3	26.3
80+%	29	0.0	24.1	31.0	41.4	6,275	1.7	12.2	18.9	24.4
Unknown	0	--	--	--	--	14	100.0	100.0	100.0	100.0
<b>Primary Disease*</b>										
Glomerular Diseases	53	3.8	26.4	47.2	62.3	16,441	1.8	11.4	18.8	26.1
Tubular & Interstitial Diseases	12	8.3	33.3	50.0	75.0	3,469	3.7	14.6	22.1	28.1
Polycystic Kidneys	20	0.0	5.0	45.0	65.0	5,803	1.6	10.5	19.3	27.6
Congenital, Familial, Metabolic	7	14.3	28.6	57.1	85.7	1,541	3.7	25.6	36.7	44.2
Diabetes	77	2.6	16.9	29.9	42.9	31,131	1.2	7.0	12.3	17.3
Renovascular & Vascular Diseases	1	0.0	0.0	0.0	0.0	147	1.4	8.8	15.6	21.8
Neoplasms	1	0.0	0.0	0.0	0.0	293	1.0	9.6	18.1	27.0
Hypertensive Nephrosclerosis	19	0.0	15.8	36.8	68.4	21,426	1.2	8.2	14.5	20.8
Other	25	16.0	36.0	40.0	52.0	10,081	5.7	17.3	23.9	29.6
Missing*	0	--	--	--	--	408	1.7	7.1	10.8	16.2

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.

## B. Waiting List Information

**Table B9. Time to transplant for waiting list candidates\***

Candidates registered on the waiting list between 07/01/2010 and 12/31/2015

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	0.8	1	2.2	1.8
10th	2.0	2.4	5.1	4.2
25th	5.9	7.1	18.8	15.3
50th (median time to transplant)	20.8	24.3	Not Observed	Not Observed
75th	Not Observed	Not Observed	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 06/30/2016. 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 07/01/2015 and 06/30/2016

Characteristic	Percentage in each category		
	Center (N=83)	Region (N=2,299)	U.S. (N=12,815)
<b>Ethnicity/Race (%)*</b>			
White	60.2	26.6	38.0
African-American	3.6	12.9	34.0
Hispanic/Latino	22.9	42.1	19.1
Asian	8.4	15.2	7.3
Other	4.8	3.2	1.6
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.0	0.0
2-11 years	0.0	0.9	1.5
12-17	0.0	1.7	2.1
18-34	15.7	11.7	11.6
35-49 years	37.3	25.8	26.0
50-64 years	32.5	39.1	39.2
65+ years	14.5	20.7	19.6
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	67.5	58.6	59.6
Female	32.5	41.4	40.4

\* 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 C1L. Living donor transplant recipient demographic characteristics**  
Patients transplanted between 07/01/2015 and 06/30/2016

Characteristic	Percentage in each category		
	Center (N=31)	Region (N=823)	U.S. (N=5,644)
<b>Ethnicity/Race (%)*</b>			
White	71.0	48.4	66.2
African-American	3.2	6.4	11.8
Hispanic/Latino	19.4	30.0	15.2
Asian	6.5	13.5	5.8
Other	0.0	1.7	1.0
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.1	0.3
2-11 years	0.0	1.7	2.1
12-17	0.0	2.2	2.1
18-34	25.8	18.0	16.8
35-49 years	19.4	26.5	26.6
50-64 years	41.9	36.7	37.1
65+ years	12.9	14.8	15.1
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	64.5	60.3	63.3
Female	35.5	39.7	36.7

\* 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 07/01/2015 and 06/30/2016

Characteristic	Percentage in each category		
	Center (N=83)	Region (N=2,299)	U.S. (N=12,815)
<b>Blood Type (%)</b>			
O	57.8	50.3	46.0
A	33.7	33.6	35.8
B	1.2	10.9	13.4
AB	7.2	5.2	4.9
<b>Previous Transplant (%)</b>			
Yes	20.5	16.1	15.8
No	79.5	83.9	84.2
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	73.5	55.6	58.5
10-79%	12.0	21.2	20.9
80+ %	14.5	23.1	20.6
Unknown	0.0	0.0	0.0
<b>Body Mass Index (%)</b>			
0-20	9.6	12.0	11.3
21-25	28.9	31.8	28.6
26-30	31.3	33.5	31.0
31+	30.1	22.1	28.3
Unknown	0.0	0.5	0.8
<b>Primary Disease (%)*</b>			
Glomerular Diseases	24.1	24.1	22.4
Tubular and Interstitial Disease	7.2	3.3	4.0
Polycystic Kidneys	8.4	5.8	6.6
Congenital, Familial, Metabolic	6.0	2.7	3.3
Diabetes	25.3	29.0	25.9
Renovascular & Vascular Diseases	0.0	0.3	0.2
Neoplasms	1.2	0.6	0.4
Hypertensive Nephrosclerosis	7.2	19.2	25.6
Other Kidney	15.7	14.0	11.2
Missing*	4.8	1.0	0.5

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.

## C. Transplant Information

**Table C2L. Living donor transplant recipient medical characteristics**  
Patients transplanted between 07/01/2015 and 06/30/2016

Characteristic	Percentage in each category		
	Center (N=31)	Region (N=823)	U.S. (N=5,644)
<b>Blood Type (%)</b>			
O	45.2	44.8	44.2
A	35.5	37.4	38.6
B	16.1	14.3	13.3
AB	3.2	3.4	4.0
<b>Previous Transplant (%)</b>			
Yes	6.5	10.0	11.3
No	93.5	90.0	88.7
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	83.9	74.2	76.3
10-79%	12.9	19.2	18.3
80+ %	3.2	6.3	5.2
Unknown	0.0	0.2	0.2
<b>Body Mass Index (%)</b>			
0-20	9.7	17.7	13.1
21-25	22.6	31.0	30.4
26-30	29.0	27.9	30.1
31+	38.7	23.2	25.9
Unknown	0.0	0.1	0.5
<b>Primary Disease (%)*</b>			
Glomerular Diseases	45.2	35.0	30.2
Tubular and Interstitial Disease	0.0	3.5	4.7
Polycystic Kidneys	9.7	11.4	13.0
Congenital, Familial, Metabolic	3.2	3.3	4.1
Diabetes	29.0	21.5	21.3
Renovascular & Vascular Diseases	0.0	0.4	0.5
Neoplasms	0.0	0.2	0.6
Hypertensive Nephrosclerosis	6.5	14.2	16.3
Other Kidney	6.5	10.0	8.8
Missing*	0.0	0.5	0.5

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.

## C. Transplant Information

**Table C3D. Deceased donor characteristics**

Transplants performed between 07/01/2015 and 06/30/2016

Donor Characteristic	Percentage in each category		
	Center (N=83)	Region (N=2,299)	U.S. (N=12,815)
<b>Cause of Death (%)</b>			
Deceased: Stroke	18.1	27.9	26.5
Deceased: MVA	9.6	15.6	16.2
Deceased: Other	72.3	56.5	57.3
<b>Ethnicity/Race (%)*</b>			
White	90.4	58.0	68.6
African-American	2.4	8.5	14.7
Hispanic/Latino	4.8	26.2	13.3
Asian	1.2	5.7	2.7
Other	1.2	1.6	0.7
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	2.4	2.2	1.2
2-11 years	7.2	3.6	3.9
12-17	4.8	4.0	5.2
18-34	38.6	32.0	35.4
35-49 years	36.1	30.2	28.9
50-64 years	9.6	24.7	23.0
65+ years	1.2	3.3	2.4
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	49.4	61.6	61.5
Female	50.6	38.4	38.5
<b>Blood Type (%)</b>			
O	57.8	52.5	48.1
A	38.6	34.9	37.4
B	1.2	9.4	11.5
AB	2.4	3.2	3.0
Unknown	0.0	0.0	0.0
<b>Expanded Criteria Donor (%)</b>			
Yes	6.0	13.8	12.9
No	94.0	86.2	87.1

\* 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 C3L. Living donor characteristics**  
Transplants performed between 07/01/2015 and 06/30/2016

Donor Characteristic	Percentage in each category		
	Center (N=31)	Region (N=823)	U.S. (N=5,644)
<b>Ethnicity/Race (%)*</b>			
White	77.4	53.8	70.7
African-American	3.2	5.5	9.3
Hispanic/Latino	12.9	27.5	14.3
Asian	0.0	10.9	4.5
Other	6.5	2.3	1.1
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
0-11 years	0.0	0.0	0.0
12-17	0.0	0.0	0.0
18-34	16.1	28.4	27.2
35-49 years	25.8	36.6	38.9
50-64 years	51.6	30.6	30.7
65+ years	6.5	4.4	3.2
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	45.2	34.9	36.6
Female	54.8	65.1	63.4
<b>Blood Type (%)</b>			
O	58.1	62.7	62.9
A	29.0	27.6	27.9
B	12.9	9.0	8.0
AB	0.0	0.7	1.2
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 07/01/2015 and 06/30/2016

