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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 Rush University Medical Center (ILPL). The report has three main sections:

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

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

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

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

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



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confidence interval includes (crosses) 1.0, then we cannot say that this program's observed transplant rate is different from what would be expected. The observed transplant rate at this program was 21.5 per 100 person-years. Transplant rates are also provided for adult and pediatric patients separately along with comparisons to adult and pediatric rates in the DSA, the OPTN region, and the nation. 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 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 07/01/2013 and 12/31/2018. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this program was 2.9 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 06/30/2019 to calculate a particular percentile of transplant times.

Table B10 contains a summary of the offer acceptance practices of the program. The offer acceptance ratio indicates whether the program is more or less likely to accept offers than the average program. If the offer acceptance ratio is greater than 1.0, then the program tends to accept more offers than average; if the offer acceptance ratio is less than 1.0, then the program tends to accept fewer offers than average. Figure B7 shows the distribution of program offer acceptance rates as well as the offer acceptance rate for this program. Figures B8 - B11 similarly show offer acceptance rates for subsets of offers.

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.



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

While Tables C5-C10 present data on graft survival, Tables C11-C16 present information on patient survival. For these tables, patients are followed from the time of transplant until death, regardless of whether the transplant is functioning or the patient required another transplant to survive.

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

Table D1 shows the rates of follow-up for living donors.

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

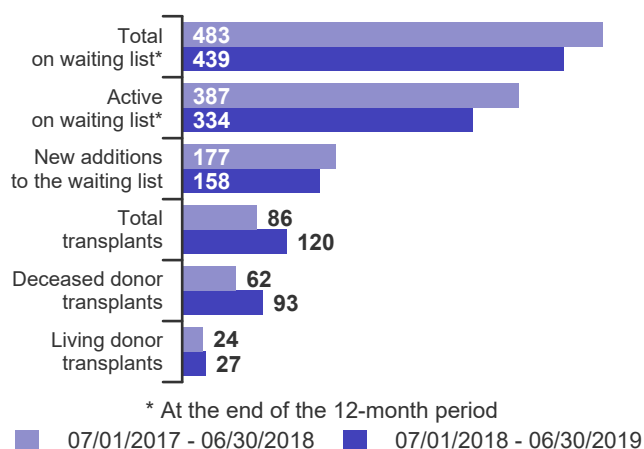


Table A1. Census of transplant recipients

Recipients	07/01/2017-06/30/2018	07/01/2018-06/30/2019
Transplanted at this center	86	120
Followed by this center*	964	952
...transplanted at this program	950	943
...transplanted elsewhere	14	9

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

Figure A2. Transplant rates  
07/01/2017 - 06/30/2019

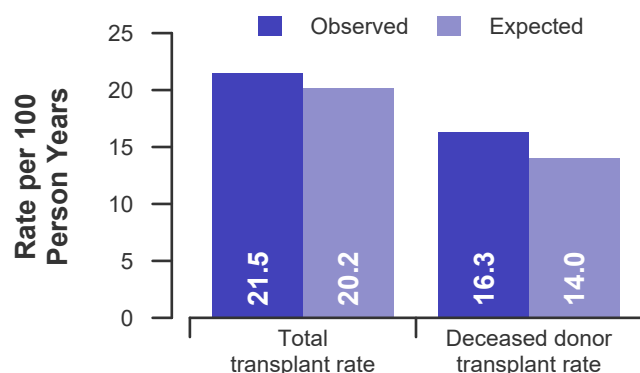


Figure A3. Waiting list mortality rates  
07/01/2017 - 06/30/2019

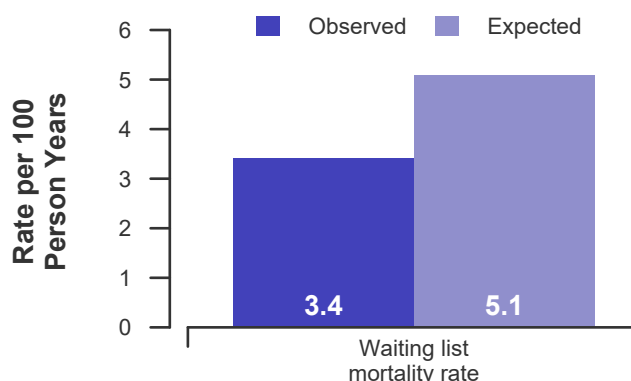


Figure A4. First-year adult graft and patient survival: 07/01/2016 - 12/31/2018

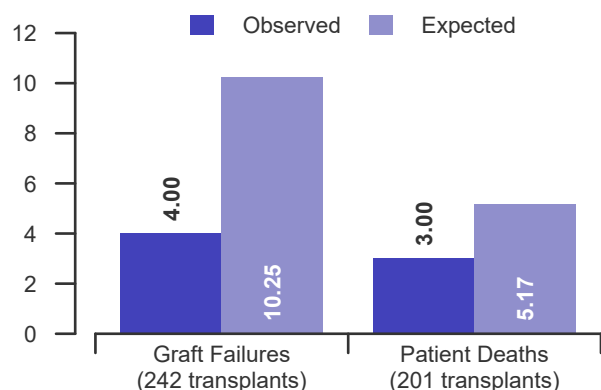


Figure A5. First-year pediatric graft and patient survival: 07/01/2016 - 12/31/2018

This center did not perform any transplants relevant to this figure during 07/01/2016-12/31/2018



## B. Waiting List Information

**Table B1. Waiting list activity summary: 07/01/2017 - 06/30/2019**

Waiting List Registrations	Counts for this center		Activity for 07/01/2018 to 06/30/2019 as percent of registrants on waiting list on 07/01/2018		
	07/01/2017- 06/30/2018	07/01/2018- 06/30/2019	This Center (%)	OPTN Region (%)	U.S. (%)
<b>On waiting list at start</b>	531	483	100.0	100.0	100.0
<b>Additions</b>					
New listings at this center	177	158	32.7	38.4	41.0
<b>Removals</b>					
Transferred to another center	5	4	0.8	0.9	1.3
Received living donor transplant*	23	27	5.6	9.6	6.6
Received deceased donor transplant*	62	93	19.3	14.1	15.4
Died	10	11	2.3	3.7	3.8
Transplanted at another center	12	6	1.2	4.2	3.6
Deteriorated	42	16	3.3	4.4	4.2
Recovered	0	0	0.0	0.2	0.2
Other reasons	71	45	9.3	5.3	5.6
<b>On waiting list at end of period</b>	483	439	90.9	96.0	100.4

\* 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 07/01/2018 and 06/30/2019**

Demographic Characteristic	New Waiting List Registrations 07/01/2018 to 06/30/2019 (%)			All Waiting List Registrations on 06/30/2019 (%)		
	This Center (N=158)	OPTN Region (N=2,946)	U.S. (N=41,372)	This Center (N=439)	OPTN Region (N=7,364)	U.S. (N=101,268)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ethnicity/Race (%)*</b>						
White	25.9	54.2	41.5	22.8	48.5	35.5
African-American	41.8	22.2	28.8	46.9	27.2	32.3
Hispanic/Latino	23.4	13.8	19.5	22.3	12.6	20.7
Asian	8.9	7.6	8.4	7.7	8.7	9.8
Other	0.0	2.2	1.8	0.2	3.1	1.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Age (%)</b>						
<2 years	0.0	0.2	0.1	0.0	0.2	0.1
2-11 years	1.9	0.9	1.0	0.2	0.6	0.6
12-17 years	0.0	1.6	1.5	0.2	1.0	0.9
18-34 years	10.8	11.4	10.8	11.6	10.9	10.6
35-49 years	26.6	23.7	24.9	31.0	27.5	27.5
50-64 years	34.8	42.6	41.0	39.0	44.5	43.4
65-69 years	14.6	13.7	13.2	11.2	11.6	11.8
70+ years	11.4	5.9	7.4	6.8	3.8	5.1
<b>Gender (%)</b>						
Male	65.8	60.2	62.1	64.7	60.3	61.9
Female	34.2	39.8	37.9	35.3	39.7	38.1

\* 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%.



## B. Waiting List Information

**Table B3. Medical characteristics of waiting list candidates**

Candidates registered on the waiting list between 07/01/2018 and 06/30/2019

Medical Characteristic	New Waiting List Registrations 07/01/2018 to 06/30/2019 (%)			All Waiting List Registrations on 06/30/2019 (%)		
	This Center (N=158)	OPTN Region (N=2,946)	U.S. (N=41,372)	This Center (N=439)	OPTN Region (N=7,364)	U.S. (N=101,268)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Blood Type (%)</b>						
O	43.7	48.2	49.1	51.5	53.2	53.3
A	34.8	34.1	32.0	27.1	28.1	27.4
B	17.7	14.1	15.0	19.1	16.6	16.7
AB	3.8	3.6	3.9	2.3	2.1	2.5
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Previous Transplant (%)</b>						
Yes	15.8	16.4	12.8	18.9	18.6	13.7
No	84.2	83.6	87.2	81.1	81.4	86.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Initial CPRA (%)</b>						
0-9%	96.2	81.6	79.5	96.6	79.3	80.2
10-79%	0.6	12.0	12.8	1.4	13.3	12.4
80+%	3.2	6.3	7.7	2.1	7.4	7.4
Unknown	0.0	0.1	0.1	0.0	0.0	0.0
<b>Primary Disease (%)*</b>						
Glomerular Diseases	17.7	20.6	19.5	17.8	21.1	19.0
Tubular and Interstitial Diseases	0.6	5.2	3.9	1.4	4.8	3.6
Polycystic Kidneys	6.3	9.4	7.2	5.9	8.0	6.9
Congenital, Familial, Metabolic	1.9	2.3	2.1	1.1	2.3	1.8
Diabetes	37.3	28.4	35.3	33.5	29.4	36.4
Renovascular & Vascular Diseases	0.0	0.2	0.2	0.0	0.2	0.1
Neoplasms	0.0	0.4	0.4	0.0	0.2	0.3
Hypertensive Nephrosclerosis	25.9	19.1	19.2	31.4	21.2	21.5
Other	10.1	13.9	11.8	8.9	12.1	9.9
Missing*	0.0	0.5	0.5	0.0	0.6	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: 07/01/2017 - 06/30/2019

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	531	3,762	7,978	102,722
Person Years**	953.5	6,983.1	15,377.6	202,385.3
Removals for Transplant	205	1,620	3,524	42,479
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	531	3,694	7,862	101,204
Person Years**	951.1	6,847.2	15,123.0	199,309.9
Removals for transplant	203	1,563	3,399	40,758
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	68	116	1,518
Person Years**	2.4	135.9	254.7	3,075.4
Removals for transplant	2	57	125	1,721

\* 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: 07/01/2017 - 06/30/2019

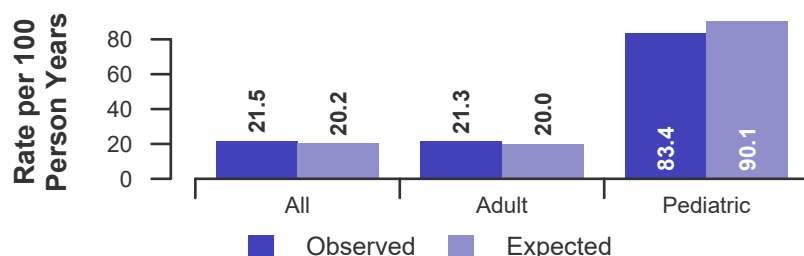


Figure B2. Transplant rate ratio estimate

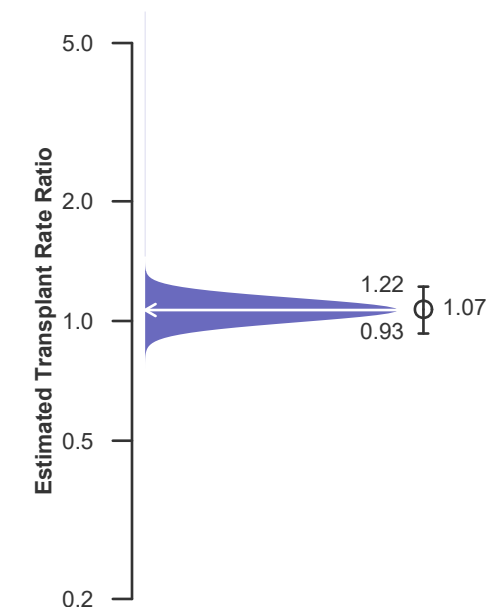
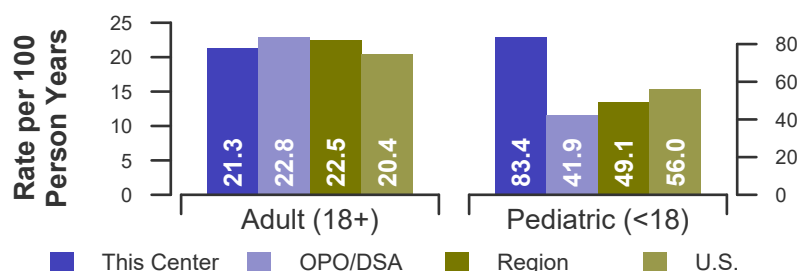


Figure B3. Observed adult (18+) and pediatric (<18) transplant rates: 07/01/2017 - 06/30/2019





## B. Waiting List Information

Table B4D. Deceased donor transplant rates: 07/01/2017 - 06/30/2019

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	531	3,762	7,978	102,722
Person Years**	953.5	6,983.1	15,377.6	202,385.3
Removals for Transplant	155	1,071	2,071	29,769
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	531	3,694	7,862	101,204
Person Years**	951.1	6,847.2	15,123.0	199,309.9
Removals for transplant	154	1,036	2,003	28,607
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	68	116	1,518
Person Years**	2.4	135.9	254.7	3,075.4
Removals for transplant	1	35	68	1,162

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

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

Figure B1D. Observed and expected deceased donor transplant rates: 07/01/2017 - 06/30/2019

