



User Guide

This report contains a wide range of useful information about the kidney transplant program at Northwestern Memorial Hospital (ILNM). 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 24.7 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 0.2 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.



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A. Program Summary

Figure A1. Waiting list and transplant activity

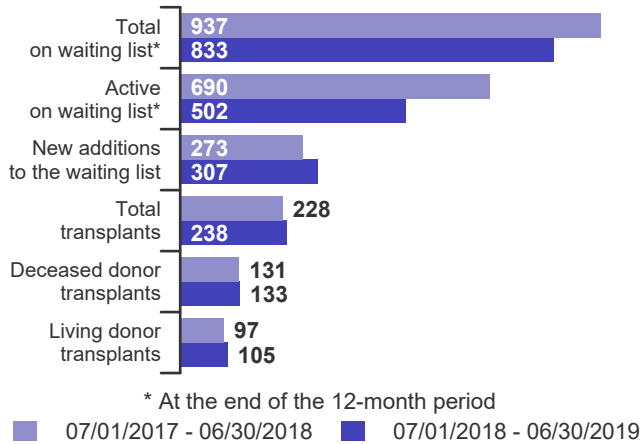


Table A1. Census of transplant recipients

Recipients	07/01/2017-06/30/2018	07/01/2018-06/30/2019
Transplanted at this center	228	238
Followed by this center*	1,938	1,674
...transplanted at this program	1,896	1,631
...transplanted elsewhere	42	43

* 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

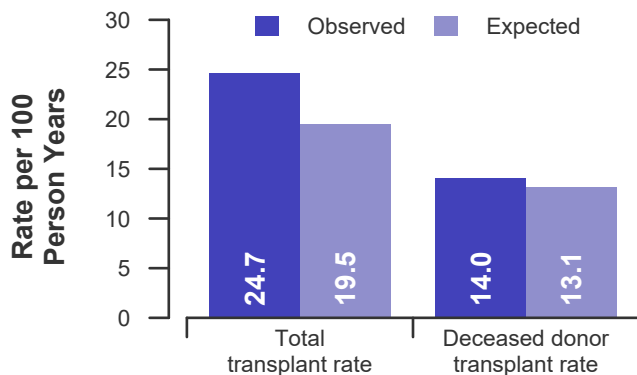


Figure A3. Waiting list mortality rates 07/01/2017 - 06/30/2019

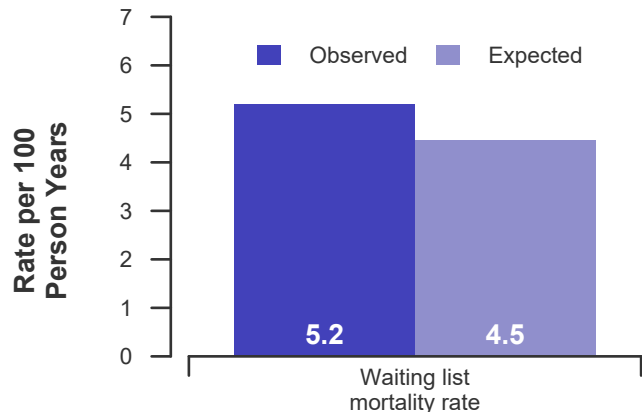


Figure A4. First-year adult graft and patient survival: 07/01/2016 - 12/31/2018

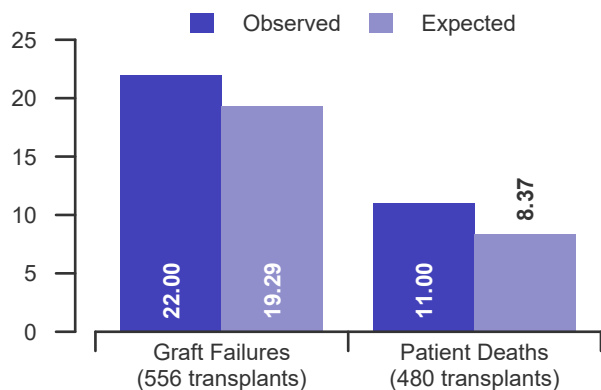


Figure A5. First-year pediatric graft and patient survival: 07/01/2016 - 12/31/2018