Transplant Characteristic	Percentage in each category		
	Center (N=83)	Region (N=2,299)	U.S. (N=12,815)
<b>Cold Ischemic Time (Hours): Local (%)</b>			
Deceased: 0-11 hr	45.6	33.9	37.7
Deceased: 12-21 hr	50.0	47.9	46.4
Deceased: 22-31 hr	4.4	14.2	12.2
Deceased: 32-41 hr	0.0	2.9	2.1
Deceased: 42+ hr	0.0	0.4	0.5
Not Reported	0.0	0.7	1.1
<b>Cold Ischemic Time (Hours): Shared (%)</b>			
Deceased: 0-11 hr	20.0	5.1	8.8
Deceased: 12-21 hr	53.3	37.8	37.5
Deceased: 22-31 hr	26.7	40.3	36.0
Deceased: 32-41 hr	0.0	11.8	12.9
Deceased: 42+ hr	0.0	4.7	3.7
Not Reported	0.0	0.3	1.0
<b>Level of Mismatch (%)</b>			
<b>A Locus Mismatches (%)</b>			
0	3.6	14.2	12.5
1	53.0	40.1	39.4
2	43.4	45.1	47.4
Not Reported	0.0	0.7	0.6
<b>B Locus Mismatches (%)</b>			
0	1.2	8.6	7.1
1	36.1	27.6	26.3
2	62.7	63.1	66.0
Not Reported	0.0	0.7	0.6
<b>DR Locus Mismatches (%)</b>			
0	14.5	19.1	16.7
1	57.8	47.0	47.2
2	27.7	33.3	35.5
Not Reported	0.0	0.7	0.6
<b>Total Mismatches (%)</b>			
0	1.2	6.3	4.5
1	0.0	1.1	1.4
2	4.8	5.2	5.2
3	20.5	17.1	14.6
4	38.6	26.9	27.7
5	20.5	29.4	31.2
6	14.5	13.3	14.7
Not Reported	0.0	0.7	0.6
<b>Procedure Type (%)</b>			
Kidney alone	94.0	94.3	93.6
Kidney and another organ	6.0	5.7	6.4
<b>Dialysis in First Week After Transplant (%)</b>			
Yes	4.8	38.5	28.3
No	95.2	61.4	71.5
Not Reported	0.0	0.0	0.2
<b>Sharing (%)</b>			
Local	81.9	59.1	69.7
Shared	18.1	40.9	30.3
<b>Median Time in Hospital After Transplant*</b>	4.0 Days	5.0 Days	5.0 Days

\* Multiple organ transplants are excluded from this statistic.

## C. Transplant Information

**Table C4L. Living donor transplant characteristics**  
Transplants performed between 07/01/2015 and 06/30/2016

Transplant Characteristic	Percentage in each category		
	Center (N=31)	Region (N=823)	U.S. (N=5,644)
<b>Relation with Donor (%)</b>			
Related	25.8	47.9	45.8
Unrelated	74.2	52.1	54.2
Not Reported	0.0	0.0	0.0
<b>Level of Mismatch (%)</b>			
<b>A Locus Mismatches (%)</b>			
0	19.4	20.4	18.6
1	58.1	50.5	50.4
2	22.6	27.6	30.5
Not Reported	0.0	1.5	0.6
<b>B Locus Mismatches (%)</b>			
0	9.7	11.9	11.9
1	45.2	45.9	45.1
2	45.2	40.7	42.5
Not Reported	0.0	1.5	0.6
<b>DR Locus Mismatches (%)</b>			
0	19.4	18.6	17.1
1	25.8	47.6	50.7
2	54.8	32.3	31.6
Not Reported	0.0	1.5	0.5
<b>Total Mismatches (%)</b>			
0	9.7	7.2	6.4
1	0.0	3.8	3.8
2	6.5	14.9	13.3
3	22.6	23.2	24.1
4	22.6	17.4	18.1
5	29.0	19.9	21.6
6	9.7	12.2	12.0
Not Reported	0.0	1.5	0.6
<b>Procedure Type (%)</b>			
Kidney alone	100.0	100.0	100.0
Kidney and another organ	0.0	0.0	0.0
<b>Dialysis in First Week After Transplant (%)</b>			
Yes	0.0	3.6	3.2
No	100.0	96.4	96.6
Not Reported	0.0	0.0	0.2
<b>Median Time in Hospital After Transplant*</b>	3.0 Days	4.0 Days	4.0 Days

\* Multiple organ transplants are excluded from this statistic.

## C. Transplant Information

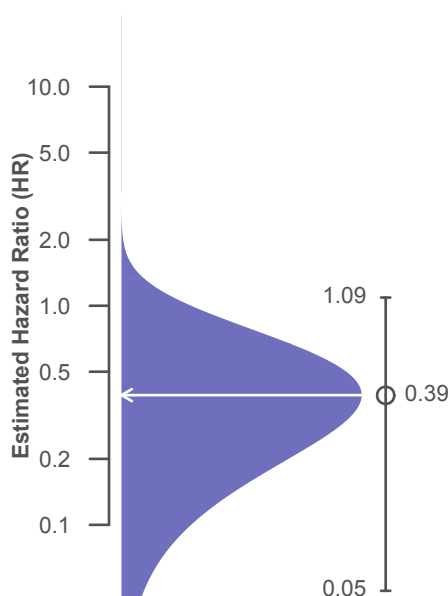
**Table C5. Adult (18+) 1-month survival with a functioning graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	234	40,128
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	98.34%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.68%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	666
Number of expected graft failures (including deaths) during the first month after transplant	3.12	--
Estimated hazard ratio*	0.39	--
95% credible interval for the hazard ratio**	[0.05, 1.09]	--

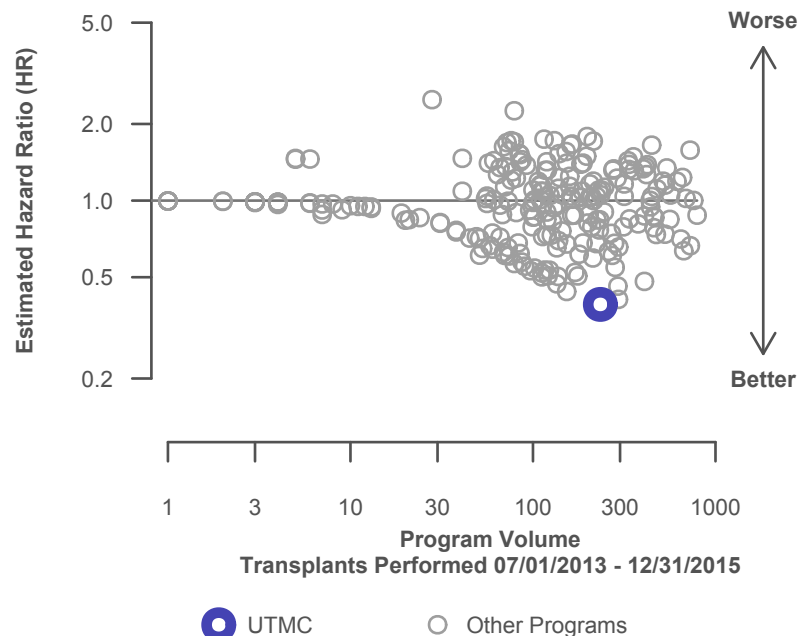
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.05, 1.09], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 61% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 95% reduced risk up to 9% increased risk.

**Figure C1. Adult (18+) 1-month graft failure HR estimate**



**Figure C2. Adult (18+) 1-month graft failure HR program comparison**





## C. Transplant Information

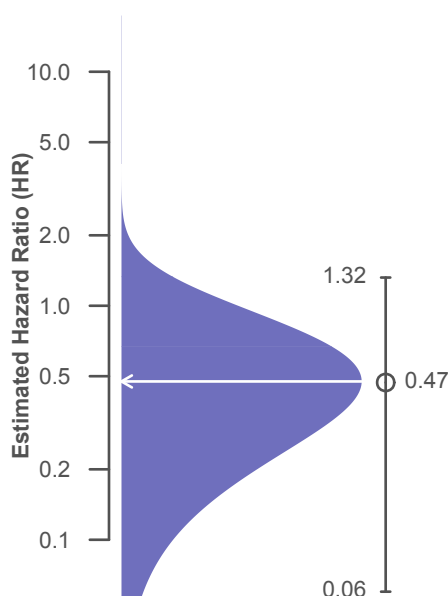
**Table C5D. Adult (18+) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	135	26,635
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	97.96%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.38%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	544
Number of expected graft failures (including deaths) during the first month after transplant	2.21	--
Estimated hazard ratio*	0.47	--
95% credible interval for the hazard ratio**	[0.06, 1.32]	--

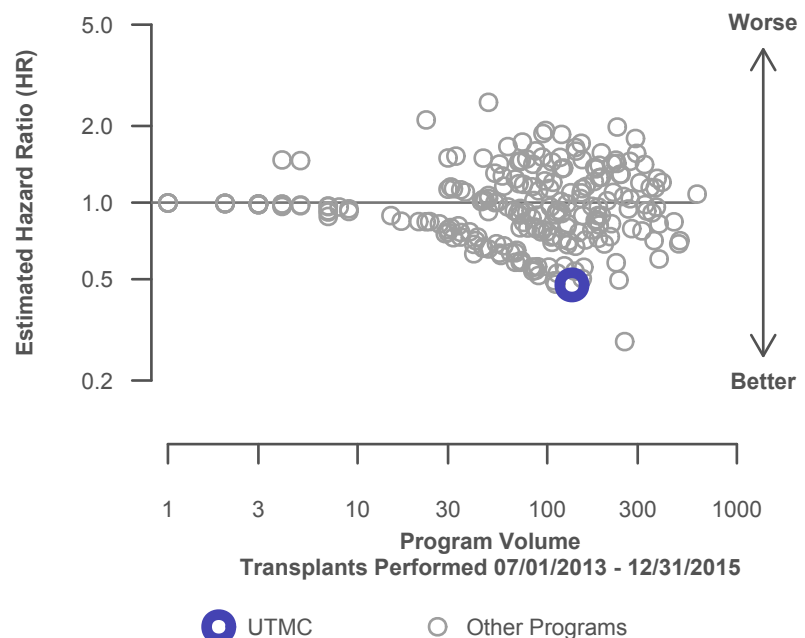
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.06, 1.32], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 53% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 94% reduced risk up to 32% increased risk.