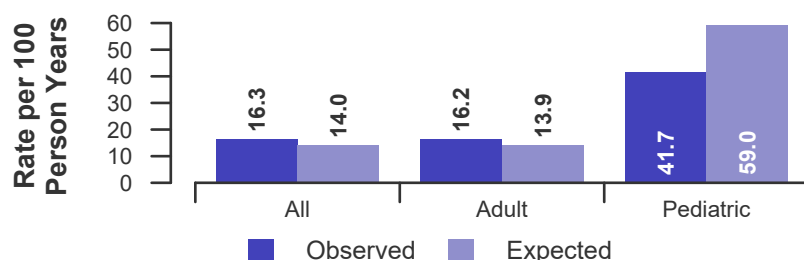


Figure B2D. Deceased donor transplant rate ratio estimate

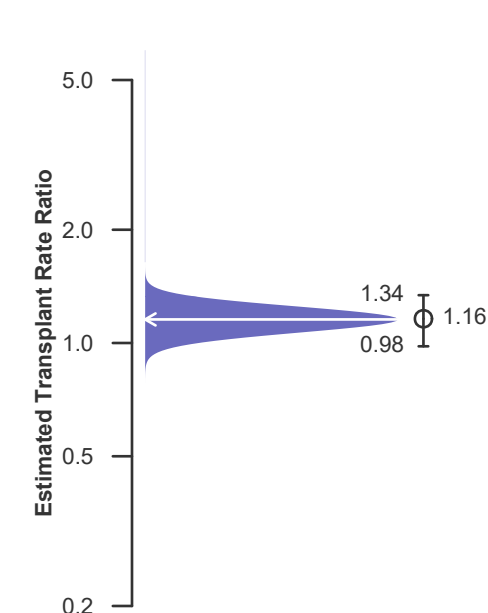
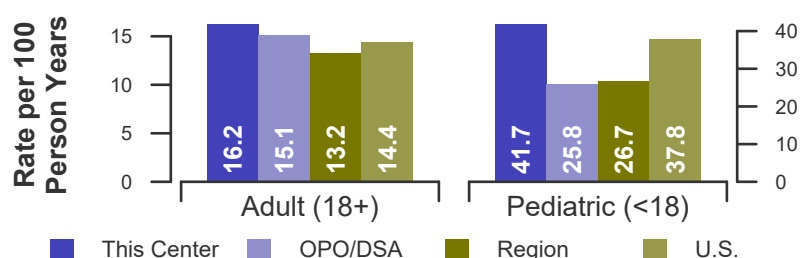


Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2017 - 06/30/2019





## B. Waiting List Information

Table B5. Waiting list mortality rates: 07/01/2017 - 06/30/2019

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	531	3,762	7,978	102,722
Person Years**	1,139.9	7,718.4	16,778.7	220,767.9
Number of deaths	39	382	787	10,969
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	531	3,694	7,862	101,204
Person Years**	1,137.5	7,582.4	16,523.9	217,592.8
Number of deaths	39	381	786	10,931
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	68	116	1,518
Person Years**	2.4	136.0	254.8	3,175.2
Number of deaths	0	1	1	38

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

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

Figure B4. Observed and expected waiting list mortality rates: 07/01/2017 - 06/30/2019

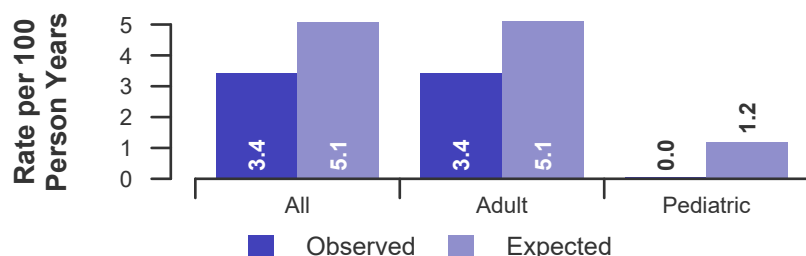


Figure B5. Waiting list mortality rate ratio estimate

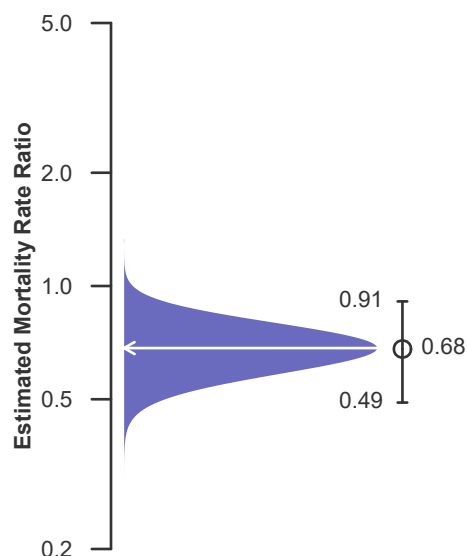
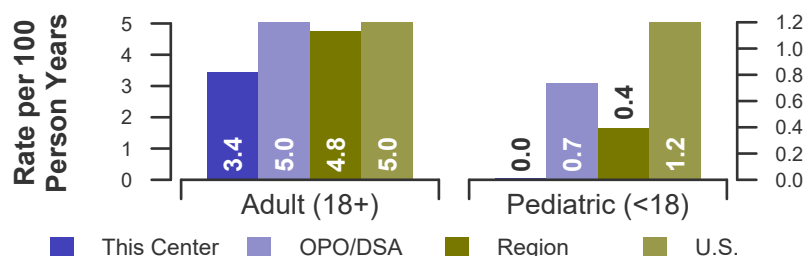


Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2017 - 06/30/2019





## B. Waiting List Information

**Table B6. Waiting list candidate status after listing**  
**Candidates registered on waiting list between 01/01/2017 and 12/31/2017**

Waiting list status (survival status)	This Center (N=223)			U.S. (N=36,696)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	79.4	65.9	57.4	77.9	64.9	55.0
<b>Died on the waiting list without transplant (%)</b>	0.9	1.8	2.2	1.2	2.2	3.1
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	1.8	2.7	3.1	0.7	1.5	2.4
Condition improved (status unknown)	0.0	0.0	0.0	0.1	0.2	0.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.0	0.1	0.2
Other	5.4	9.4	11.7	0.8	1.7	2.8
<b>Transplant (living donor from waiting list only) (%):</b>						
Functioning (alive)	4.5	7.2	5.8	6.6	10.0	8.4
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	2.2	0.1	0.4	3.9
<b>Transplant (deceased donor) (%):</b>						
Functioning (alive)	7.2	9.9	11.7	10.4	14.2	12.6
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	0.1	0.1	0.0
Died	0.0	0.4	0.4	0.2	0.4	0.7
Status Yet Unknown*	0.9	2.2	4.5	1.6	3.6	9.4
<b>Lost or Transferred (status unknown) (%)</b>	0.0	0.4	0.9	0.3	0.7	1.2
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.9	2.2	2.7	1.5	2.7	3.9
Total % known died or removed as unstable	2.7	4.9	5.8	2.1	4.2	6.3
Total % removed for transplant	12.6	19.7	24.7	18.9	28.7	35.1
Total % with known functioning transplant (alive)	11.7	17.0	17.5	17.0	24.2	21.0

\* 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 07/01/2013 and 06/30/2016

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
<b>All</b>	604	1.2	15.2	21.9	26.3	94,041	2.8	13.4	20.1	25.4
<b>Ethnicity/Race*</b>										
White	135	3.0	13.3	19.3	22.2	37,492	3.2	14.7	21.5	26.6
African-American	266	0.8	13.9	22.6	27.8	30,238	2.4	12.7	19.6	24.8
Hispanic/Latino	164	0.6	17.1	20.1	25.0	17,228	2.8	12.9	19.5	24.9
Asian	38	0.0	23.7	34.2	36.8	7,575	1.6	10.0	16.4	21.9
Other	1	0.0	0.0	0.0	0.0	1,508	2.7	15.7	22.1	27.5
Unknown	0	--	--	--	--	0	--	--	--	--
<b>Age</b>										
<2 years	0	--	--	--	--	145	6.2	31.7	49.0	62.1
2-11 years	2	0.0	50.0	50.0	50.0	807	7.2	47.5	62.5	70.6
12-17 years	2	0.0	100.0	100.0	100.0	1,365	7.5	49.1	61.7	67.7
18-34 years	57	1.8	12.3	19.3	22.8	9,544	2.3	13.4	22.3	29.9
35-49 years	174	0.0	8.6	15.5	21.8	23,967	2.4	12.1	19.1	24.9
50-64 years	251	1.2	13.9	20.3	24.7	40,579	2.9	12.5	18.6	23.3
65-69 years	78	1.3	23.1	29.5	33.3	12,055	2.7	12.5	18.3	22.7
70+ years	40	5.0	35.0	42.5	42.5	5,579	2.4	13.1	18.7	22.5
<b>Gender</b>										
Male	381	1.3	16.0	20.7	24.7	58,154	2.9	13.1	19.4	24.5
Female	223	0.9	13.9	23.8	29.1	35,887	2.6	13.9	21.3	26.8

\* 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 07/01/2013 and 06/30/2016

Characteristic	N	Percent transplanted at time periods since listing This Center				N	United States			
		30 day	1 year	2 years	3 years		30 day	1 year	2 years	3 years
<b>All</b>	604	1.2	15.2	21.9	26.3	94,041	2.8	13.4	20.1	25.4
<b>Blood Type</b>										
O	280	0.7	12.9	18.2	24.3	46,674	2.5	11.5	17.2	21.7
A	191	1.6	15.2	23.0	26.7	29,604	3.3	16.0	24.3	30.9
B	111	1.8	19.8	26.1	28.8	14,235	2.0	10.8	16.5	21.0
AB	22	0.0	22.7	36.4	36.4	3,528	4.6	26.5	38.3	45.3
<b>Previous Transplant</b>										
Yes	104	1.0	3.8	9.6	11.5	13,106	2.3	13.5	21.8	27.5
No	500	1.2	17.6	24.4	29.4	80,935	2.8	13.4	19.8	25.0
<b>Peak PRA/CPRA</b>										
0-9%	602	1.2	15.3	21.9	26.4	76,518	2.9	12.9	19.2	24.4
10-79%	1	0.0	0.0	0.0	0.0	10,354	2.0	13.4	21.0	26.8
80+%	1	0.0	0.0	0.0	0.0	7,085	2.2	17.8	28.1	33.7
Unknown	0	--	--	--	--	8	100.0	100.0	100.0	100.0
<b>Primary Disease*</b>										
Glomerular Diseases	79	0.0	8.9	21.5	24.1	16,899	2.1	14.2	22.6	29.4
Tubular & Interstitial Diseases	11	0.0	18.2	36.4	36.4	3,337	4.2	17.4	25.4	30.6
Polycystic Kidneys	32	0.0	6.2	6.2	6.2	6,182	1.6	11.9	19.4	26.3
Congenital, Familial, Metabolic	3	0.0	0.0	33.3	33.3	1,818	3.8	26.6	37.6	45.0
Diabetes	176	0.6	14.2	19.9	25.0	33,115	1.7	9.6	14.5	18.5
Renovascular & Vascular Diseases	0	--	--	--	--	135	4.4	15.6	23.7	28.9
Neoplasms	2	0.0	0.0	0.0	0.0	292	2.7	18.2	26.0	30.8
Hypertensive Nephrosclerosis	233	2.1	18.9	24.0	28.8	20,970	2.3	12.6	19.6	25.1
Other	68	1.5	17.6	25.0	32.4	10,890	8.0	22.4	30.1	35.0
Missing*	0	--	--	--	--	403	1.0	9.7	15.6	19.9

\* 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 07/01/2013 and 12/31/2018**

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	2.9	0.8	1	1.1
10th	4.4	2.9	2.8	2.9
25th	15.4	13.2	10.0	11.1
50th (median time to transplant)	Not Observed	Not Observed	44.2	50.3
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 06/30/2019. Calculated as the months after listing, during which the corresponding percent of all patients initially listed had received a transplant.



## B. Waiting List Information

**Table B10. Offer Acceptance Practices: 07/01/2018 - 06/30/2019**

Offers Acceptance Characteristics	This Center	OPO/DSA	Region	U.S.
<b>Overall</b>				
Number of Offers	8,486	51,996	96,458	1,657,991
Number of Acceptances	90	547	1,005	14,558
Expected Acceptances	104.9	616.9	1,198.5	14,546.9
Offer Acceptance Ratio*	0.86	0.89	0.84	1.00
95% Credible Interval**	[0.69, 1.05]	--	--	--
<b>Low-KDRI Donors (KDRI &lt; 1.05)</b>				
Number of Offers	1,663	10,538	20,459	231,877
Number of Acceptances	24	121	310	4,979
Expected Acceptances	40.3	187.5	431.0	4,980.4
Offer Acceptance Ratio*	0.61	0.65	0.72	1.00
95% Credible Interval**	[0.40, 0.87]	--	--	--
<b>Medium-KDRI Donors (1.05 &lt; KDRI &lt; 1.75)</b>				
Number of Offers	5,886	31,329	58,113	1,056,662
Number of Acceptances	52	326	552	7,967
Expected Acceptances	55.1	340.8	628.4	7,955.4
Offer Acceptance Ratio*	0.95	0.96	0.88	1.00
95% Credible Interval**	[0.71, 1.21]	--	--	--
<b>High-KDRI Donors (KDRI &gt; 1.75)</b>				
Number of Offers	937	10,129	17,886	369,452
Number of Acceptances	14	100	143	1,612
Expected Acceptances	9.5	88.7	139.2	1,611.1
Offer Acceptance Ratio*	1.40	1.12	1.03	1.00
95% Credible Interval**	[0.80, 2.16]	--	--	--
<b>Hard-to-Place Kidneys (Over 100 Offers)</b>				
Number of Offers	6,725	37,619	71,785	1,398,185
Number of Acceptances	10	97	121	2,091
Expected Acceptances	13.8	81.1	135.7	2,096.5
Offer Acceptance Ratio*	0.76	1.19	0.89	1.00
95% Credible Interval**	[0.39, 1.24]	--	--	--

\* The offer acceptance ratio estimates the relative offer acceptance practice of Rush University Medical Center (ILPL) compared to the national offer acceptance practice. A ratio above one indicates the program is more likely to accept an offer compared to national offer acceptance practices (e.g., an offer acceptance ratio of 1.25 indicates a 25% more likely to accept an offer), while a ratio below one indicates the program is less likely to accept an offer compared to national offer acceptance practices (e.g., an offer acceptance ratio of 0.75 indicates a 25% less likely to accept an offer).

\*\* As an example, the 95% Credible Interval for the overall offer acceptance ratio, [0.69, 1.05], indicates the location of ILPL's true offer acceptance ratio with 95% probability. The best estimate is 14% less likely to accept an offer compared to national acceptance behavior, but ILPL's performance could plausibly range from 31% reduced acceptance up to 5% higher acceptance.