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. (%)
On waiting list at start	1,071	937	100.0	100.0	100.0
Additions					
New listings at this center	273	307	32.8	38.4	41.0
Removals					
Transferred to another center	8	6	0.6	0.9	1.3
Received living donor transplant*	96	105	11.2	9.6	6.6
Received deceased donor transplant*	131	133	14.2	14.1	15.4
Died	47	38	4.1	3.7	3.8
Transplanted at another center	37	31	3.3	4.2	3.6
Deteriorated	43	56	6.0	4.4	4.2
Recovered	2	1	0.1	0.2	0.2
Other reasons	43	41	4.4	5.3	5.6
On waiting list at end of period	937	833	88.9	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=307)	OPTN Region (N=2,946)	U.S. (N=41,372)	This Center (N=833)	OPTN Region (N=7,364)	U.S. (N=101,268)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Ethnicity/Race (%)*						
White	49.5	54.2	41.5	34.2	48.5	35.5
African-American	21.2	22.2	28.8	33.3	27.2	32.3
Hispanic/Latino	21.5	13.8	19.5	22.7	12.6	20.7
Asian	7.8	7.6	8.4	9.4	8.7	9.8
Other	0.0	2.2	1.8	0.5	3.1	1.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Age (%)						
<2 years	0.0	0.2	0.1	0.0	0.2	0.1
2-11 years	0.0	0.9	1.0	0.0	0.6	0.6
12-17 years	0.0	1.6	1.5	0.1	1.0	0.9
18-34 years	14.3	11.4	10.8	13.0	10.9	10.6
35-49 years	28.3	23.7	24.9	34.5	27.5	27.5
50-64 years	47.6	42.6	41.0	49.6	44.5	43.4
65-69 years	5.5	13.7	13.2	2.5	11.6	11.8
70+ years	4.2	5.9	7.4	0.4	3.8	5.1
Gender (%)						
Male	61.6	60.2	62.1	57.3	60.3	61.9
Female	38.4	39.8	37.9	42.7	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=307)	OPTN Region (N=2,946)	U.S. (N=41,372)	This Center (N=833)	OPTN Region (N=7,364)	U.S. (N=101,268)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Blood Type (%)						
O	51.1	48.2	49.1	57.6	53.2	53.3
A	35.5	34.1	32.0	24.4	28.1	27.4
B	9.4	14.1	15.0	16.3	16.6	16.7
AB	3.9	3.6	3.9	1.7	2.1	2.5
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Previous Transplant (%)						
Yes	20.8	16.4	12.8	22.0	18.6	13.7
No	79.2	83.6	87.2	78.0	81.4	86.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Initial CPRA (%)						
0-9%	97.4	81.6	79.5	95.9	79.3	80.2
10-79%	1.0	12.0	12.8	2.2	13.3	12.4
80+%	1.6	6.3	7.7	1.9	7.4	7.4
Unknown	0.0	0.1	0.1	0.0	0.0	0.0
Primary Disease (%)*						
Glomerular Diseases	19.5	20.6	19.5	20.3	21.1	19.0
Tubular and Interstitial Diseases	4.2	5.2	3.9	2.4	4.8	3.6
Polycystic Kidneys	9.8	9.4	7.2	9.5	8.0	6.9
Congenital, Familial, Metabolic	2.0	2.3	2.1	1.4	2.3	1.8
Diabetes	26.7	28.4	35.3	30.5	29.4	36.4
Renovascular & Vascular Diseases	0.3	0.2	0.2	0.6	0.2	0.1
Neoplasms	0.3	0.4	0.4	0.0	0.2	0.3
Hypertensive Nephrosclerosis	19.2	19.1	19.2	22.8	21.2	21.5
Other	17.9	13.9	11.8	12.5	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.
All Candidates				
Count on waiting list at start*	1,071	3,762	7,978	102,722
Person Years**	1,886.3	6,983.1	15,377.6	202,385.3
Removals for Transplant	465	1,620	3,524	42,479
Adult (18+) Candidates				
Count on waiting list at start*	1,070	3,694	7,862	101,204
Person Years**	1,884.3	6,847.2	15,123.0	199,309.9
Removals for transplant	465	1,563	3,399	40,758
Pediatric (<18) Candidates				
Count on waiting list at start*	1	68	116	1,518
Person Years**	2.0	135.9	254.7	3,075.4
Removals for transplant	0	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