**Figure C1D. Adult (18+) 1-month deceased donor graft failure HR estimate**



**Figure C2D. Adult (18+) 1-month deceased donor graft failure HR program comparison**



## C. Transplant Information

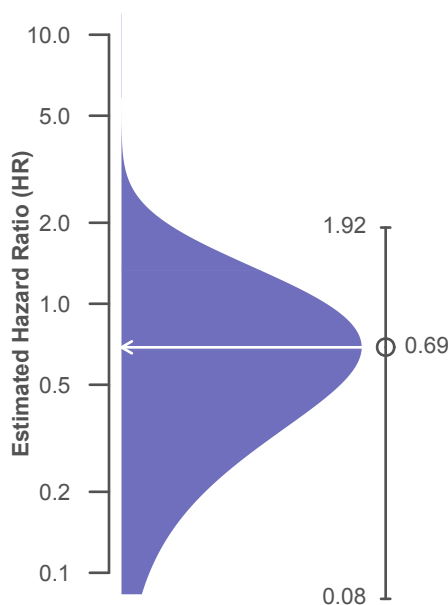
**Table C5L. Adult (18+) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	99	13,493
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.10%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.09%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	122
Number of expected graft failures (including deaths) during the first month after transplant	0.90	--
Estimated hazard ratio*	0.69	--
95% credible interval for the hazard ratio**	[0.08, 1.92]	--

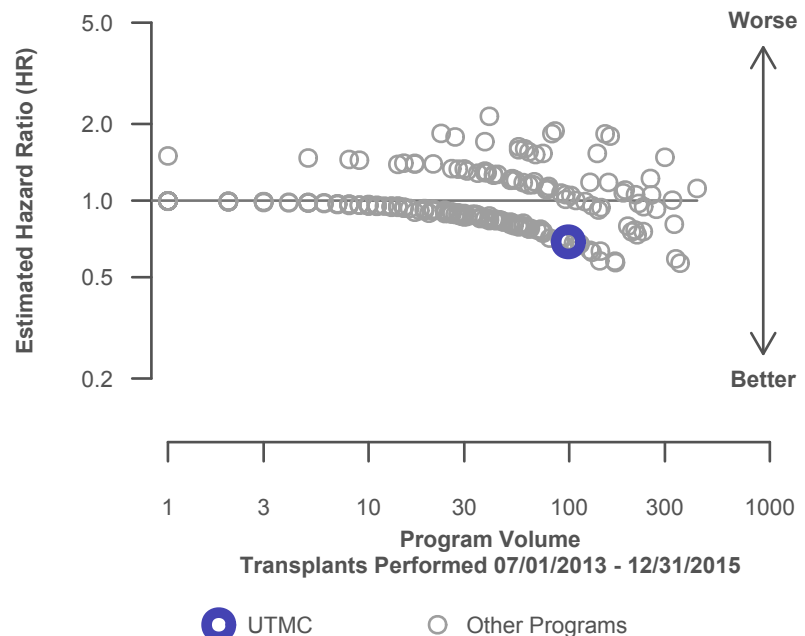
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.08, 1.92], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 31% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 92% reduced risk up to 92% increased risk.

**Figure C1L. Adult (18+) 1-month living donor graft failure HR estimate**



**Figure C2L. Adult (18+) 1-month living donor graft failure HR program comparison**



## C. Transplant Information

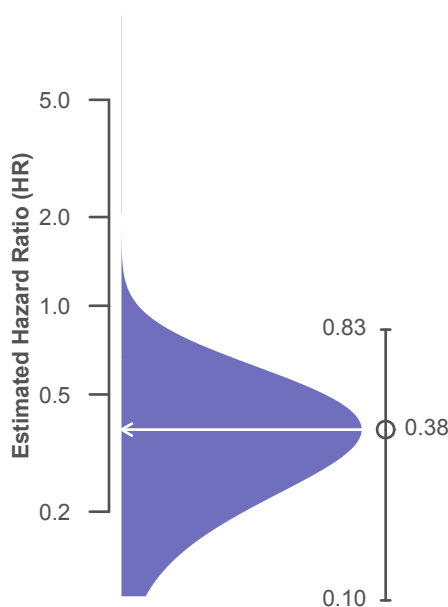
**Table C6. Adult (18+) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	234	40,128
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	99.15%	95.04%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	96.09%	--
Number of observed graft failures (including deaths) during the first year after transplant	2	1,868
Number of expected graft failures (including deaths) during the first year after transplant	8.53	--
Estimated hazard ratio*	0.38	--
95% credible interval for the hazard ratio**	[0.10, 0.83]	--

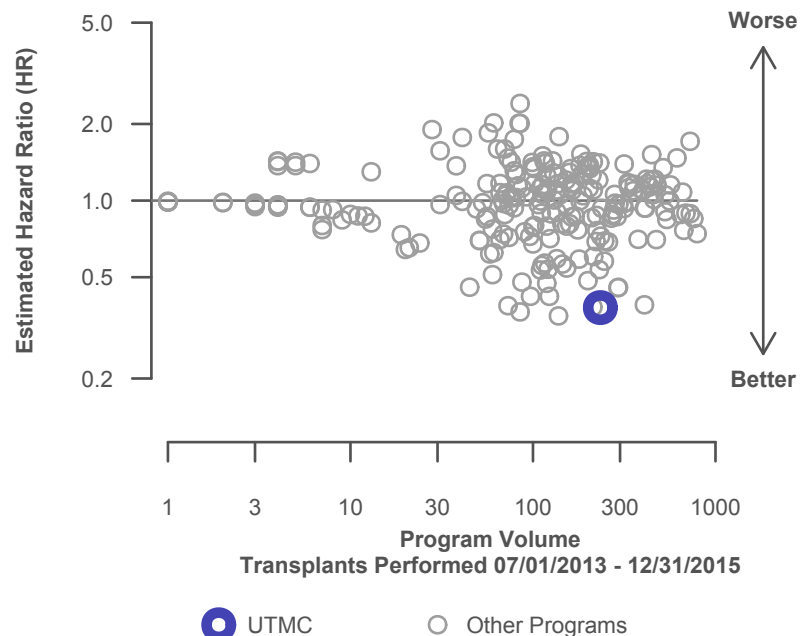
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.10, 0.83], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 62% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 90% reduced risk up to 17% reduced risk.

**Figure C3. Adult (18+) 1-year graft failure HR estimate**



**Figure C4. Adult (18+) 1-year graft failure HR program comparison**



## C. Transplant Information

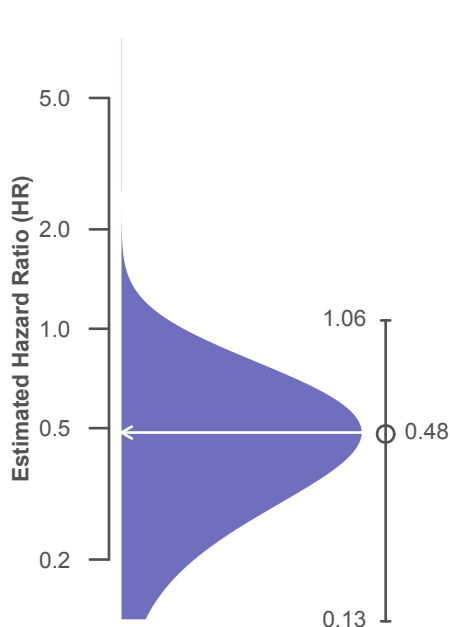
**Table C6D. Adult (18+) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	135	26,635
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	98.52%	93.76%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	95.00%	--
Number of observed graft failures (including deaths) during the first year after transplant	2	1,565
Number of expected graft failures (including deaths) during the first year after transplant	6.25	--
Estimated hazard ratio*	0.48	--
95% credible interval for the hazard ratio**	[0.13, 1.06]	--

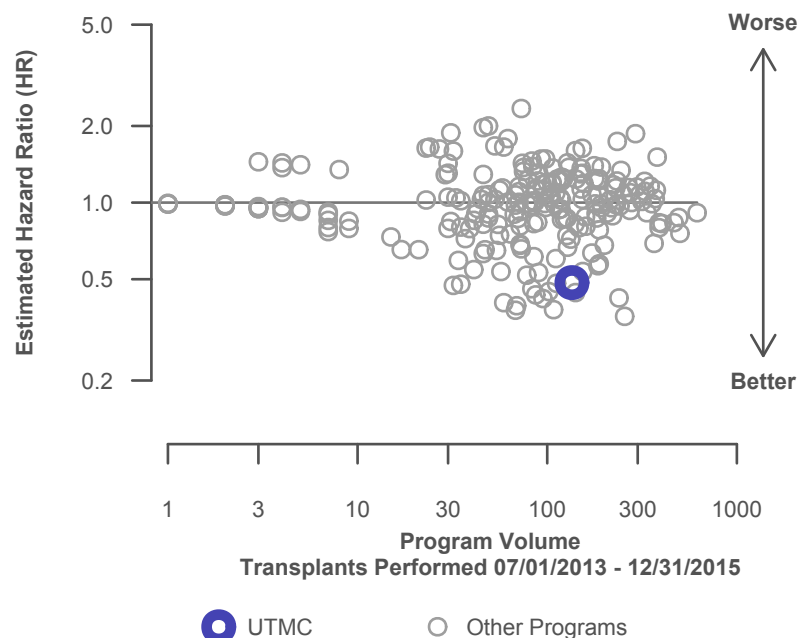
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.13, 1.06], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 52% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 87% reduced risk up to 6% increased risk.