## B. Waiting List Information

Figure B7. Offer acceptance: Overall

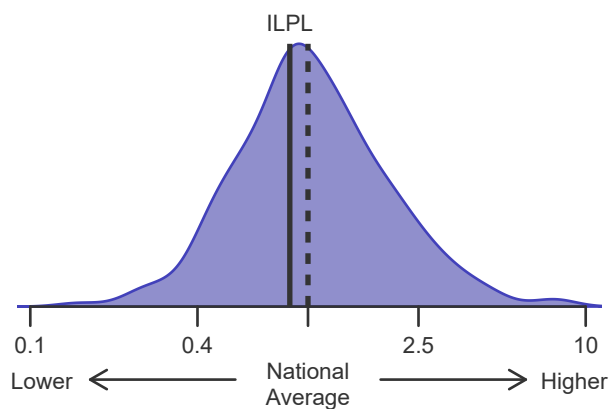


Figure B8. Offer acceptance: Low-KDRI

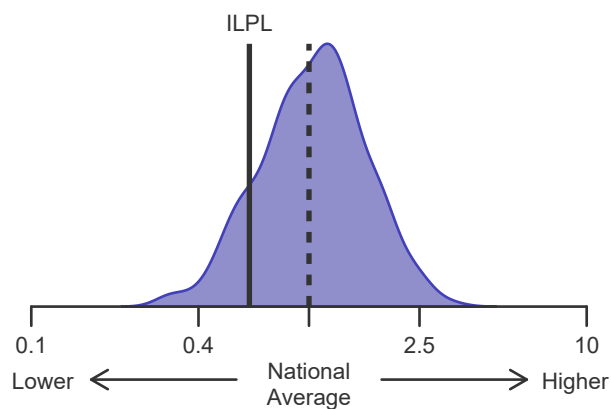


Figure B9. Offer acceptance: Medium-KDRI

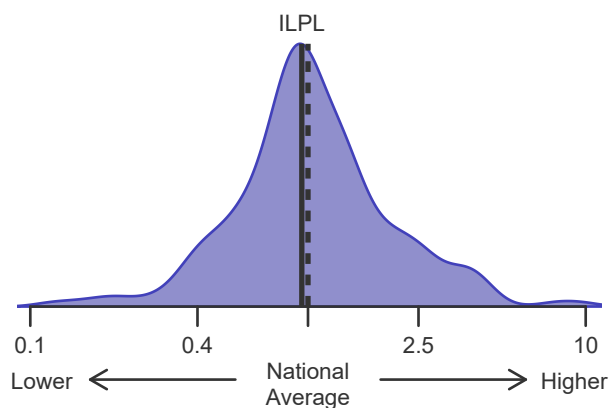


Figure B10. Offer acceptance: High-KDRI

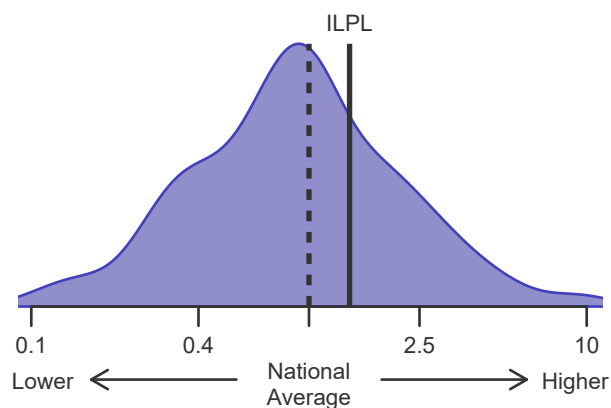
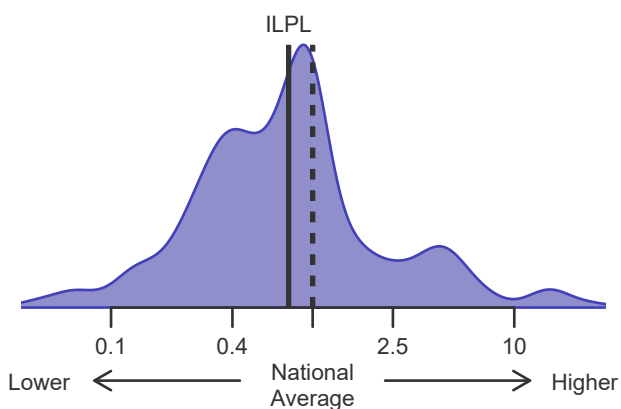


Figure B11. Offer acceptance: Offer number > 100





## C. Transplant Information

**Table C1D. Deceased donor transplant recipient demographic characteristics**

**Patients transplanted between 07/01/2018 and 06/30/2019**

Characteristic	Percentage in each category		
	Center (N=93)	Region (N=1,084)	U.S. (N=15,530)
<b>Ethnicity/Race (%)*</b>			
White	23.7	41.9	37.2
African-American	45.2	28.8	33.2
Hispanic/Latino	23.7	17.4	19.5
Asian	7.5	9.0	8.1
Other	0.0	2.9	1.9
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.0	0.1
2-11 years	1.1	0.8	1.2
12-17	0.0	1.5	1.8
18-34	5.4	9.5	9.7
35-49 years	21.5	23.3	23.8
50-64 years	36.6	45.1	40.7
65-69 years	18.3	12.2	13.5
70+ years	17.2	7.6	9.3
<b>Gender (%)</b>			
Male	69.9	61.2	60.0
Female	30.1	38.8	40.0

\* 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 C1L. Living donor transplant recipient demographic characteristics****Patients transplanted between 07/01/2018 and 06/30/2019**

Characteristic	Percentage in each category		
	Center (N=27)	Region (N=752)	U.S. (N=6,687)
<b>Ethnicity/Race (%)*</b>			
White	40.7	69.7	63.7
African-American	14.8	11.8	12.6
Hispanic/Latino	37.0	12.0	16.1
Asian	7.4	4.1	6.2
Other	0.0	2.4	1.4
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.1	0.1
2-11 years	3.7	2.4	2.0
12-17	0.0	1.7	1.7
18-34	22.2	14.4	16.2
35-49 years	25.9	24.3	26.2
50-64 years	33.3	37.0	35.9
65-69 years	7.4	11.4	9.9
70+ years	7.4	8.6	7.9
<b>Gender (%)</b>			
Male	63.0	60.2	62.6
Female	37.0	39.8	37.4

\* 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 C2D. Deceased donor transplant recipient medical characteristics****Patients transplanted between 07/01/2018 and 06/30/2019**

Characteristic	Percentage in each category		
	Center (N=93)	Region (N=1,084)	U.S. (N=15,530)
<b>Blood Type (%)</b>			
O	33.3	42.3	46.4
A	40.9	34.4	33.7
B	15.1	16.9	14.5
AB	10.8	6.5	5.4
<b>Previous Transplant (%)</b>			
Yes	23.7	16.1	13.0
No	76.3	83.9	87.0
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	57.0	60.2	59.3
10-79%	23.7	23.4	22.8
80+ %	19.4	16.3	17.9
Unknown	0.0	0.0	0.0
<b>Body Mass Index (%)</b>			
0-20	8.6	8.4	9.7
21-25	37.6	27.3	27.9
26-30	30.1	30.7	30.6
31-35	21.5	19.8	21.0
36-40	2.2	9.9	8.0
41+	0.0	2.0	1.4
Unknown	0.0	1.8	1.5
<b>Primary Disease (%)*</b>			
Glomerular Diseases	19.4	21.8	21.6
Tubular and Interstitial Disease	3.2	4.7	4.2
Polycystic Kidneys	3.2	6.5	7.5
Congenital, Familial, Metabolic	0.0	2.3	2.6
Diabetes	29.0	28.6	29.0
Renovascular & Vascular Diseases	0.0	0.3	0.2
Neoplasms	1.1	0.8	0.4
Hypertensive Nephrosclerosis	37.6	21.7	23.4
Other Kidney	6.5	12.8	10.8
Missing*	0.0	0.6	0.2

\* 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.



## C. Transplant Information

**Table C2L. Living donor transplant recipient medical characteristics****Patients transplanted between 07/01/2018 and 06/30/2019**

Characteristic	Percentage in each category		
	Center (N=27)	Region (N=752)	U.S. (N=6,687)
<b>Blood Type (%)</b>			
O	33.3	43.2	44.5
A	44.4	39.2	37.8
B	11.1	12.8	13.5
AB	11.1	4.8	4.2
<b>Previous Transplant (%)</b>			
Yes	22.2	13.0	10.9
No	77.8	87.0	89.1
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	55.6	71.1	75.0
10-79%	33.3	21.5	20.2
80+ %	11.1	7.0	4.7
Unknown	0.0	0.3	0.1
<b>Body Mass Index (%)</b>			
0-20	25.9	13.6	12.5
21-25	18.5	25.0	29.2
26-30	33.3	27.9	30.2
31-35	18.5	21.1	19.0
36-40	3.7	8.9	7.0
41+	0.0	3.3	1.3
Unknown	0.0	0.1	0.7
<b>Primary Disease (%)*</b>			
Glomerular Diseases	25.9	29.9	30.0
Tubular and Interstitial Disease	7.4	6.0	5.6
Polycystic Kidneys	11.1	12.6	12.3
Congenital, Familial, Metabolic	3.7	3.3	3.4
Diabetes	18.5	22.1	23.2
Renovascular & Vascular Diseases	0.0	0.0	0.3
Neoplasms	0.0	0.8	0.6
Hypertensive Nephrosclerosis	14.8	14.1	15.1
Other Kidney	18.5	10.8	9.2
Missing*	0.0	0.4	0.3

\* 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 07/01/2018 and 06/30/2019**

Donor Characteristic	Percentage in each category		
	Center (N=93)	Region (N=1,084)	U.S. (N=15,530)
<b>Cause of Death (%)</b>			
Deceased: Stroke	26.9	25.4	23.5
Deceased: MVA	11.8	13.2	14.2
Deceased: Other	61.3	61.4	62.2
<b>Ethnicity/Race (%)*</b>			
White	65.6	71.7	67.6
African-American	18.3	16.1	13.7
Hispanic/Latino	14.0	9.8	14.8
Asian	2.2	1.8	2.6
Other	0.0	0.7	1.3
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	1.8	0.9
2-11 years	1.1	2.9	2.9
12-17	2.2	3.8	4.1
18-34	22.6	29.6	32.8
35-49 years	45.2	30.3	32.1
50-64 years	25.8	29.1	24.5
65-69 years	3.2	1.9	2.0
70+ years	0.0	0.6	0.6
<b>Gender (%)</b>			
Male	61.3	61.0	61.2
Female	38.7	39.0	38.8
<b>Blood Type (%)</b>			
O	35.5	44.4	48.3
A	43.0	35.2	36.2
B	15.1	15.7	12.0
AB	6.5	4.7	3.5
Unknown	0.0	0.0	0.0
No	83.9	85.3	86.3

\* 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%.



## C. Transplant Information

**Table C3L. Living donor characteristics****Transplants performed between 07/01/2018 and 06/30/2019**

Donor Characteristic	Percentage in each category		
	Center (N=27)	Region (N=752)	U.S. (N=6,687)
<b>Ethnicity/Race (%)*</b>			
White	59.3	74.1	69.8
African-American	7.4	8.9	8.9
Hispanic/Latino	25.9	12.0	15.1
Asian	7.4	3.9	4.6
Other	0.0	1.2	1.6
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	44.4	27.1	26.3
35-49 years	25.9	36.0	38.9
50-64 years	25.9	31.4	30.2
65-69 years	0.0	3.7	3.5
70+ years	3.7	1.7	1.1
<b>Gender (%)</b>			
Male	44.4	41.1	34.9
Female	55.6	58.9	65.1
<b>Blood Type (%)</b>			
O	48.1	60.4	63.0
A	37.0	30.7	27.7
B	14.8	7.4	8.1
AB	0.0	1.5	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 07/01/2018 and 06/30/2019**

Transplant Characteristic	Center (N=93)	Percentage in each category Region (N=1,084)	U.S. (N=15,530)
<b>Cold Ischemic Time (Hours): Local (%)</b>			
Deceased: 0-11 hr	28.9	35.1	34.8
Deceased: 12-21 hr	66.3	53.5	47.4
Deceased: 22-31 hr	4.8	10.7	14.4
Deceased: 32-41 hr	0.0	0.2	1.8
Deceased: 42+ hr	0.0	0.0	0.7
Not Reported	0.0	0.5	0.9
<b>Cold Ischemic Time (Hours): Shared (%)</b>			
Deceased: 0-11 hr	10.0	12.8	8.7
Deceased: 12-21 hr	90.0	59.7	39.7
Deceased: 22-31 hr	0.0	25.1	35.8
Deceased: 32-41 hr	0.0	2.1	11.5
Deceased: 42+ hr	0.0	0.0	3.6
Not Reported	0.0	0.4	0.8
<b>Level of Mismatch (%)</b>			
A Locus Mismatches (%)			
0	8.6	13.3	11.7
1	35.5	37.0	38.4
2	54.8	48.3	49.3
Not Reported	1.1	1.4	0.5
B Locus Mismatches (%)			
0	7.5	9.2	7.5
1	15.1	23.1	24.2
2	76.3	66.3	67.8
Not Reported	1.1	1.4	0.5
DR Locus Mismatches (%)			
0	16.1	18.3	16.6
1	47.3	44.5	47.4
2	35.5	35.9	35.4
Not Reported	1.1	1.4	0.5
Total Mismatches (%)			
0	3.2	6.3	4.7
1	1.1	1.5	1.3
2	4.3	4.0	4.6
3	9.7	13.0	13.5
4	24.7	26.8	27.7
5	41.9	32.6	32.5
6	14.0	14.6	15.2
Not Reported	1.1	1.4	0.5
<b>Procedure Type (%)</b>			
Kidney alone	96.8	92.7	94.1
Kidney and another organ	3.2	7.3	5.9
<b>Dialysis in First Week After Transplant (%)</b>			
Yes	32.3	27.3	29.6
No	67.7	72.7	70.1
Not Reported	0.0	0.0	0.4
<b>Sharing (%)</b>			
Local	89.2	77.6	68.1
Shared	10.8	22.4	31.9
<b>Median Time in Hospital After Transplant*</b>	3.0 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 07/01/2018 and 06/30/2019**

Transplant Characteristic	Percentage in each category		
	Center (N=27)	Region (N=752)	U.S. (N=6,687)
<b>Relation with Donor (%)</b>			
Related	40.7	40.3	40.0
Unrelated	59.3	59.7	59.8
Not Reported	0.0	0.0	0.1
<b>Level of Mismatch (%)</b>			
A Locus Mismatches (%)			
0	33.3	18.2	16.9
1	44.4	52.0	48.9
2	22.2	29.4	30.8
Not Reported	0.0	0.4	3.4
B Locus Mismatches (%)			
0	14.8	11.0	10.3
1	48.1	44.1	41.9
2	37.0	44.4	44.5
Not Reported	0.0	0.4	3.4
DR Locus Mismatches (%)			
0	25.9	17.8	15.8
1	48.1	51.6	48.1
2	25.9	30.2	32.8
Not Reported	0.0	0.4	3.4
Total Mismatches (%)			
0	11.1	5.9	5.2
1	7.4	3.7	3.6
2	18.5	14.2	12.4
3	18.5	23.4	22.5
4	14.8	19.3	18.0
5	25.9	22.5	22.5
6	3.7	10.6	12.5
Not Reported	0.0	0.4	3.4
<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	3.7	2.3	3.1
No	96.3	97.7	96.4
Not Reported	0.0	0.0	0.5
<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

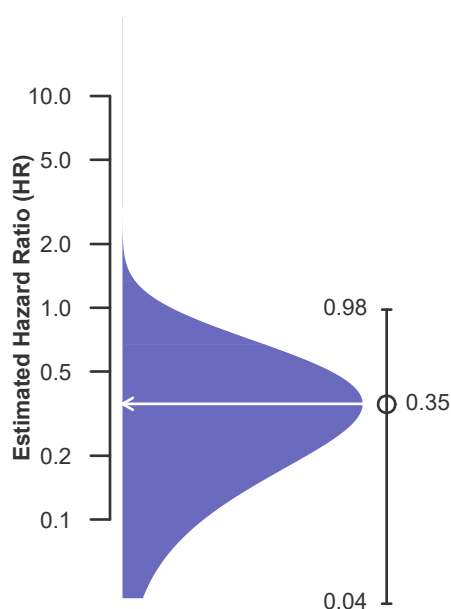
**Table C5. Adult (18+) 1-month survival with a functioning graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	242	46,453
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	98.61%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.49%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	645
Number of expected graft failures (including deaths) during the first month after transplant	3.69	--
Estimated hazard ratio*	0.35	--
95% credible interval for the hazard ratio**	[0.04, 0.98]	--