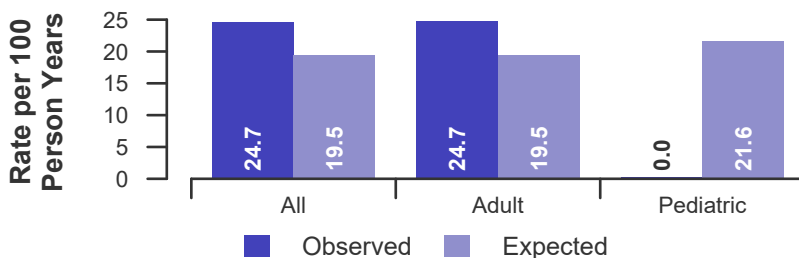


Figure B2. Transplant rate ratio estimate

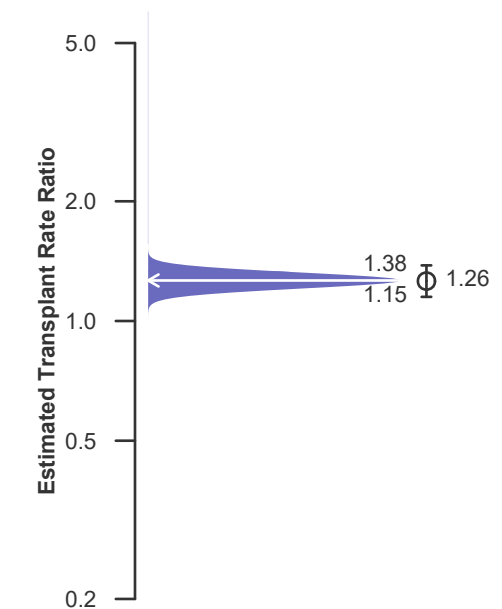
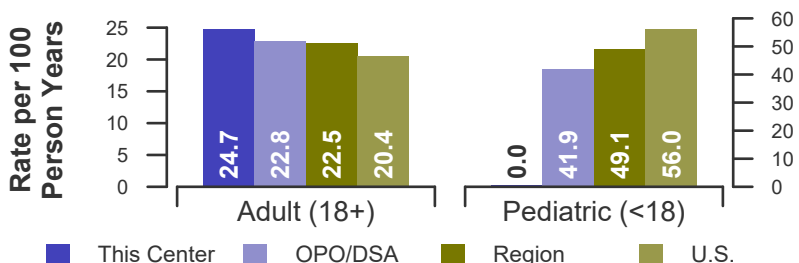


Figure B3. Observed adult (18+) and pediatric (<18) transplant rates: 07/01/2017 - 06/30/2019





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.
All Candidates				
Count on waiting list at start*	1,071	3,762	7,978	102,722
Person Years**	1,886.3	6,983.1	15,377.6	202,385.3
Removals for Transplant	264	1,071	2,071	29,769
Adult (18+) Candidates				
Count on waiting list at start*	1,070	3,694	7,862	101,204
Person Years**	1,884.3	6,847.2	15,123.0	199,309.9
Removals for transplant	264	1,036	2,003	28,607
Pediatric (<18) Candidates				
Count on waiting list at start*	1	68	116	1,518
Person Years**	2.0	135.9	254.7	3,075.4
Removals for transplant	0	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