**Figure C3D. Adult (18+) 1-year deceased donor graft failure HR estimate**



**Figure C4D. Adult (18+) 1-year deceased donor graft failure HR program comparison**



## C. Transplant Information

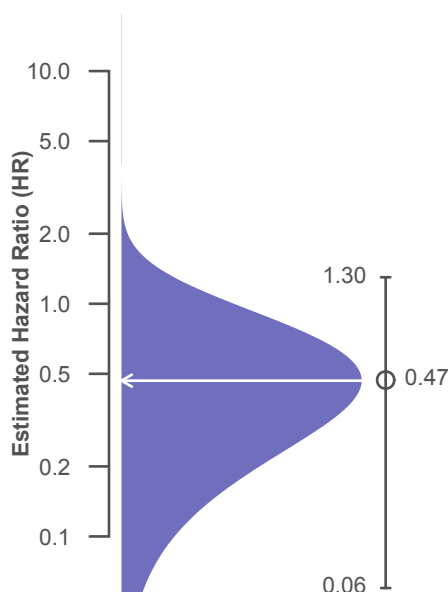
**Table C6L. Adult (18+) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	99	13,493
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	100.00%	97.58%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	97.57%	--
Number of observed graft failures (including deaths) during the first year after transplant	0	303
Number of expected graft failures (including deaths) during the first year after transplant	2.28	--
Estimated hazard ratio*	0.47	--
95% credible interval for the hazard ratio**	[0.06, 1.30]	--

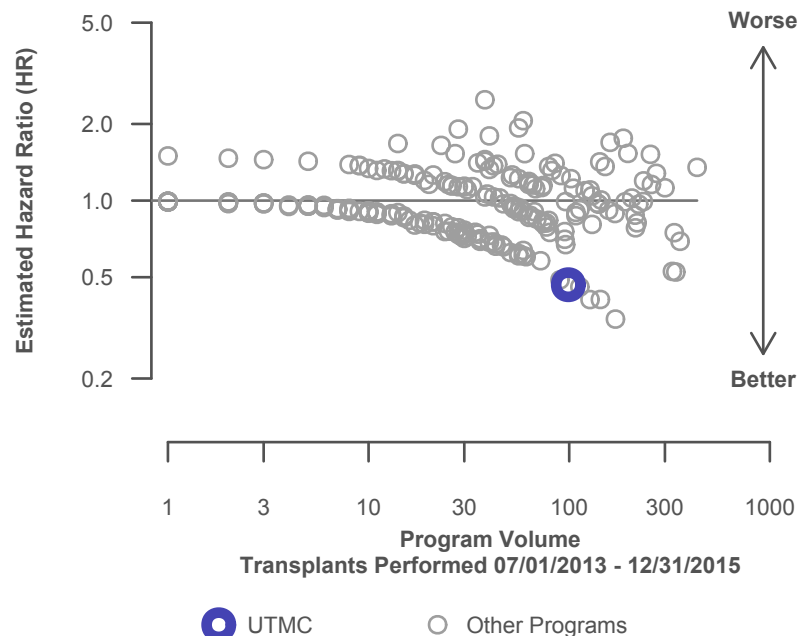
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.06, 1.30], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 53% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 94% reduced risk up to 30% increased risk.

**Figure C3L. Adult (18+) 1-year living donor graft failure HR estimate**



**Figure C4L. Adult (18+) 1-year living donor graft failure HR program comparison**



## C. Transplant Information

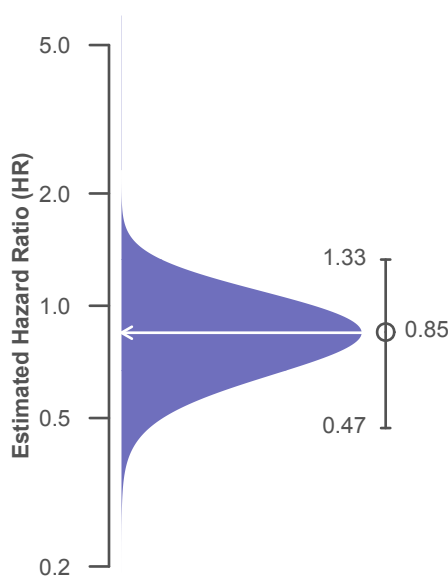
**Table C7. Adult (18+) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	168	38,368
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	92.26%	88.05%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	90.40%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	13	4,586
Number of expected graft failures (including deaths) during the first 3 years after transplant	15.72	--
Estimated hazard ratio*	0.85	--
95% credible interval for the hazard ratio**	[0.47, 1.33]	--

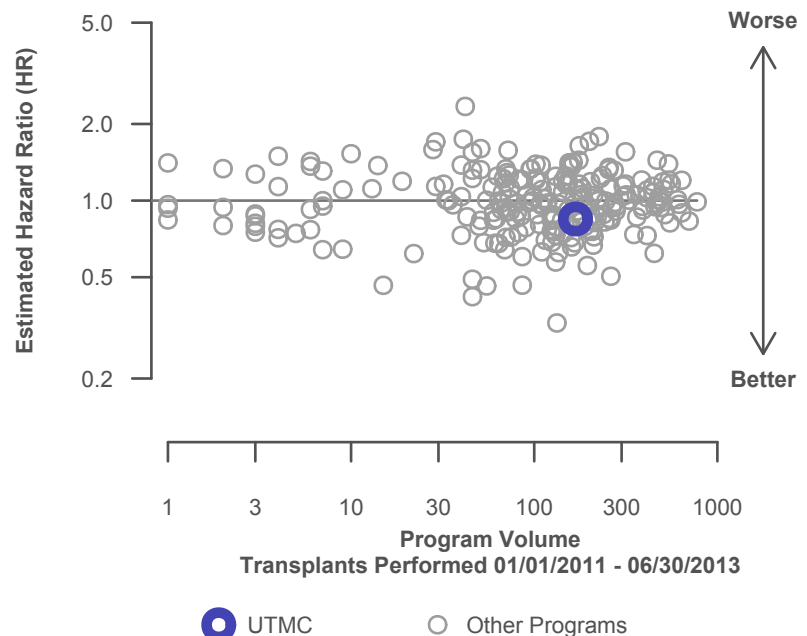
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.47, 1.33], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 15% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 53% reduced risk up to 33% increased risk.

**Figure C5. Adult (18+) 3-year graft failure HR estimate**



**Figure C6. Adult (18+) 3-year graft failure HR program comparison**



## C. Transplant Information

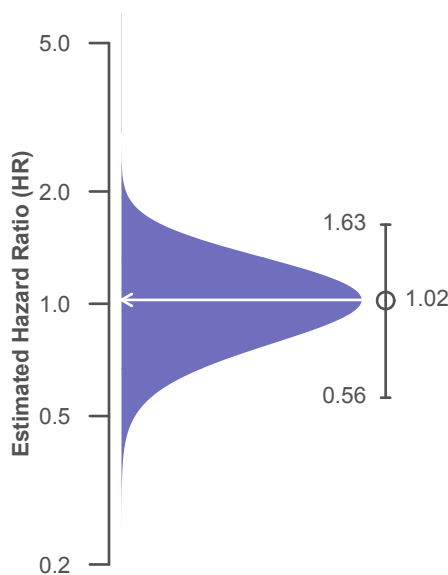
**Table C7D. Adult (18+) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	112	24,932
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	89.29%	85.62%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	89.09%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	12	3,586
Number of expected graft failures (including deaths) during the first 3 years after transplant	11.67	--
Estimated hazard ratio*	1.02	--
95% credible interval for the hazard ratio**	[0.56, 1.63]	--

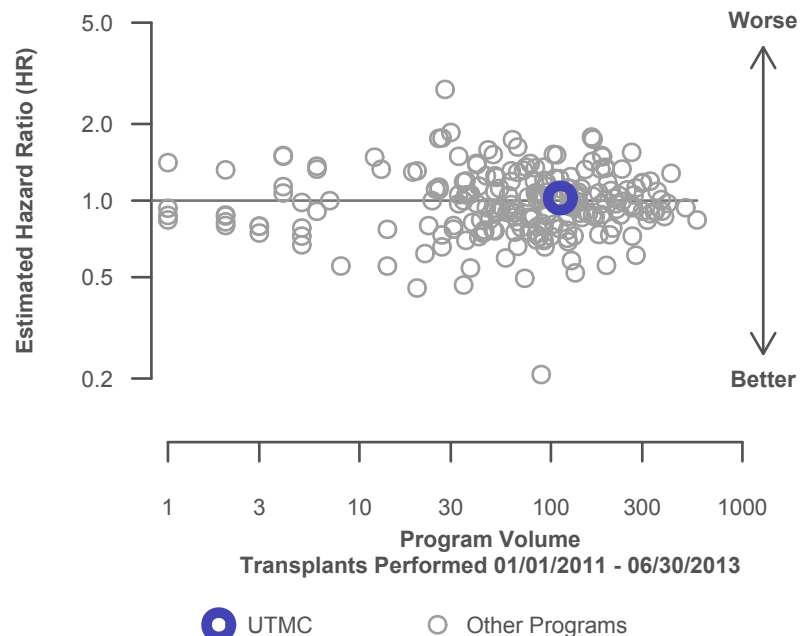
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.56, 1.63], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 2% higher risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 44% reduced risk up to 63% increased risk.