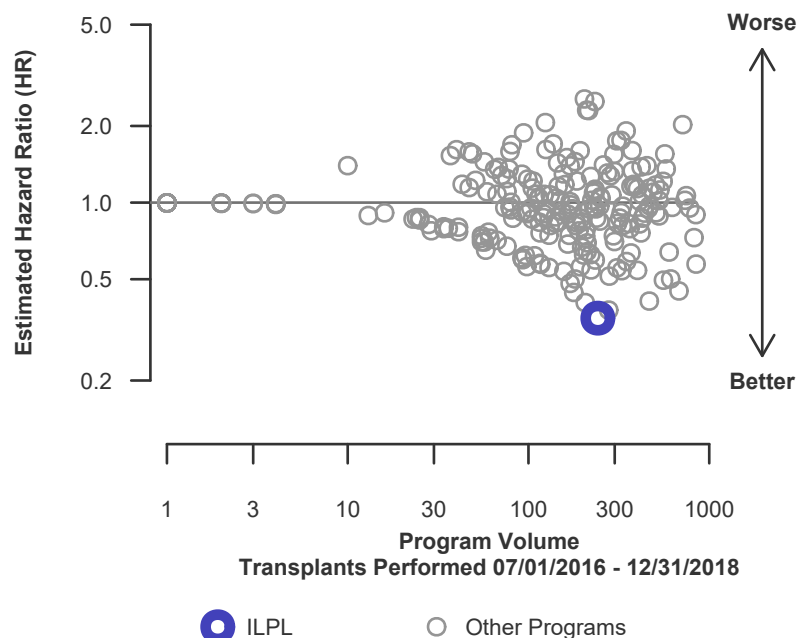
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.04, 0.98], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 65% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 96% reduced risk up to 2% reduced 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 07/01/2016 and 12/31/2018**

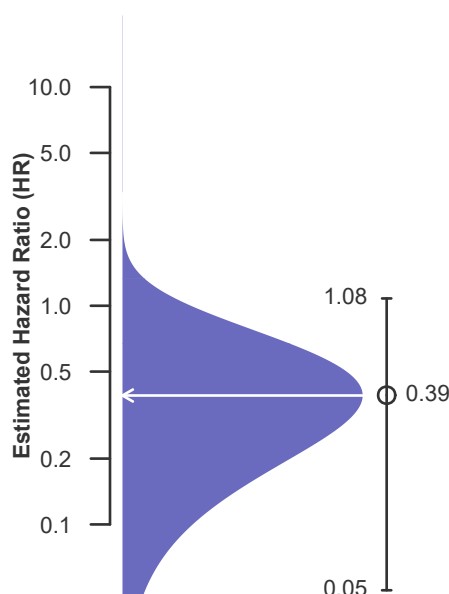
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	176	31,966
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	98.32%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.23%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	538
Number of expected graft failures (including deaths) during the first month after transplant	3.15	--
Estimated hazard ratio*	0.39	--
95% credible interval for the hazard ratio**	[0.05, 1.08]	--

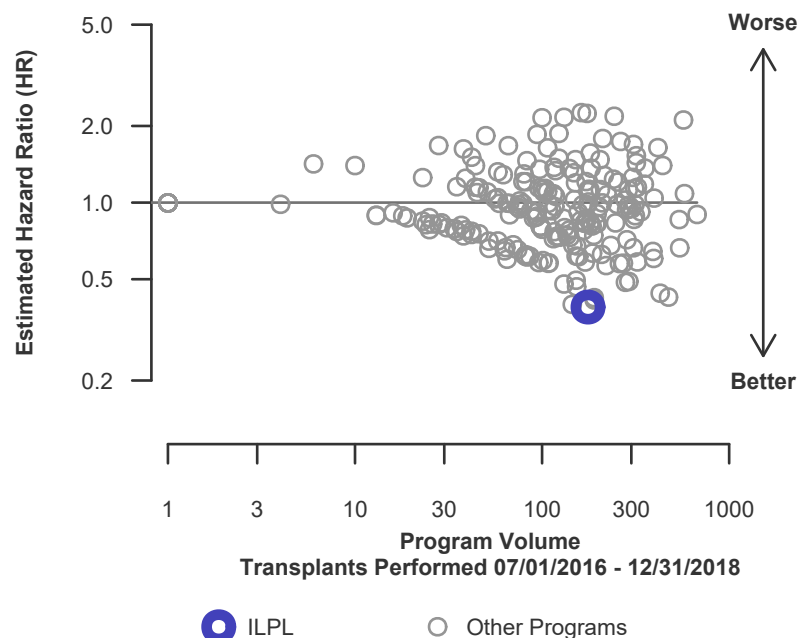
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.05, 1.08], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 61% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 95% reduced risk up to 8% 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 07/01/2016 and 12/31/2018**

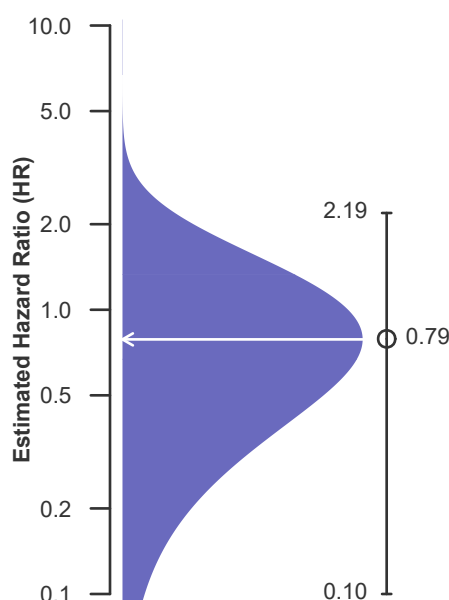
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	66	14,487
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.26%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.18%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	107
Number of expected graft failures (including deaths) during the first month after transplant	0.54	--
Estimated hazard ratio*	0.79	--
95% credible interval for the hazard ratio**	[0.10, 2.19]	--

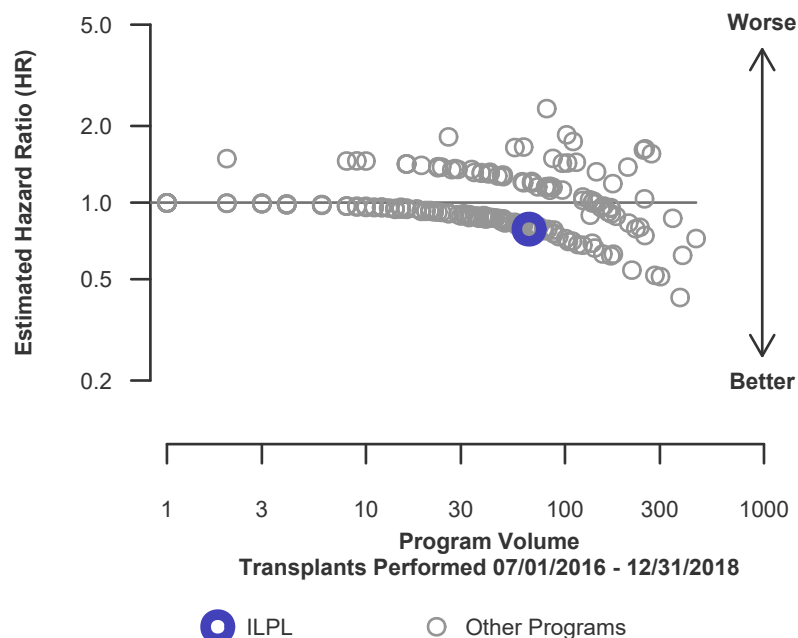
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.10, 2.19], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 21% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 90% reduced risk up to 119% 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

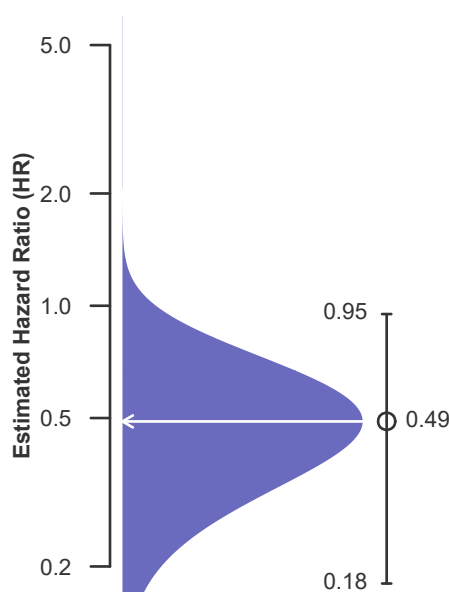
**Table C6. Adult (18+) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	242	46,453
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	98.20%	95.90%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	95.52%	--
Number of observed graft failures (including deaths) during the first year after transplant	4	1,787
Number of expected graft failures (including deaths) during the first year after transplant	10.25	--
Estimated hazard ratio*	0.49	--
95% credible interval for the hazard ratio**	[0.18, 0.95]	--

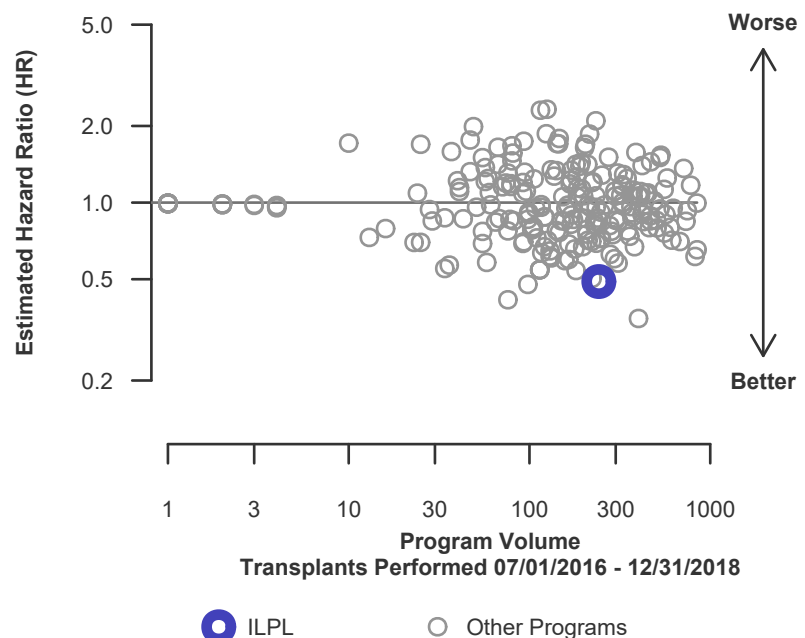
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.18, 0.95], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 51% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 82% reduced risk up to 5% 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

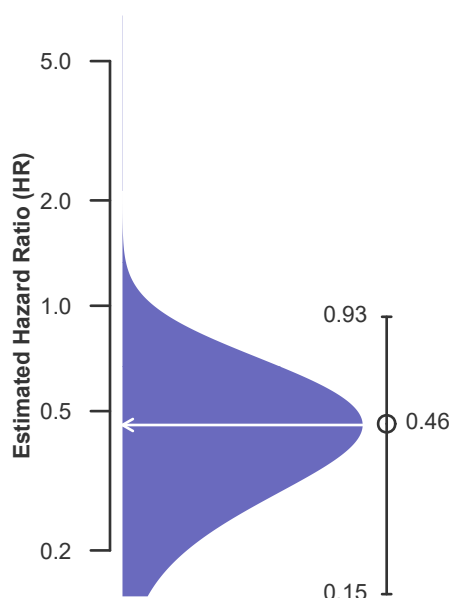
**Table C6D. Adult (18+) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	176	31,966
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	98.30%	94.91%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	94.63%	--
Number of observed graft failures (including deaths) during the first year after transplant	3	1,529
Number of expected graft failures (including deaths) during the first year after transplant	8.96	--
Estimated hazard ratio*	0.46	--
95% credible interval for the hazard ratio**	[0.15, 0.93]	--

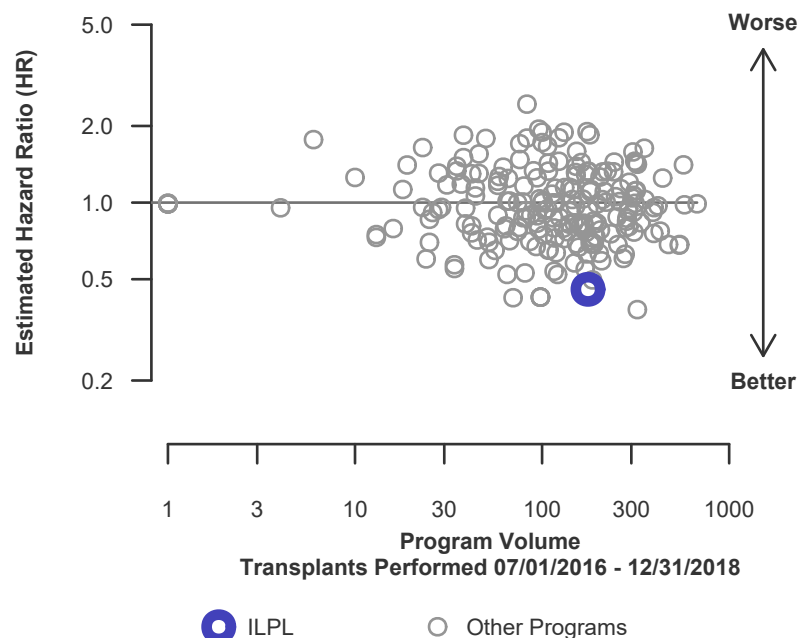
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.15, 0.93], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 54% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 85% reduced risk up to 7% reduced 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 07/01/2016 and 12/31/2018**

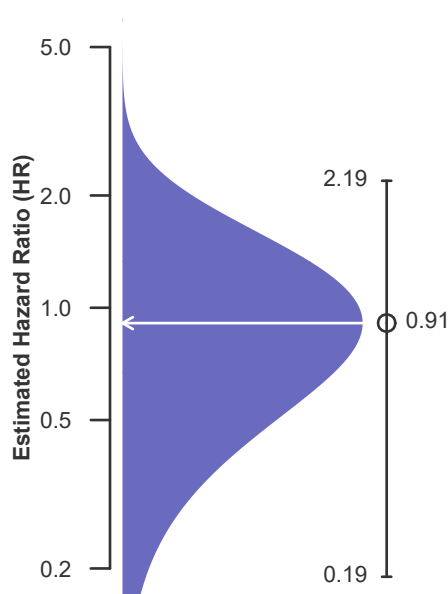
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	66	14,487
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	97.96%	98.09%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	97.88%	--
Number of observed graft failures (including deaths) during the first year after transplant	1	258
Number of expected graft failures (including deaths) during the first year after transplant	1.30	--
Estimated hazard ratio*	0.91	--
95% credible interval for the hazard ratio**	[0.19, 2.19]	--