**Figure C5D. Adult (18+) 3-year deceased donor graft failure HR estimate**



**Figure C6D. Adult (18+) 3-year deceased donor graft failure HR program comparison**



## C. Transplant Information

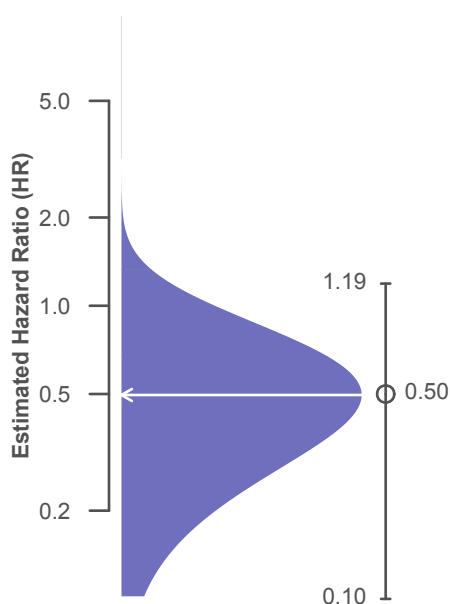
**Table C7L. Adult (18+) 3-year survival with a functioning living donor graft**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Deaths and retransplants are considered graft failures**

	UTMC	U.S.
Number of transplants evaluated	56	13,436
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	98.21%	92.56%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	93.03%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	1	1,000
Number of expected graft failures (including deaths) during the first 3 years after transplant	4.05	--
Estimated hazard ratio*	0.50	--
95% credible interval for the hazard ratio**	[0.10, 1.19]	--

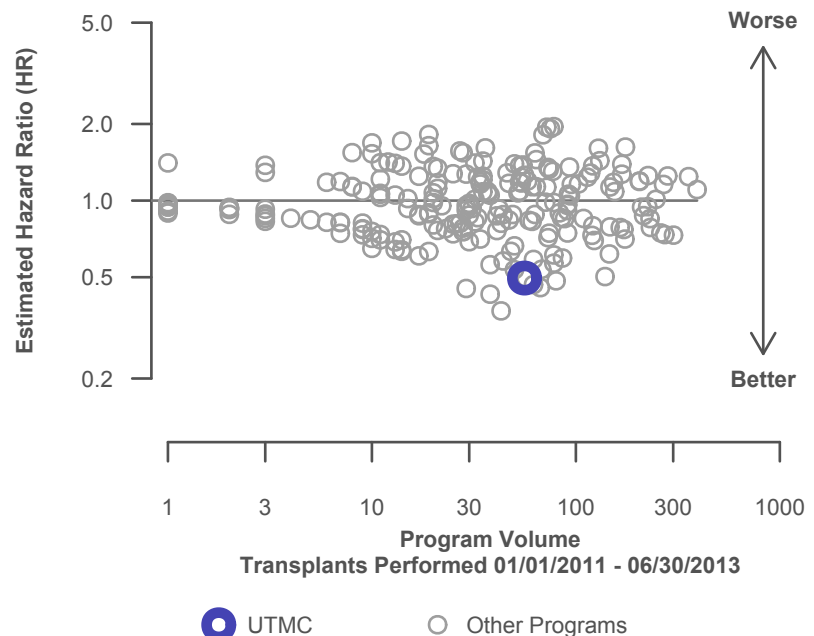
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.10, 1.19], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 50% lower risk of graft failure compared to an average program, but UTMC's performance could plausibly range from 90% reduced risk up to 19% increased risk.

**Figure C5L. Adult (18+) 3-year living donor graft failure HR estimate**



**Figure C6L. Adult (18+) 3-year living donor graft failure HR program comparison**





## C. Transplant Information

**Table C8. Pediatric (<18) 1-month survival with a functioning graft**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Deaths and retransplants are considered graft failures

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

**Figure C7. Pediatric (<18)  
1-month graft failure HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C8. Pediatric (<18) 1-month graft failure HR program  
comparison**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015



## C. Transplant Information

**Table C8D. Pediatric (<18) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

**This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015**

**Figure C7D. Pediatric (<18)  
1-month deceased donor graft  
failure HR estimate**

**This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015**

**Figure C8D. Pediatric (<18) 1-month deceased donor graft  
failure HR program comparison**

**This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015**

## C. Transplant Information

**Table C8L. Pediatric (<18) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

**Figure C7L. Pediatric (<18)**  
**1-month living donor graft failure**  
**HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C8L. Pediatric (<18) 1-month living donor graft failure**  
**HR program comparison**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

## C. Transplant Information

**Table C9. Pediatric (<18) 1-year survival with a functioning graft**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Deaths and retransplants are considered graft failures

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

**Figure C9. Pediatric (<18) 1-year  
graft failure HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C10. Pediatric (<18) 1-year graft failure HR program  
comparison**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015



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## C. Transplant Information

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**Table C9D. Pediatric (<18) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

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**Figure C9D. Pediatric (<18)  
1-year deceased donor graft  
failure HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C10D. Pediatric (<18) 1-year deceased donor graft  
failure HR program comparison**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015



## C. Transplant Information

**Table C9L. Pediatric (<18) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Deaths and retransplants are considered graft failures**

**This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015**

**Figure C9L. Pediatric (<18) 1-year  
living donor graft failure HR  
estimate**

**This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015**

**Figure C10L. Pediatric (<18) 1-year living donor graft failure  
HR program comparison**

**This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015**

## C. Transplant Information

**Table C10. Pediatric (<18) 3-year survival with a functioning graft**  
Single organ transplants performed between 01/01/2011 and 06/30/2013  
Deaths and retransplants are considered graft failures

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

**Figure C11. Pediatric (<18) 3-year  
graft failure HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

**Figure C12. Pediatric (<18) 3-year graft failure HR program  
comparison**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013



## C. Transplant Information

**Table C10D. Pediatric (<18) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

**Figure C11D. Pediatric (<18)**  
**3-year deceased donor graft**  
**failure HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

**Figure C12D. Pediatric (<18) 3-year deceased donor graft**  
**failure HR program comparison**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013



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## C. Transplant Information

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**Table C10L. Pediatric (<18) 3-year survival with a functioning living donor graft**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

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**Figure C11L. Pediatric (<18)**  
**3-year living donor graft failure**  
**HR estimate**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

**Figure C12L. Pediatric (<18) 3-year living donor graft failure**  
**HR program comparison**

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

## C. Transplant Information

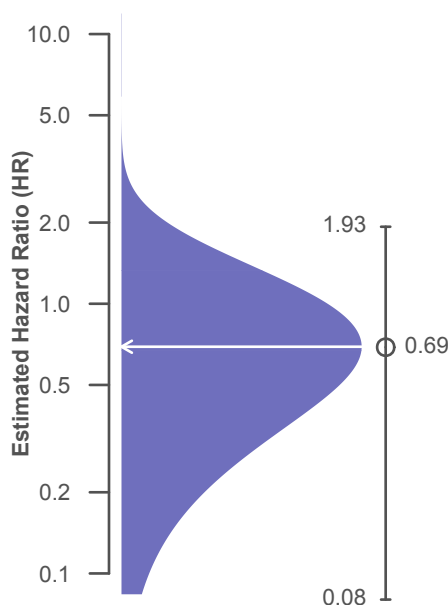
**Table C11. Adult (18+) 1-month patient survival**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded

	UTMC	U.S.
Number of transplants evaluated	192	34,869
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.48%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.54%	--
Number of observed deaths during the first month after transplant	0	183
Number of expected deaths during the first month after transplant	0.89	--
Estimated hazard ratio*	0.69	--
95% credible interval for the hazard ratio**	[0.08, 1.93]	--

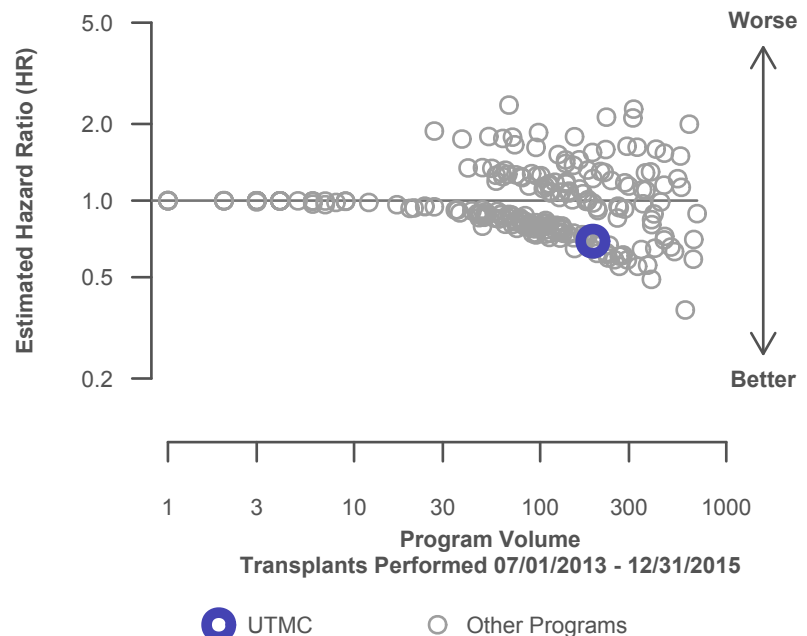
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.08, 1.93], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 31% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 92% reduced risk up to 93% increased risk.