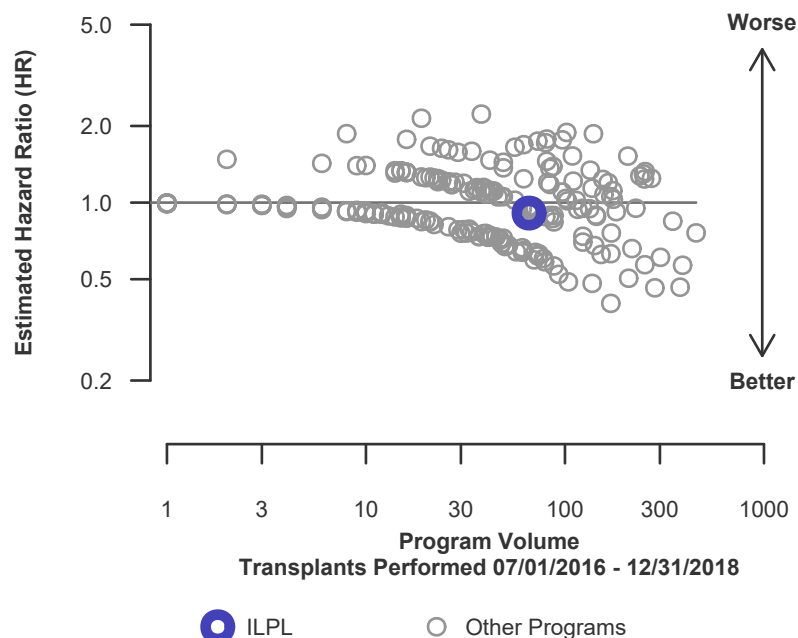
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.19, 2.19], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 9% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 81% reduced risk up to 119% 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

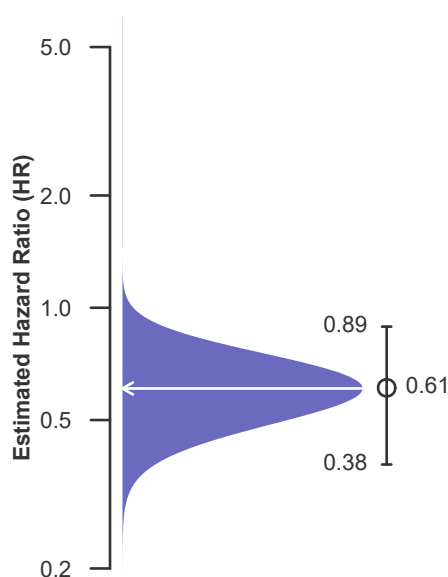
**Table C7. Adult (18+) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2014 and 06/30/2016**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	240	40,310
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	92.08%	89.02%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	86.87%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	19	4,426
Number of expected graft failures (including deaths) during the first 3 years after transplant	32.56	--
Estimated hazard ratio*	0.61	--
95% credible interval for the hazard ratio**	[0.38, 0.89]	--

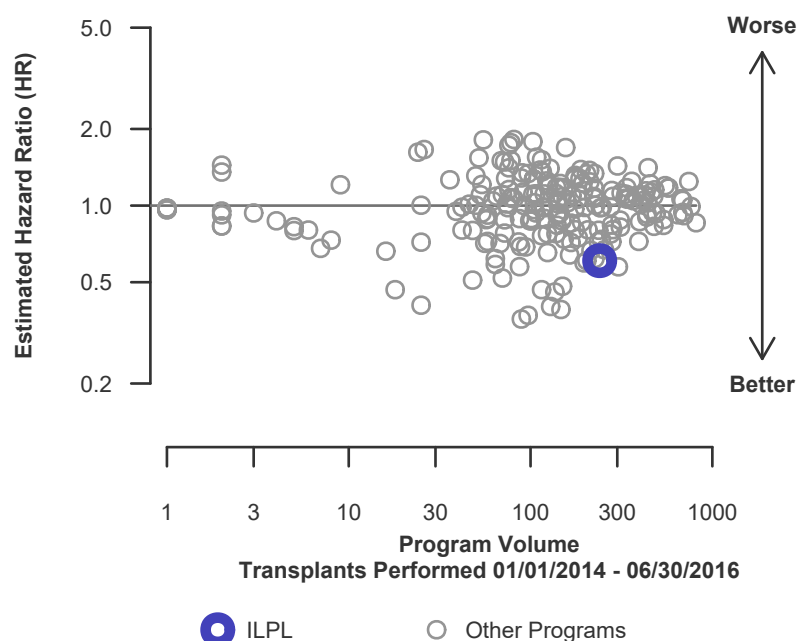
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.38, 0.89], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 39% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 62% reduced risk up to 11% reduced 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

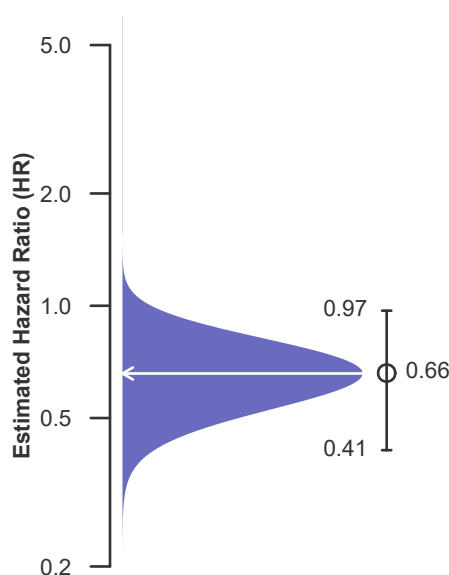
**Table C7D. Adult (18+) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2014 and 06/30/2016**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	197	27,101
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	90.36%	86.62%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	85.30%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	19	3,626
Number of expected graft failures (including deaths) during the first 3 years after transplant	29.90	--
Estimated hazard ratio*	0.66	--
95% credible interval for the hazard ratio**	[0.41, 0.97]	--

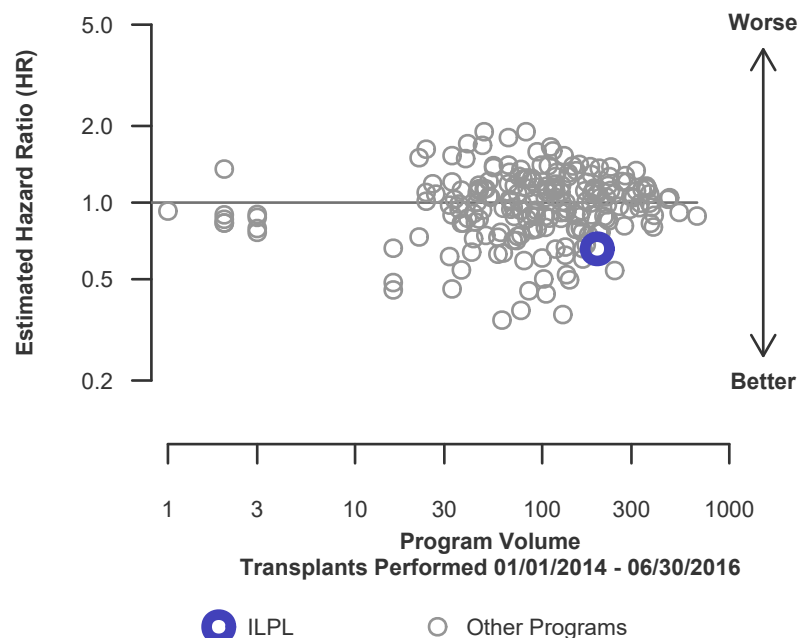
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.41, 0.97], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 34% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 59% reduced risk up to 3% reduced 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 01/01/2014 and 06/30/2016**

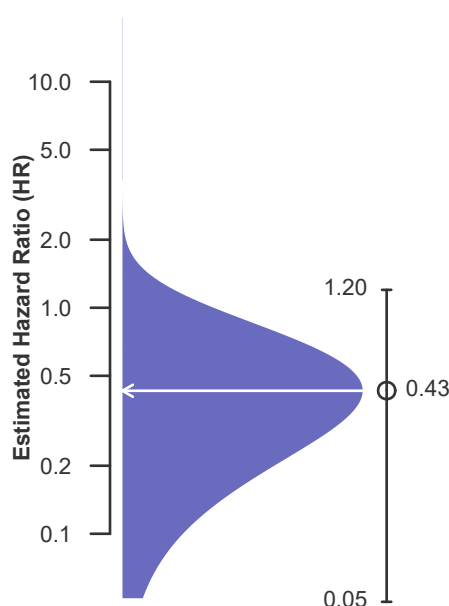
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	43	13,209
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	100.00%	93.94%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	94.06%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	0	800
Number of expected graft failures (including deaths) during the first 3 years after transplant	2.66	--
Estimated hazard ratio*	0.43	--
95% credible interval for the hazard ratio**	[0.05, 1.20]	--

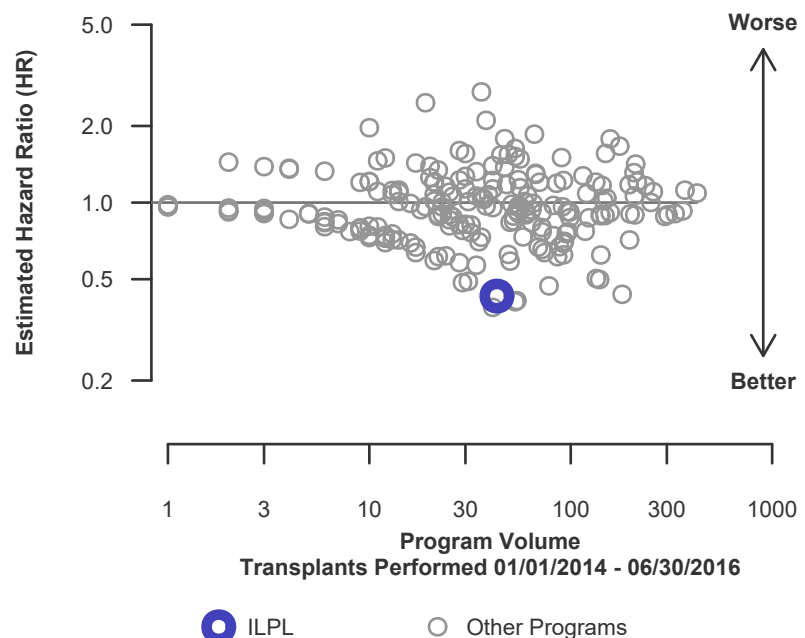
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.05, 1.20], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 57% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 95% reduced risk up to 20% 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 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C8D. Pediatric (<18) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C8L. Pediatric (<18) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C9. Pediatric (<18) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C9D. Pediatric (<18) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C9L. Pediatric (<18) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018





## C. Transplant Information

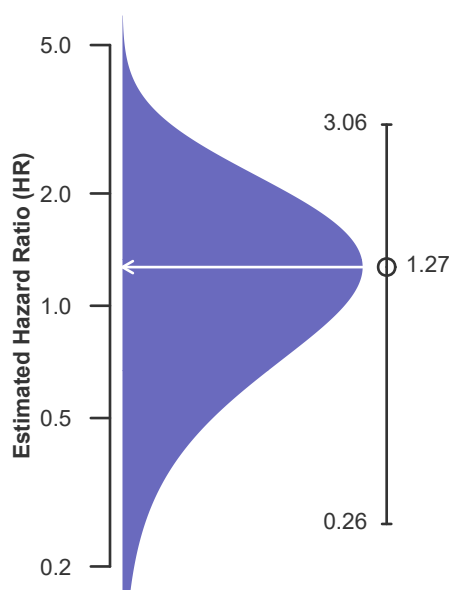
**Table C10. Pediatric (<18) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2014 and 06/30/2016**  
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	4	2,039
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	75.00%	92.59%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	90.74%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	1	151
Number of expected graft failures (including deaths) during the first 3 years after transplant	0.36	--
Estimated hazard ratio*	1.27	--
95% credible interval for the hazard ratio**	[0.26, 3.06]	--

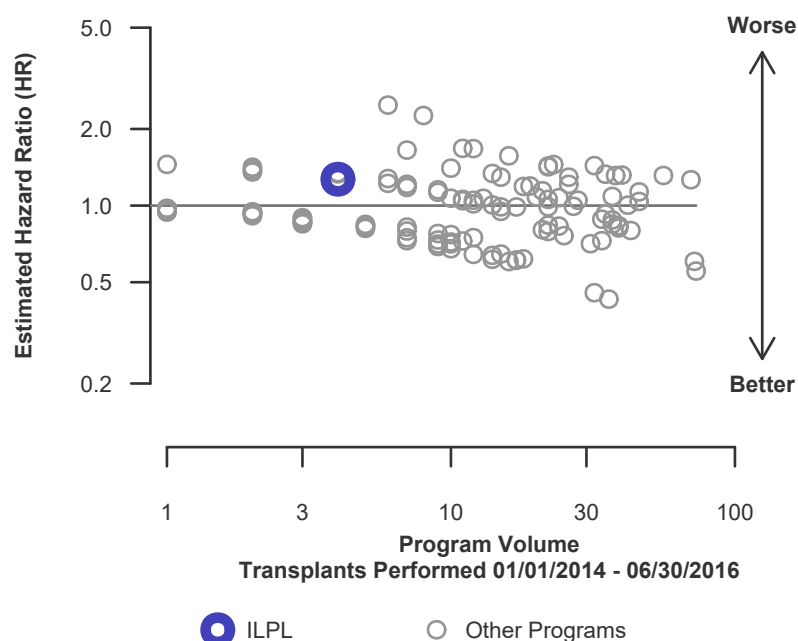
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.26, 3.06], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 27% higher risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 74% reduced risk up to 206% increased risk.