**Figure C13. Adult (18+) 1-month patient death HR estimate**



**Figure C14. Adult (18+) 1-month patient death HR program comparison**



## C. Transplant Information

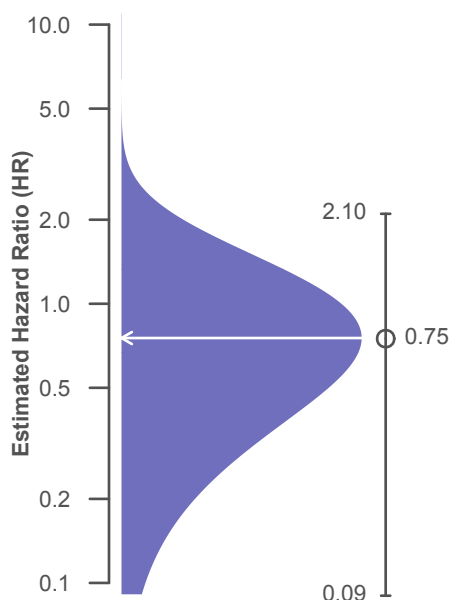
**Table C11D. Adult (18+) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	112	22,815
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.35%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.42%	--
Number of observed deaths during the first month after transplant	0	149
Number of expected deaths during the first month after transplant	0.65	--
Estimated hazard ratio*	0.75	--
95% credible interval for the hazard ratio**	[0.09, 2.10]	--

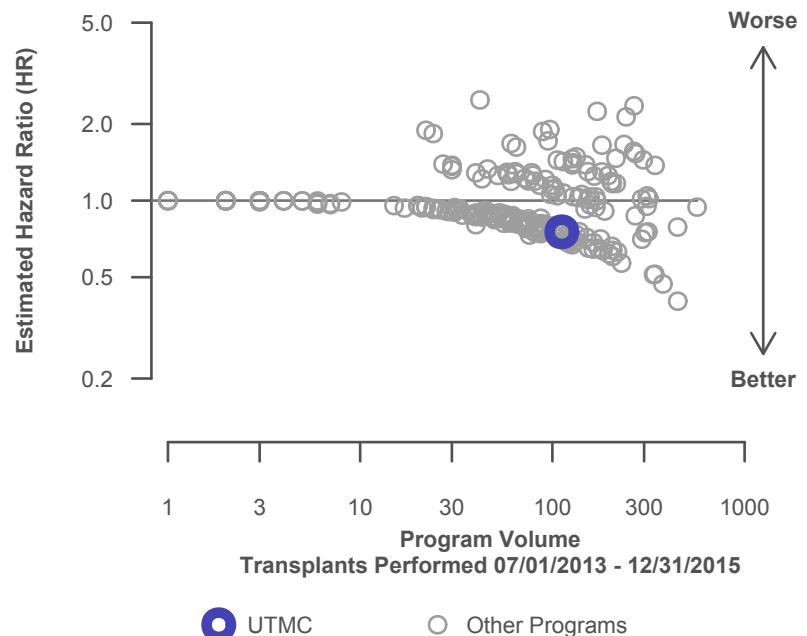
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.09, 2.10], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 25% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 91% reduced risk up to 110% 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

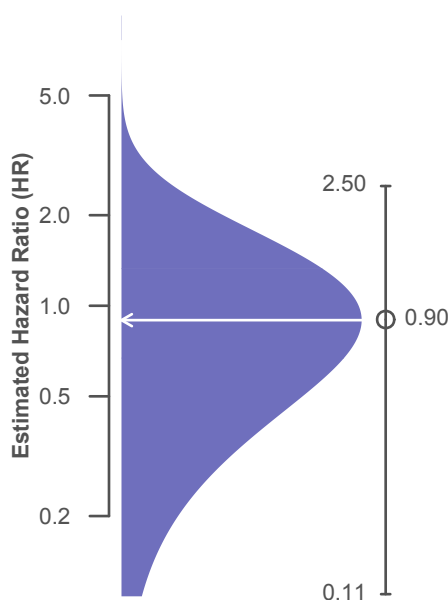
**Table C11L. Adult (18+) 1-month patient survival (living donor graft recipients)  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	80	12,054
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.72%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.71%	--
Number of observed deaths during the first month after transplant	0	34
Number of expected deaths during the first month after transplant	0.23	--
Estimated hazard ratio*	0.90	--
95% credible interval for the hazard ratio**	[0.11, 2.50]	--

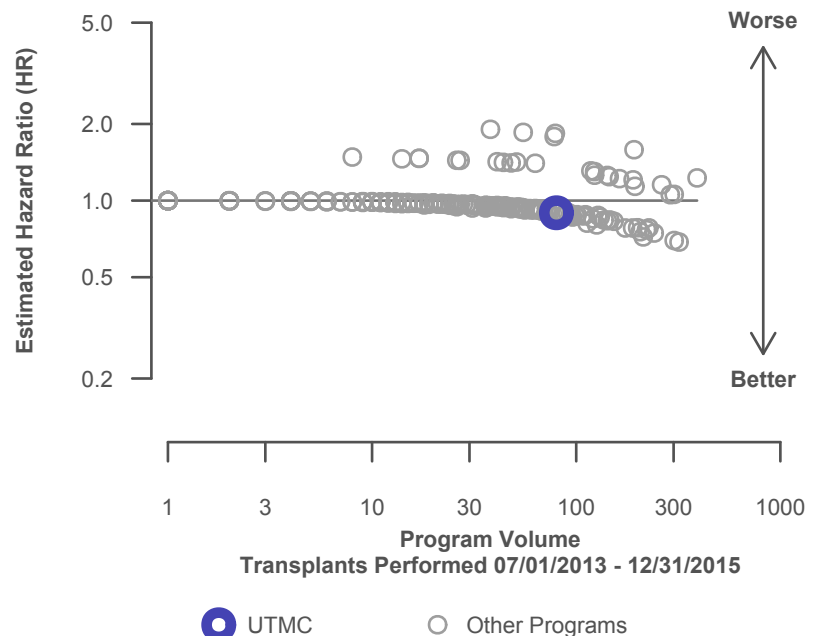
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.50], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 10% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 89% reduced risk up to 150% increased risk.

**Figure C13L. Adult (18+) 1-month patient death HR estimate (living donor grafts)**



**Figure C14L. Adult (18+) 1-month patient death HR program comparison (living donor grafts)**



## C. Transplant Information

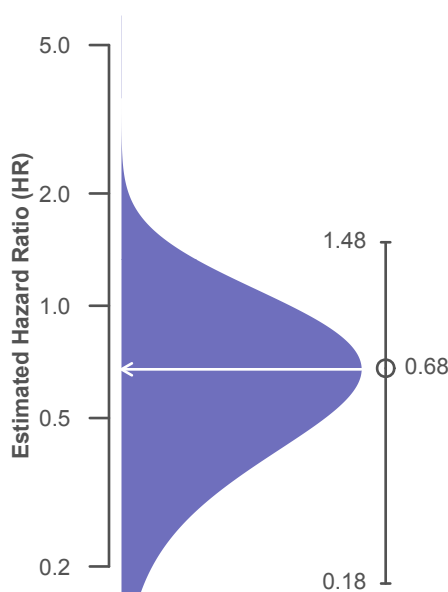
**Table C12. Adult (18+) 1-year patient survival**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded

	UTMC	U.S.
Number of transplants evaluated	192	34,869
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	98.96%	97.34%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	97.69%	--
Number of observed deaths during the first year after transplant	2	853
Number of expected deaths during the first year after transplant	3.92	--
Estimated hazard ratio*	0.68	--
95% credible interval for the hazard ratio**	[0.18, 1.48]	--

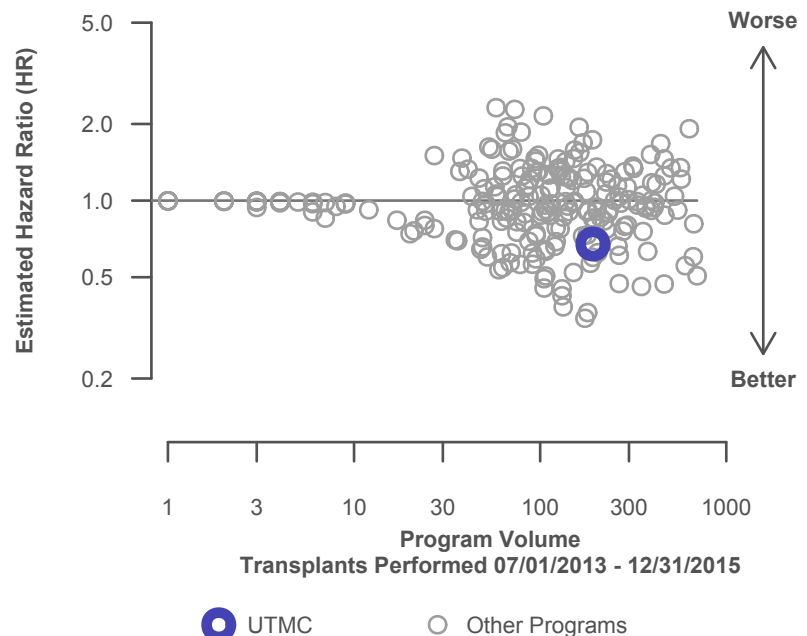
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.18, 1.48], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 32% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 82% reduced risk up to 48% increased risk.