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



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





## C. Transplant Information

**Table C10D. Pediatric (<18) 3-year survival with a functioning deceased donor graft**

**Single organ transplants performed between 01/01/2014 and 06/30/2016**

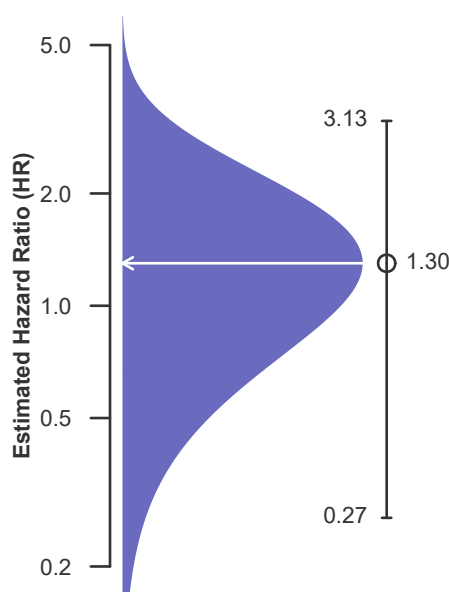
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	3	1,374
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	66.67%	91.63%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	89.45%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	1	115
Number of expected graft failures (including deaths) during the first 3 years after transplant	0.31	--
Estimated hazard ratio*	1.30	--
95% credible interval for the hazard ratio**	[0.27, 3.13]	--

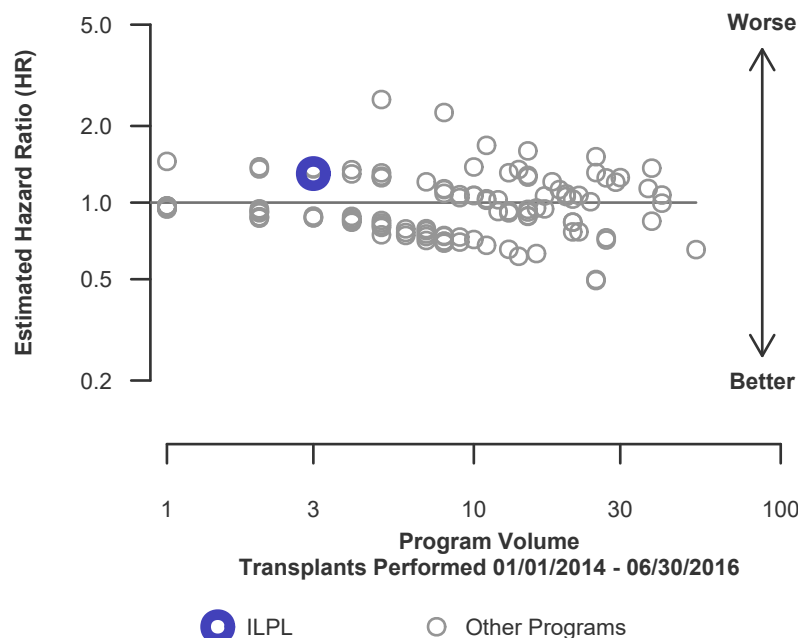
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.27, 3.13], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 30% higher risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 73% reduced risk up to 213% increased risk.

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



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





## C. Transplant Information

**Table C10L. Pediatric (<18) 3-year survival with a functioning living donor graft**

**Single organ transplants performed between 01/01/2014 and 06/30/2016**

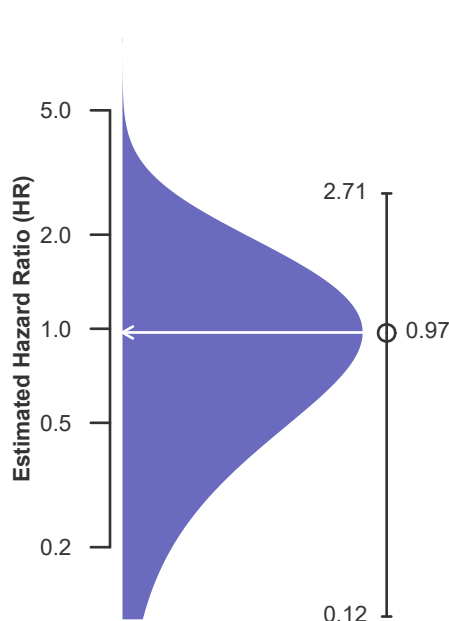
**Deaths and retransplants are considered graft failures**

	ILPL	U.S.
Number of transplants evaluated	1	665
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	100.00%	94.59%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	94.59%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	0	36
Number of expected graft failures (including deaths) during the first 3 years after transplant	0.06	--
Estimated hazard ratio*	0.97	--
95% credible interval for the hazard ratio**	[0.12, 2.71]	--

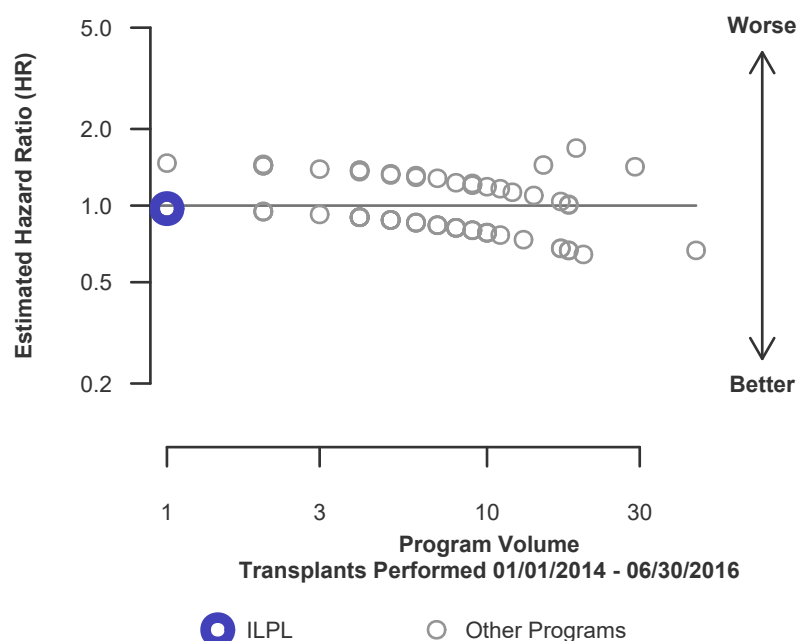
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.12, 2.71], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 3% lower risk of graft failure compared to an average program, but ILPL's performance could plausibly range from 88% reduced risk up to 171% increased risk.

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



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





## C. Transplant Information

**Table C11. Adult (18+) 1-month patient survival**

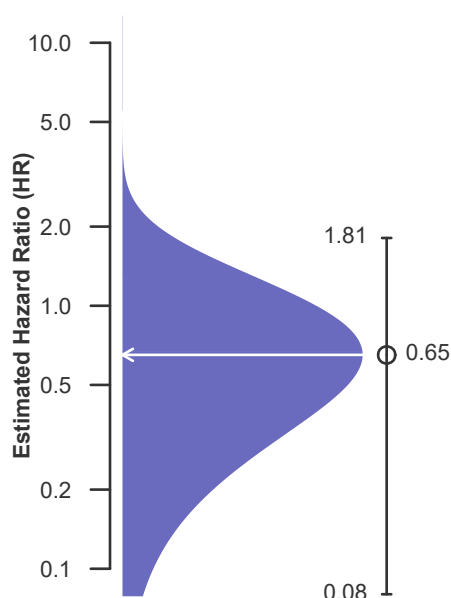
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	201	40,946
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.57%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.47%	--
Number of observed deaths during the first month after transplant	0	178
Number of expected deaths during the first month after transplant	1.07	--
Estimated hazard ratio*	0.65	--
95% credible interval for the hazard ratio**	[0.08, 1.81]	--

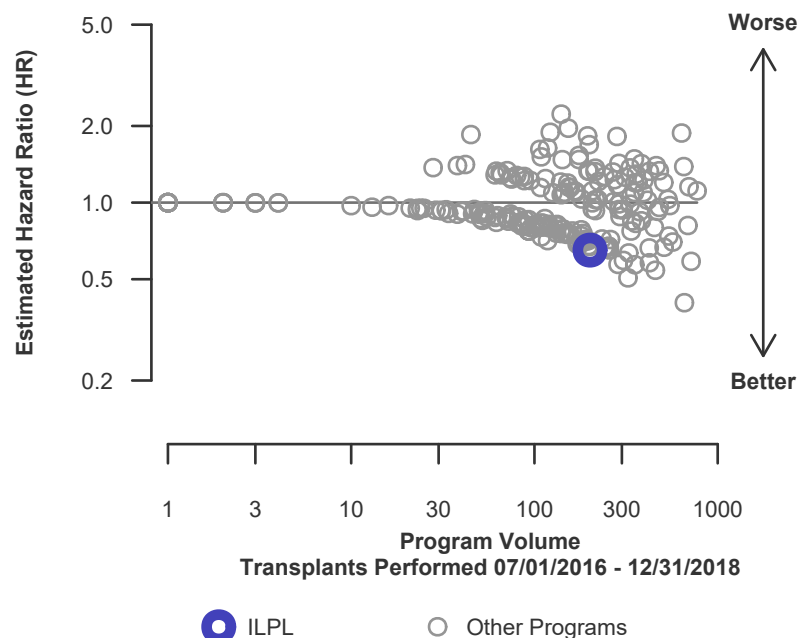
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.08, 1.81], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 35% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 92% reduced risk up to 81% 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 07/01/2016 and 12/31/2018**

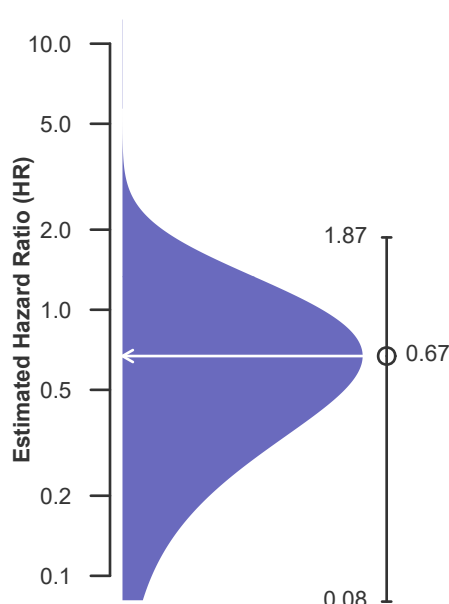
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	149	27,873
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.44%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.34%	--
Number of observed deaths during the first month after transplant	0	155
Number of expected deaths during the first month after transplant	0.99	--
Estimated hazard ratio*	0.67	--
95% credible interval for the hazard ratio**	[0.08, 1.87]	--

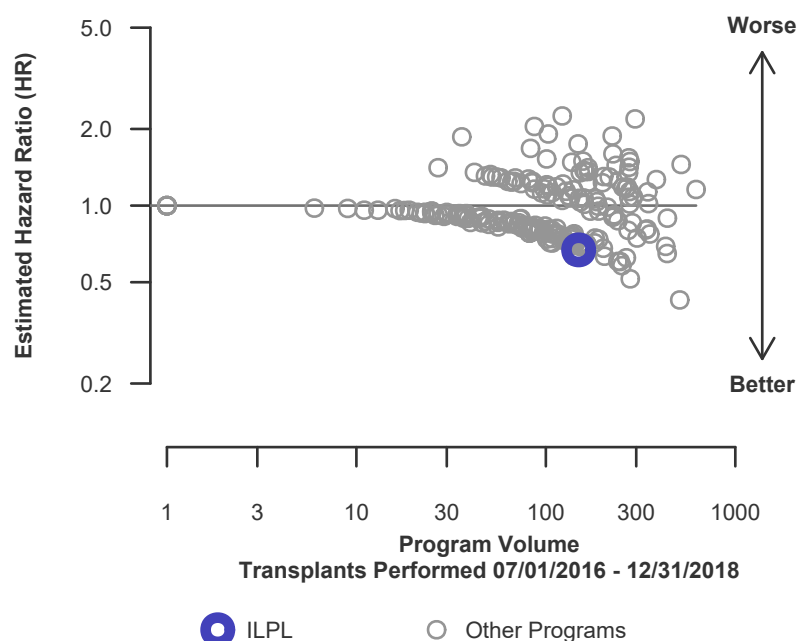
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.08, 1.87], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 33% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 92% reduced risk up to 87% 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 07/01/2016 and 12/31/2018**

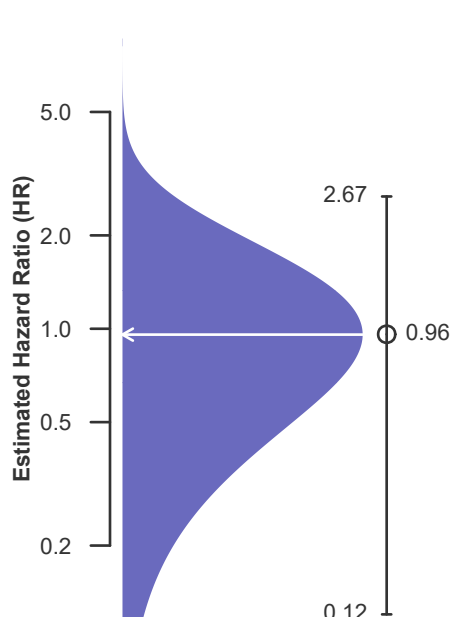
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	52	13,073
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.82%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.83%	--
Number of observed deaths during the first month after transplant	0	23
Number of expected deaths during the first month after transplant	0.09	--
Estimated hazard ratio*	0.96	--
95% credible interval for the hazard ratio**	[0.12, 2.67]	--

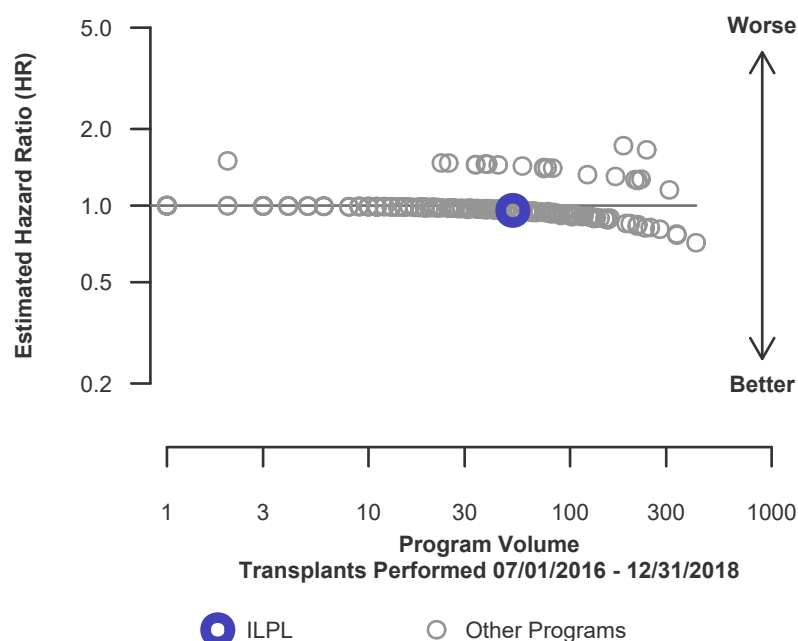
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.12, 2.67], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 4% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 88% reduced risk up to 167% 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 07/01/2016 and 12/31/2018