**Figure C15. Adult (18+) 1-year patient death HR estimate**



**Figure C16. Adult (18+) 1-year patient death HR program comparison**



## C. Transplant Information

**Table C12D. Adult (18+) 1-year patient survival (deceased donor graft recipients)**

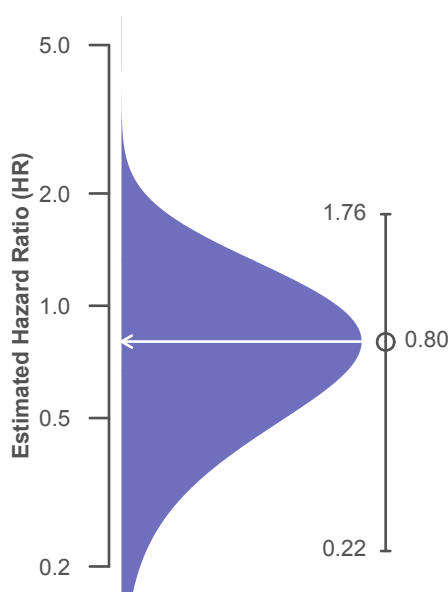
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	112	22,815
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	98.21%	96.59%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.96%	--
Number of observed deaths during the first year after transplant	2	717
Number of expected deaths during the first year after transplant	2.99	--
Estimated hazard ratio*	0.80	--
95% credible interval for the hazard ratio**	[0.22, 1.76]	--

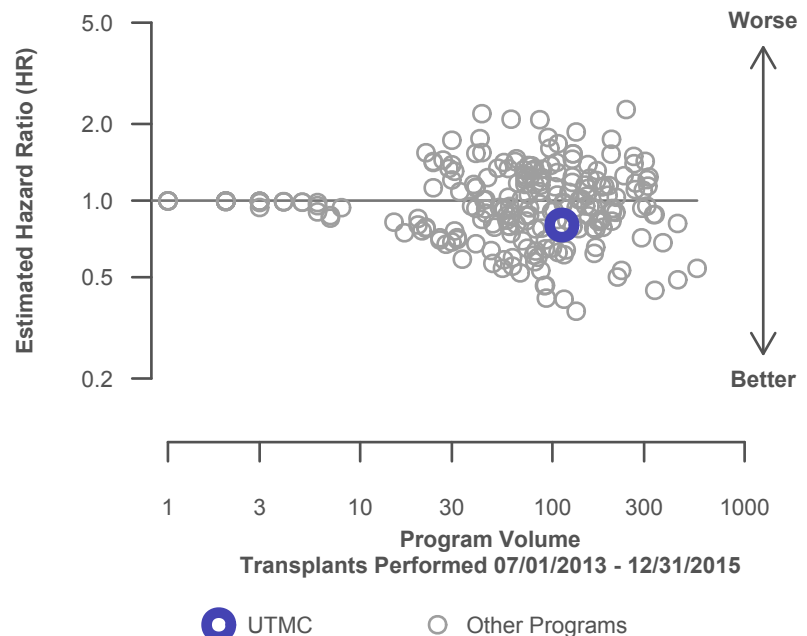
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.22, 1.76], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 20% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 78% reduced risk up to 76% 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

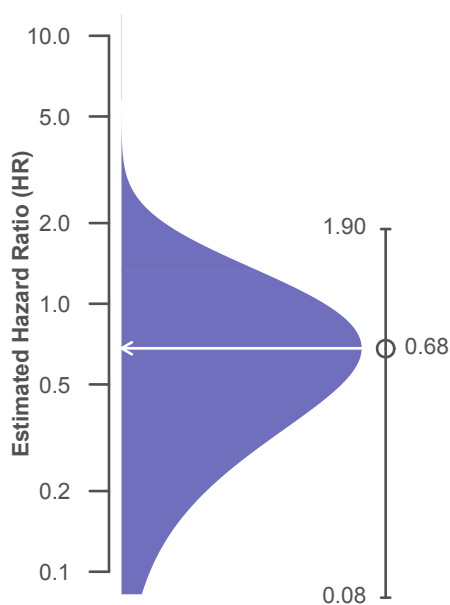
**Table C12L. Adult (18+) 1-year patient survival (living donor graft recipients)  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	80	12,054
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	98.75%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	98.71%	--
Number of observed deaths during the first year after transplant	0	136
Number of expected deaths during the first year after transplant	0.93	--
Estimated hazard ratio*	0.68	--
95% credible interval for the hazard ratio**	[0.08, 1.90]	--

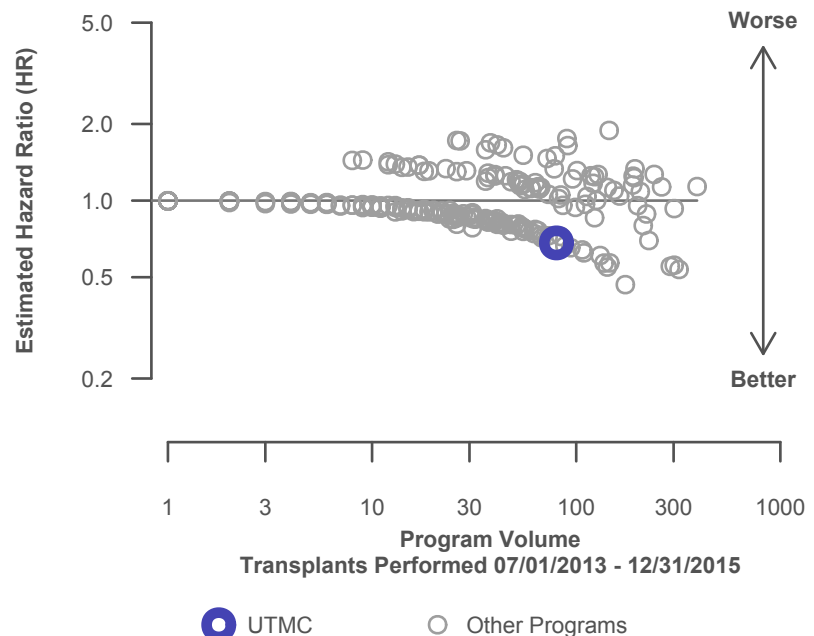
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.08, 1.90], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 32% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 92% reduced risk up to 90% increased risk.

**Figure C15L. Adult (18+) 1-year patient death HR estimate (living donor grafts)**



**Figure C16L. Adult (18+) 1-year patient death HR program comparison (living donor grafts)**



## C. Transplant Information

**Table C13. Adult (18+) 3-year patient survival**

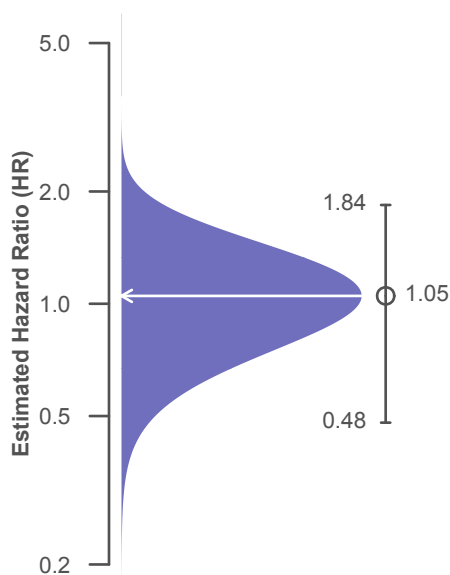
Single organ transplants performed between 01/01/2011 and 06/30/2013  
Retransplants excluded

	UTMC	U.S.
Number of transplants evaluated	131	33,622
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	94.66%	93.27%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	94.84%	--
Number of observed deaths during the first 3 years after transplant	7	2,264
Number of expected deaths during the first 3 years after transplant	6.57	--
Estimated hazard ratio*	1.05	--
95% credible interval for the hazard ratio**	[0.48, 1.84]	--

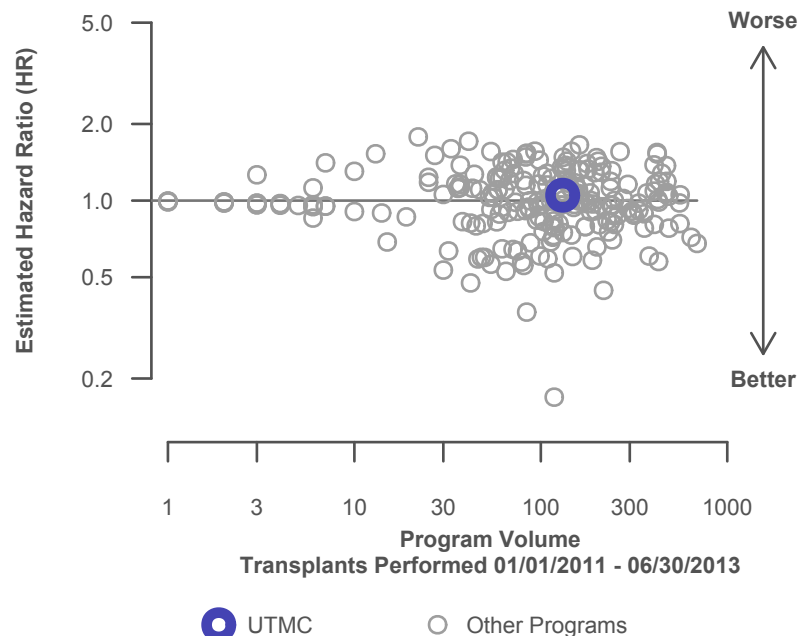
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.48, 1.84], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 5% higher risk of patient death compared to an average program, but UTMC's performance could plausibly range from 52% reduced risk up to 84% increased risk.