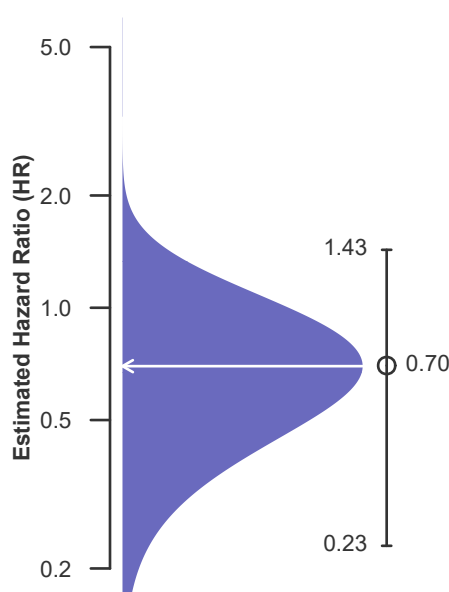
Retransplants excluded

	ILPL	U.S.
Number of transplants evaluated	201	40,946
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	98.51%	97.71%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	97.19%	--
Number of observed deaths during the first year after transplant	3	856
Number of expected deaths during the first year after transplant	5.17	--
Estimated hazard ratio*	0.70	--
95% credible interval for the hazard ratio**	[0.23, 1.43]	--

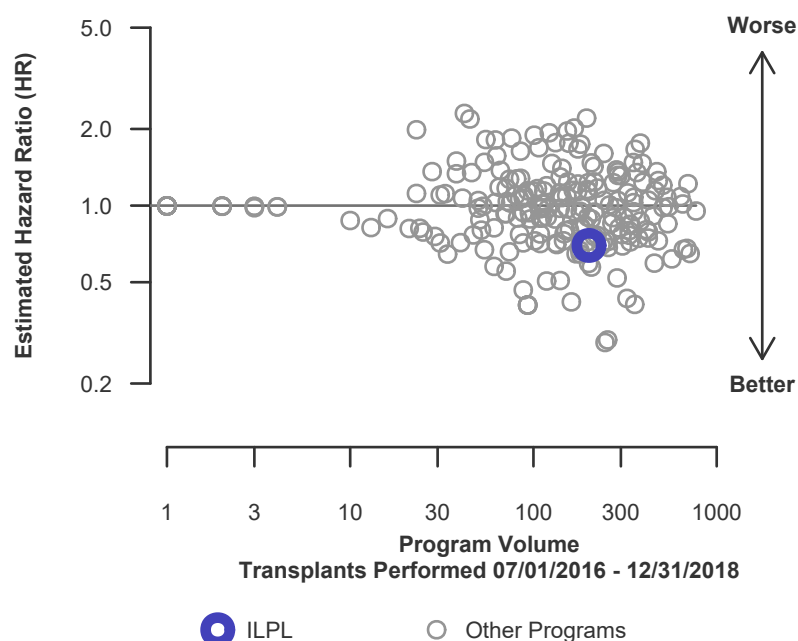
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.23, 1.43], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 30% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 77% reduced risk up to 43% 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 07/01/2016 and 12/31/2018**

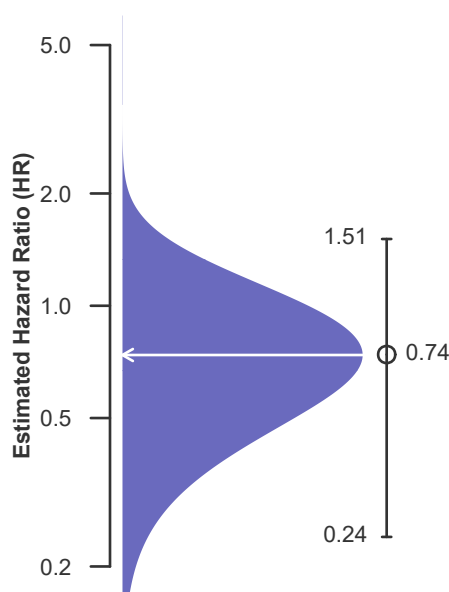
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	149	27,873
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	97.99%	97.05%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.50%	--
Number of observed deaths during the first year after transplant	3	751
Number of expected deaths during the first year after transplant	4.78	--
Estimated hazard ratio*	0.74	--
95% credible interval for the hazard ratio**	[0.24, 1.51]	--

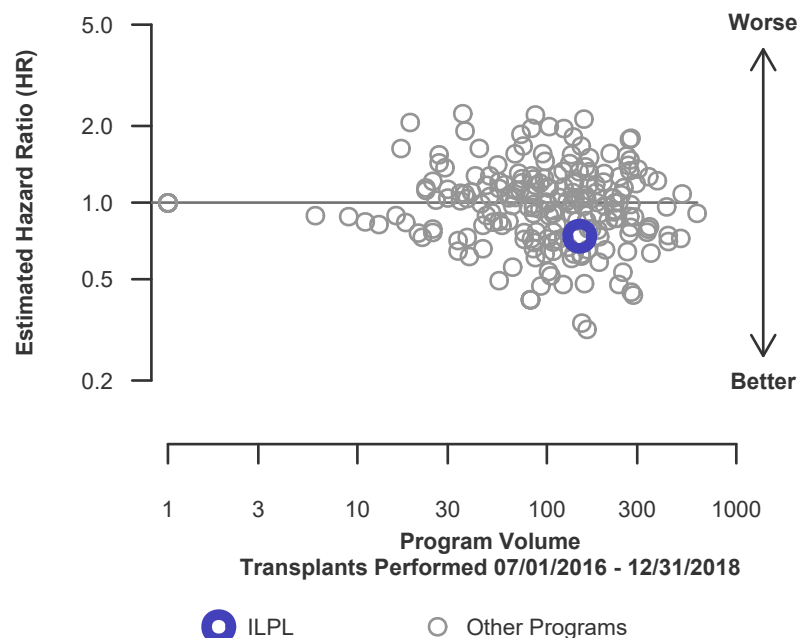
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.24, 1.51], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 26% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 76% reduced risk up to 51% 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 07/01/2016 and 12/31/2018**

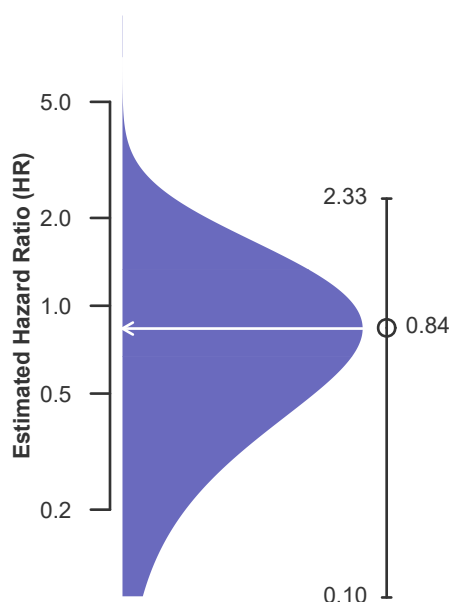
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	52	13,073
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	99.12%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	99.14%	--
Number of observed deaths during the first year after transplant	0	105
Number of expected deaths during the first year after transplant	0.39	--
Estimated hazard ratio*	0.84	--
95% credible interval for the hazard ratio**	[0.10, 2.33]	--

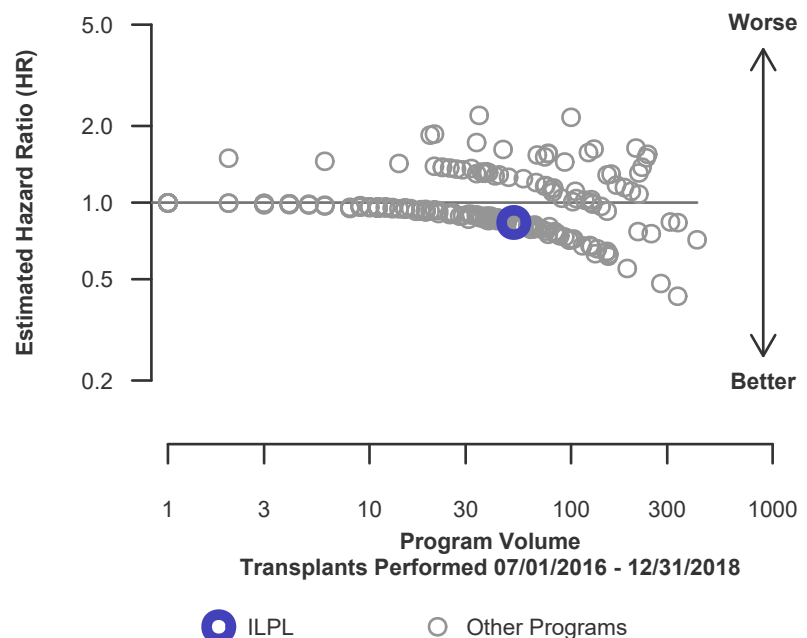
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.10, 2.33], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 16% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 90% reduced risk up to 133% 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 01/01/2014 and 06/30/2016

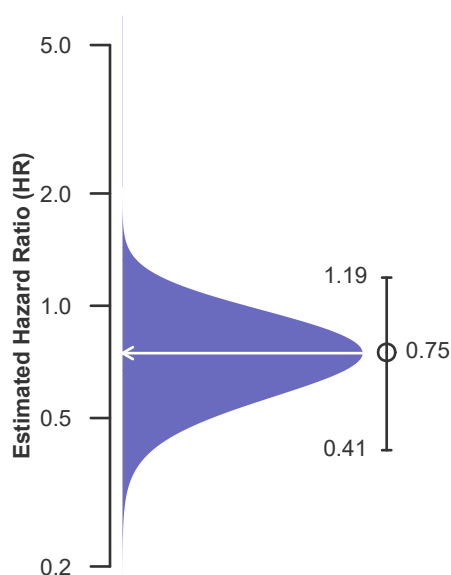
Retransplants excluded

	ILPL	U.S.
Number of transplants evaluated	214	34,940
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	94.39%	93.49%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	92.28%	--
Number of observed deaths during the first 3 years after transplant	12	2,276
Number of expected deaths during the first 3 years after transplant	16.76	--
Estimated hazard ratio*	0.75	--
95% credible interval for the hazard ratio**	[0.41, 1.19]	--

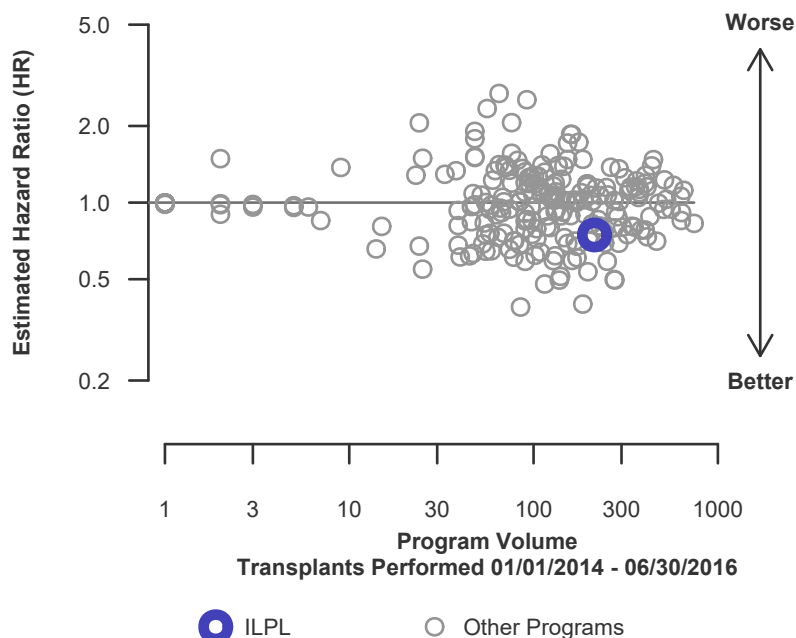
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.41, 1.19], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 25% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 59% reduced risk up to 19% 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 01/01/2014 and 06/30/2016

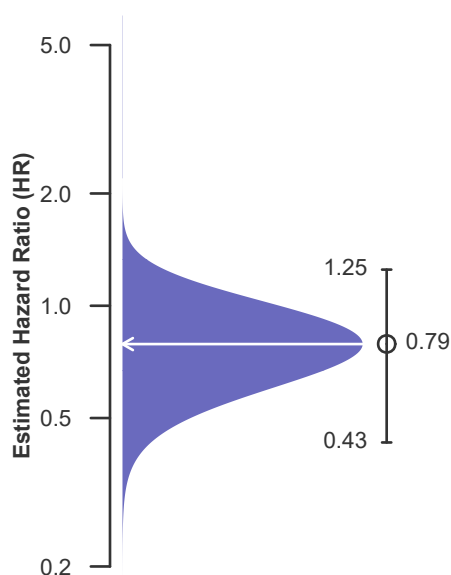
Retransplants excluded

	ILPL	U.S.
Number of transplants evaluated	177	23,108
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	93.22%	91.86%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	91.22%	--
Number of observed deaths during the first 3 years after transplant	12	1,880
Number of expected deaths during the first 3 years after transplant	15.74	--
Estimated hazard ratio*	0.79	--
95% credible interval for the hazard ratio**	[0.43, 1.25]	--

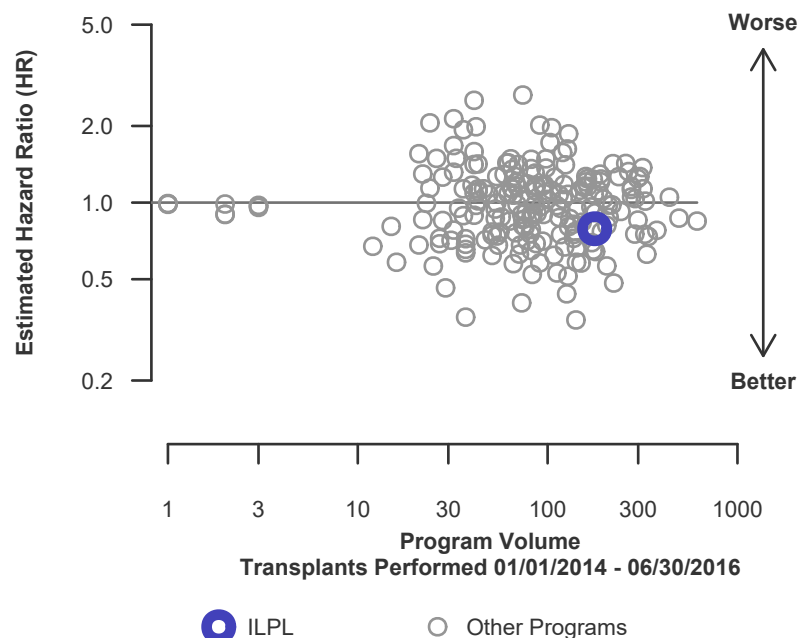
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.43, 1.25], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 21% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 57% reduced risk up to 25% 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 01/01/2014 and 06/30/2016**

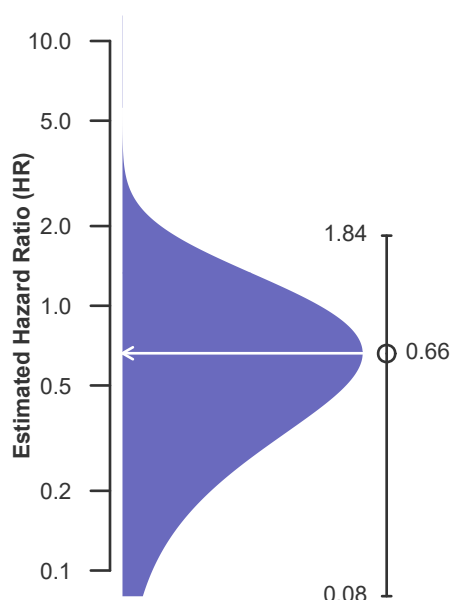
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	37	11,832
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	96.65%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	97.31%	--
Number of observed deaths during the first 3 years after transplant	0	396
Number of expected deaths during the first 3 years after transplant	1.02	--
Estimated hazard ratio*	0.66	--
95% credible interval for the hazard ratio**	[0.08, 1.84]	--

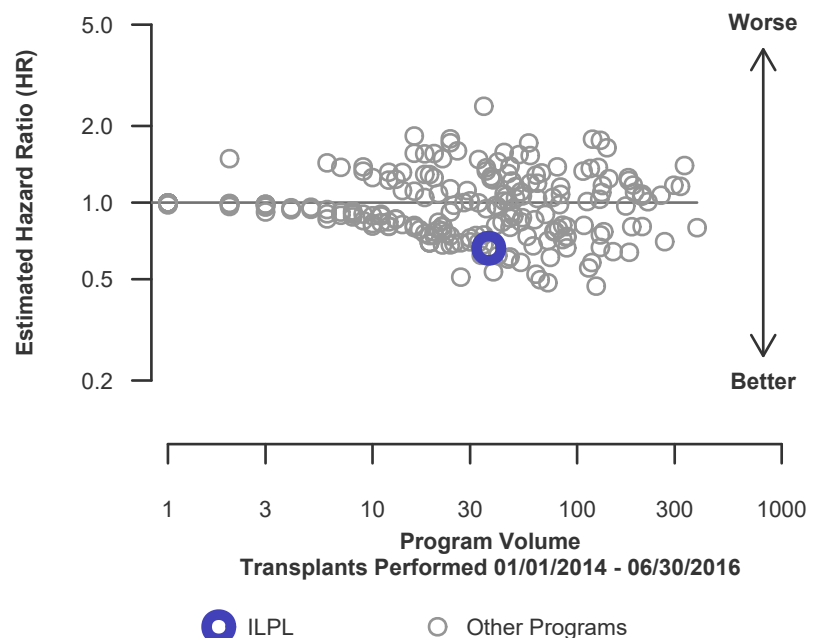
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.08, 1.84], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 34% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 92% reduced risk up to 84% 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)**





## C. Transplant Information

**Table C14. Pediatric (<18) 1-month patient survival**

**Single organ transplants performed between 07/01/2016 and 12/31/2018**

**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C14D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

**Table C14L. Pediatric (<18) 1-month patient survival (living donor graft recipients)**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

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

Single organ transplants performed between 07/01/2016 and 12/31/2018

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2016-12/31/2018





## C. Transplant Information

**Table C15D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2016 and 12/31/2018**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018

**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  
07/01/2016-12/31/2018



## C. Transplant Information

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

Single organ transplants performed between 07/01/2016 and 12/31/2018

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2016-12/31/2018

### 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  
07/01/2016-12/31/2018

### 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  
07/01/2016-12/31/2018



## C. Transplant Information

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

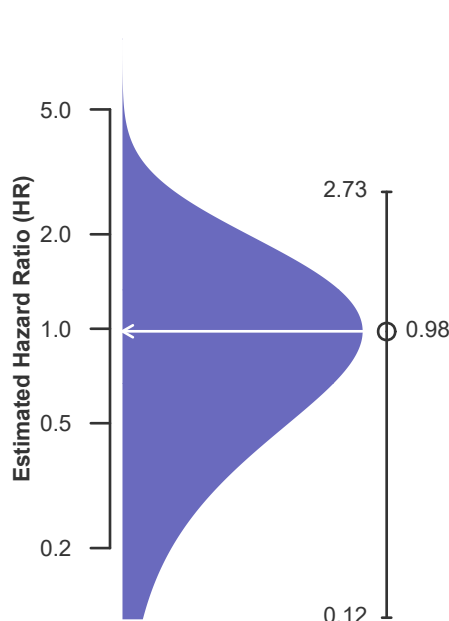
**Single organ transplants performed between 01/01/2014 and 06/30/2016**  
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	4	1,838
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	99.02%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	99.06%	--
Number of observed deaths during the first 3 years after transplant	0	18
Number of expected deaths during the first 3 years after transplant	0.04	--
Estimated hazard ratio*	0.98	--
95% credible interval for the hazard ratio**	[0.12, 2.73]	--

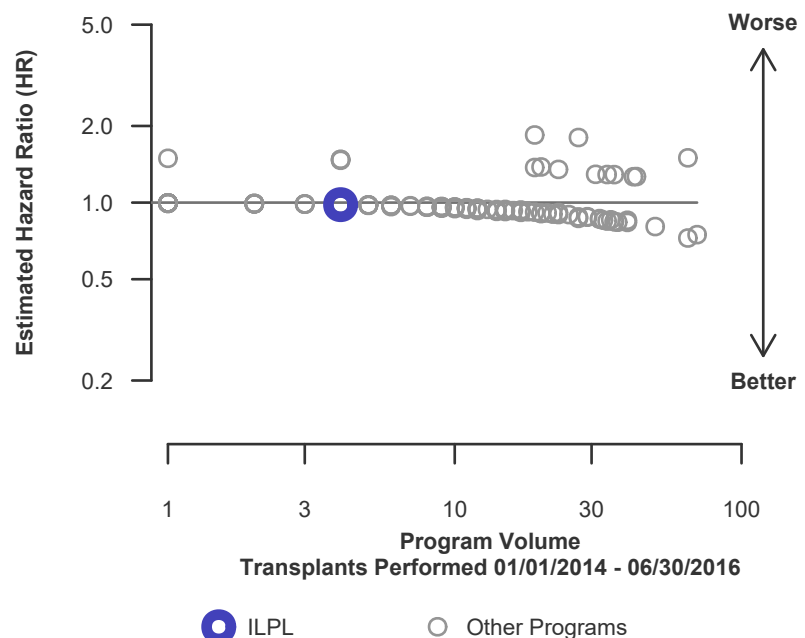
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.12, 2.73], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 2% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 88% reduced risk up to 173% increased risk.

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



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





## C. Transplant Information

**Table C16D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)**

**Single organ transplants performed between 01/01/2014 and 06/30/2016**

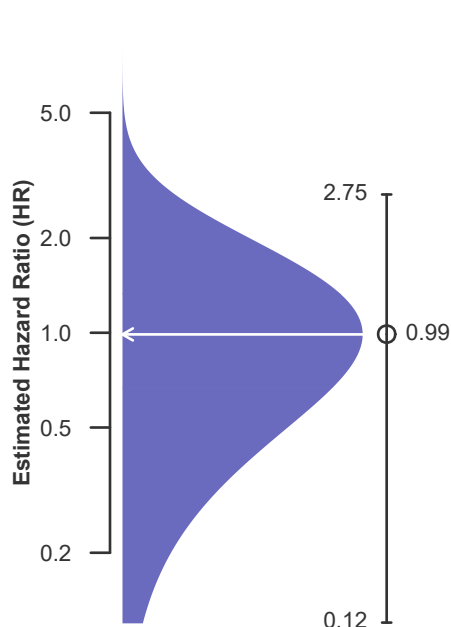
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	3	1,232
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	99.19%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	99.19%	--
Number of observed deaths during the first 3 years after transplant	0	10
Number of expected deaths during the first 3 years after transplant	0.02	--
Estimated hazard ratio*	0.99	--
95% credible interval for the hazard ratio**	[0.12, 2.75]	--

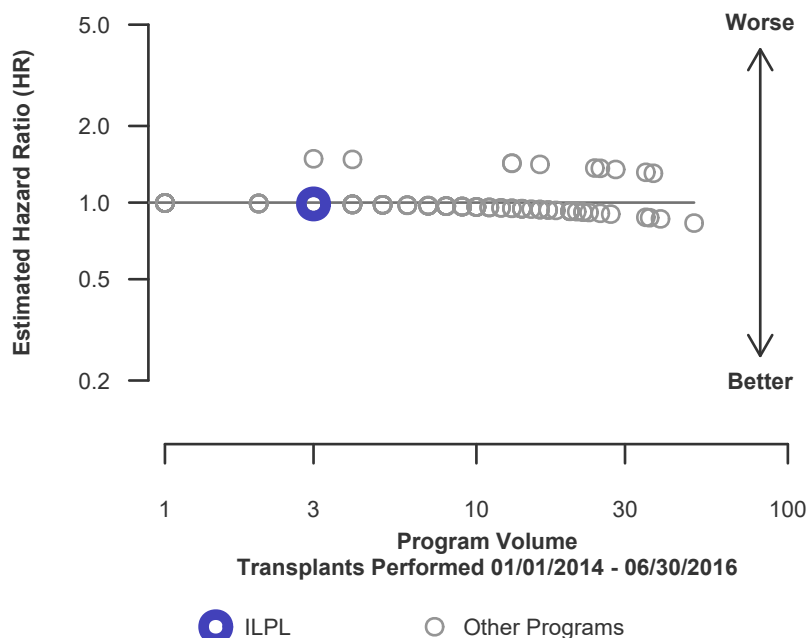
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.12, 2.75], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 1% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 88% reduced risk up to 175% increased risk.

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



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





## C. Transplant Information

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

**Single organ transplants performed between 01/01/2014 and 06/30/2016**

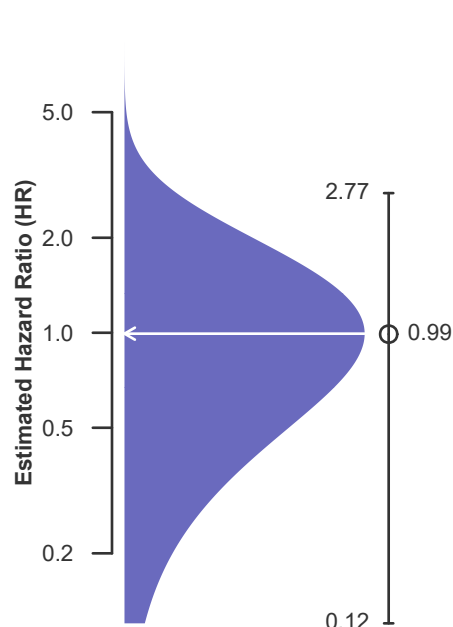
**Retransplants excluded**

	ILPL	U.S.
Number of transplants evaluated	1	606
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	98.68%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	98.68%	--
Number of observed deaths during the first 3 years after transplant	0	8
Number of expected deaths during the first 3 years after transplant	0.01	--
Estimated hazard ratio*	0.99	--
95% credible interval for the hazard ratio**	[0.12, 2.77]	--

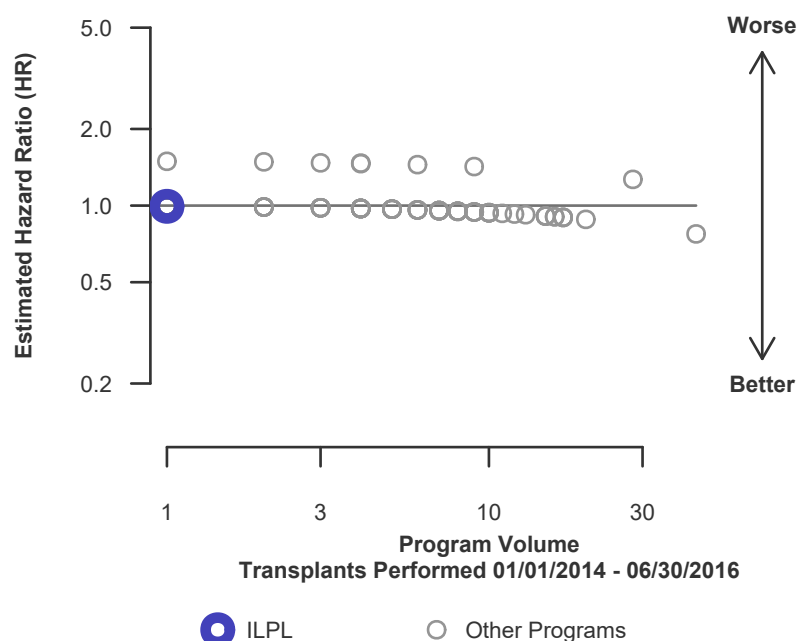
\* The hazard ratio provides an estimate of how Rush University Medical Center (ILPL)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate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

\*\* The 95% credible interval, [0.12, 2.77], indicates the location of ILPL's true hazard ratio with 95% probability. The best estimate is 1% lower risk of patient death compared to an average program, but ILPL's performance could plausibly range from 88% reduced risk up to 177% increased risk.

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



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





## C. Transplant Information

Table C17. Multi-organ transplant graft survival: 07/01/2016 - 12/31/2018

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Kidney Graft Failures		Estimated Kidney Graft Survival	
	ILPL-TX1	USA	ILPL-TX1	USA	ILPL-TX1	USA
Kidney-Liver	5	1,742	0	203	100.0%	87.9%
Kidney-Pancreas	16	2,007	1	70	93.8%	96.2%

### Pediatric (<18) Transplants

No pediatric (<18) multi-organ transplants were performed

Table C18. Multi-organ transplant patient survival: 07/01/2016 - 12/31/2018

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Patient Deaths		Estimated Patient Survival	
	ILPL-TX1	USA	ILPL-TX1	USA	ILPL-TX1	USA
Kidney-Liver	5	1,742	0	167	100.0%	89.9%
Kidney-Pancreas	16	2,007	0	43	100.0%	97.7%

### Pediatric (<18) Transplants

No pediatric (<18) multi-organ transplants were performed



## D. Living Donor Information

Table D1. Living donor summary: 07/01/2016 - 06/30/2019

Living Donor Follow-Up	This Center			United States		
	07/2016- 06/2017	07/2017- 06/2018	07/2018- 12/2018	07/2016- 06/2017	07/2017- 06/2018	07/2018- 12/2018
<b>Number of Living Donors</b>	26	27	14	5,722	6,153	3,303
<b>6-Month Follow-Up</b>						
Donors due for follow-up	26	27	14	5,719	6,152	3,298
Timely clinical data	23 88.5%	19 70.4%	11 78.6%	5,100 89.2%	5,392 87.6%	2,864 86.8%
Timely lab data	24 92.3%	23 85.2%	11 78.6%	4,876 85.3%	5,210 84.7%	2,743 83.2%
<b>12-Month Follow-Up</b>						
Donors due for follow-up	26	27		5,719	6,150	
Timely clinical data	25 96.2%	20 74.1%		4,817 84.2%	5,087 82.7%	
Timely lab data	23 88.5%	20 74.1%		4,565 79.8%	4,811 78.2%	
<b>24-Month Follow-Up</b>						
Donors due for follow-up	26			5,718		
Timely clinical data	23 88.5%			4,368 76.4%		
Timely lab data	24 92.3%			4,002 70.0%		

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