**Figure C17. Adult (18+) 3-year patient death HR estimate**



**Figure C18. Adult (18+) 3-year patient death HR program comparison**





## C. Transplant Information

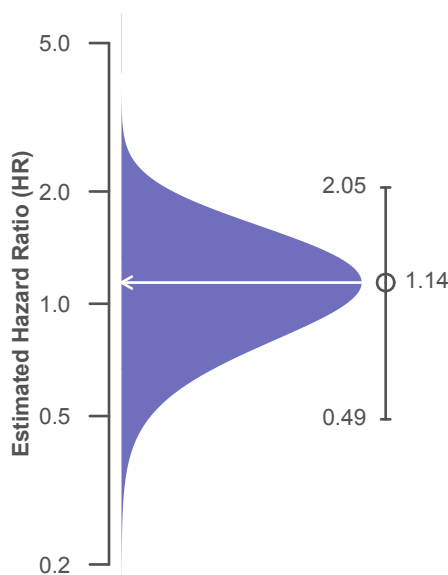
**Table C13D. Adult (18+) 3-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	90	21,623
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	93.33%	91.74%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	94.18%	--
Number of observed deaths during the first 3 years after transplant	6	1,787
Number of expected deaths during the first 3 years after transplant	5.02	--
Estimated hazard ratio*	1.14	--
95% credible interval for the hazard ratio**	[0.49, 2.05]	--

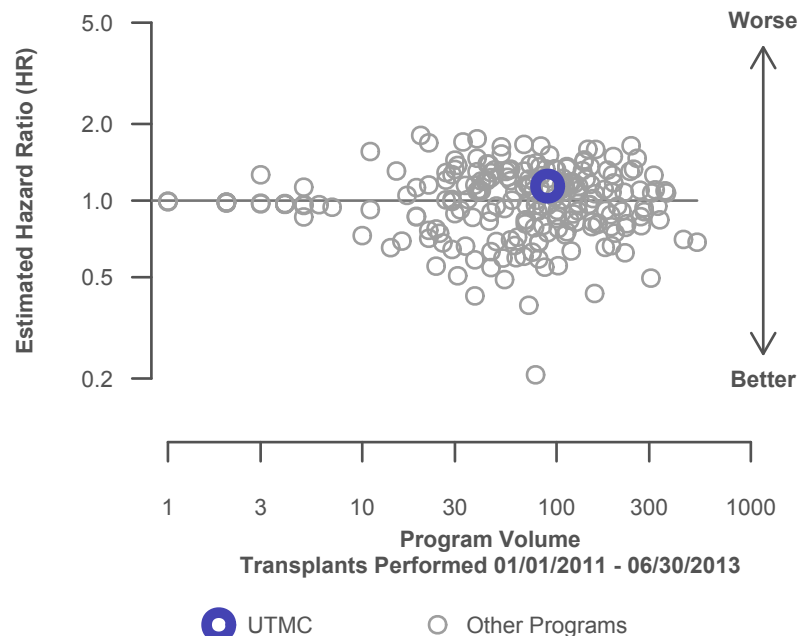
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.49, 2.05], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 14% higher risk of patient death compared to an average program, but UTMC's performance could plausibly range from 51% reduced risk up to 105% 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

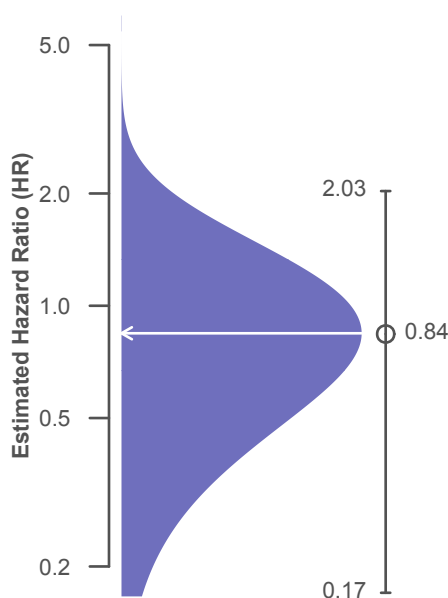
**Table C13L. Adult (18+) 3-year patient survival (living donor graft recipients)  
Single organ transplants performed between 01/01/2011 and 06/30/2013  
Retransplants excluded**

	UTMC	U.S.
Number of transplants evaluated	41	11,999
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	97.56%	96.02%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	96.28%	--
Number of observed deaths during the first 3 years after transplant	1	477
Number of expected deaths during the first 3 years after transplant	1.56	--
Estimated hazard ratio*	0.84	--
95% credible interval for the hazard ratio**	[0.17, 2.03]	--

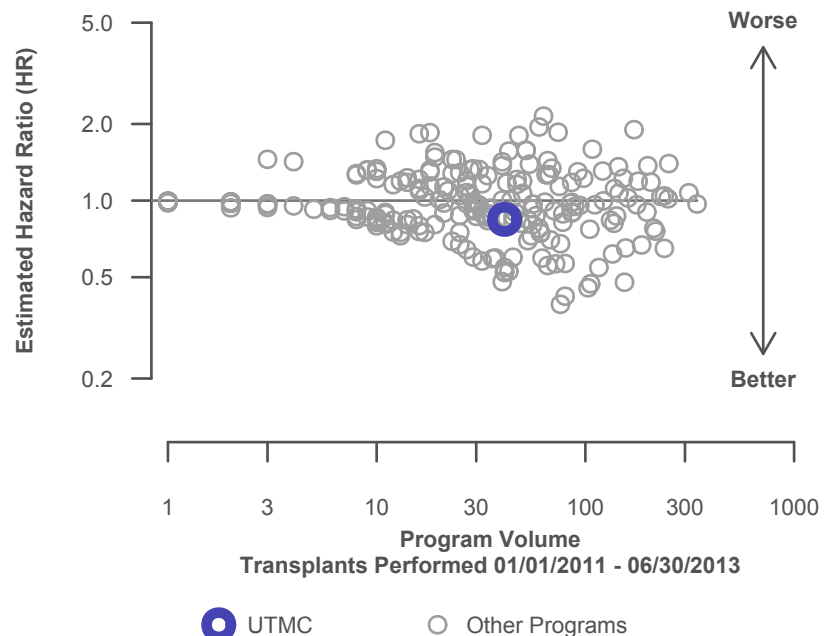
\* The hazard ratio provides an estimate of how University of Utah Medical Center (UTMC)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 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 UTMC's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.17, 2.03], indicates the location of UTMC's true hazard ratio with 95% probability. The best estimate is 16% lower risk of patient death compared to an average program, but UTMC's performance could plausibly range from 83% reduced risk up to 103% increased risk.

**Figure C17L. Adult (18+) 3-year patient death HR estimate (living donor grafts)**



**Figure C18L. Adult (18+) 3-year patient death HR program comparison (living donor grafts)**





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## C. Transplant Information

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**Table C14. Pediatric (<18) 1-month patient survival**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

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**Figure C19. Pediatric (<18)  
1-month patient death HR  
estimate**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C20. Pediatric (<18) 1-month patient death HR program  
comparison**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015



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## C. Transplant Information

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**Table C14D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

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**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  
07/01/2013-12/31/2015

**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  
07/01/2013-12/31/2015



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## C. Transplant Information

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**Table C14L. Pediatric (<18) 1-month patient survival (living donor graft recipients)**  
**Single organ transplants performed between 07/01/2013 and 12/31/2015**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

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**Figure C19L. Pediatric (<18)  
1-month patient death HR  
estimate (living donor grafts)**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C20L. Pediatric (<18) 1-month patient death HR  
program comparison (living donor grafts)**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

## C. Transplant Information

### Table C15. Pediatric (<18) 1-year patient survival

Single organ transplants performed between 07/01/2013 and 12/31/2015

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

### Figure C21. Pediatric (<18) 1-year patient death HR estimate

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

### Figure C22. Pediatric (<18) 1-year patient death HR program comparison

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

## C. Transplant Information

**Table C15D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)**  
Single organ transplants performed between 07/01/2013 and 12/31/2015  
Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

**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  
07/01/2013-12/31/2015

**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  
07/01/2013-12/31/2015

## C. Transplant Information

### Table C15L. Pediatric (<18) 1-year patient survival (living donor graft recipients)

Single organ transplants performed between 07/01/2013 and 12/31/2015

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2013-12/31/2015

**Figure C21L. Pediatric (<18)  
1-year patient death HR estimate  
(living donor grafts)**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015

**Figure C22L. Pediatric (<18) 1-year patient death HR program  
comparison (living donor grafts)**

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2013-12/31/2015



## C. Transplant Information

### Table C16. Pediatric (<18) 3-year patient survival

Single organ transplants performed between 01/01/2011 and 06/30/2013

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

### Figure C23. Pediatric (<18) 3-year patient death HR estimate

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

### Figure C24. Pediatric (<18) 3-year patient death HR program comparison

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013



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## C. Transplant Information

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**Table C16D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 01/01/2011 and 06/30/2013**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

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**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  
01/01/2011-06/30/2013

**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  
01/01/2011-06/30/2013

## C. Transplant Information

### Table C16L. Pediatric (<18) 3-year patient survival (living donor graft recipients)

Single organ transplants performed between 01/01/2011 and 06/30/2013

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
01/01/2011-06/30/2013

### Figure C23L. Pediatric (<18) 3-year patient death HR estimate (living donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

### Figure C24L. Pediatric (<18) 3-year patient death HR program comparison (living donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2011-06/30/2013

## D. Living Donor Information

**Table D1. Living donor summary: 07/01/2013 - 06/30/2016**

Living Donor Follow-Up	This Center			United States		
	07/2013- 06/2014	07/2014- 06/2015	07/2015- 12/2015	07/2013- 06/2014	07/2014- 06/2015	07/2015- 12/2015
<b>Number of Living Donors</b>	44	50	19	5,652	5,558	2,934
<b>6-Month Follow-Up</b>						
Donors due for follow-up	44	50	9	5,650	5,555	1,451
Timely clinical data	41 93.2%	44 88.0%	9 100.0%	4,289 75.9%	4,605 82.9%	1,237 85.3%
Timely lab data	41 93.2%	35 70.0%	5 55.6%	4,075 72.1%	4,321 77.8%	1,167 80.4%
<b>12-Month Follow-Up</b>						
Donors due for follow-up	44	37		5,650	4,142	
Timely clinical data	43 97.7%	31 83.8%		4,105 72.7%	3,184 76.9%	
Timely lab data	41 93.2%	33 89.2%		3,800 67.3%	2,916 70.4%	
<b>24-Month Follow-Up</b>						
Donors due for follow-up	35			4,273		
Timely clinical data	22 62.9%			2,950 69.0%		
Timely lab data	16 45.7%			2,568 60.1%		

Follow-up completion standards through 2 years post-donation were implemented in policy on February 1, 2013.