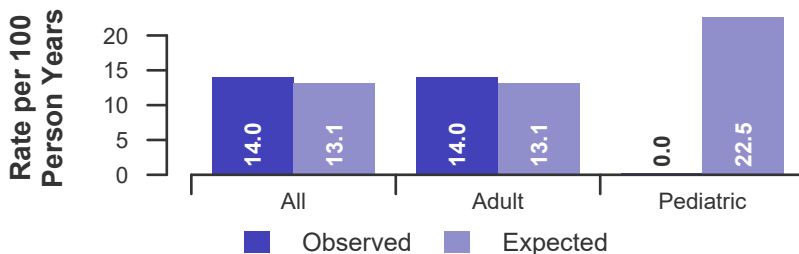


Figure B2D. Deceased donor transplant rate ratio estimate

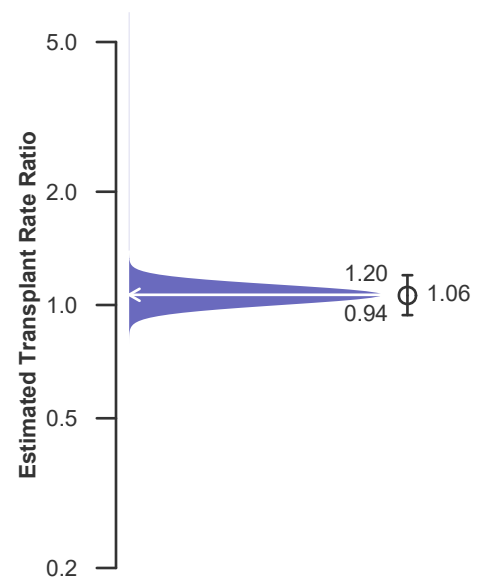
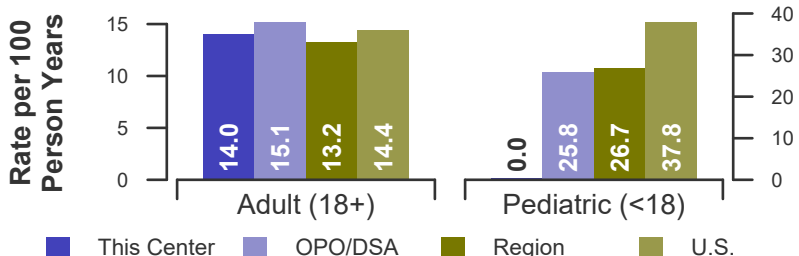


Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2017 - 06/30/2019





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.
All Candidates				
Count on waiting list at start*	1,071	3,762	7,978	102,722
Person Years**	2,040.6	7,718.4	16,778.7	220,767.9
Number of deaths	106	382	787	10,969
Adult (18+) Candidates				
Count on waiting list at start*	1,070	3,694	7,862	101,204
Person Years**	2,038.6	7,582.4	16,523.9	217,592.8
Number of deaths	106	381	786	10,931
Pediatric (<18) Candidates				
Count on waiting list at start*	1	68	116	1,518
Person Years**	2.0	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

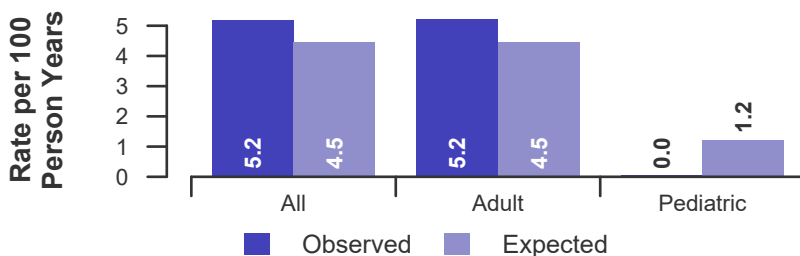


Figure B5. Waiting list mortality rate ratio estimate

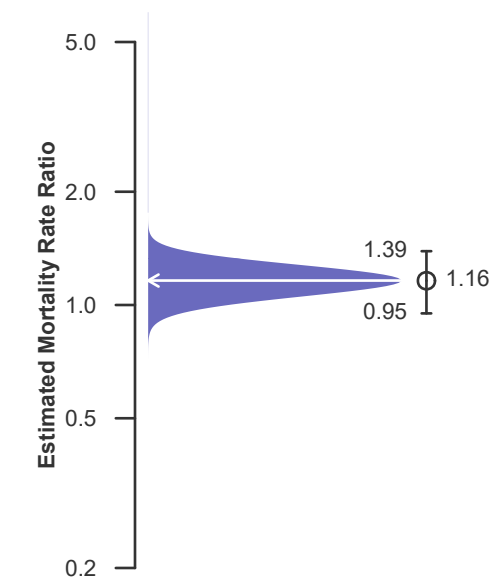
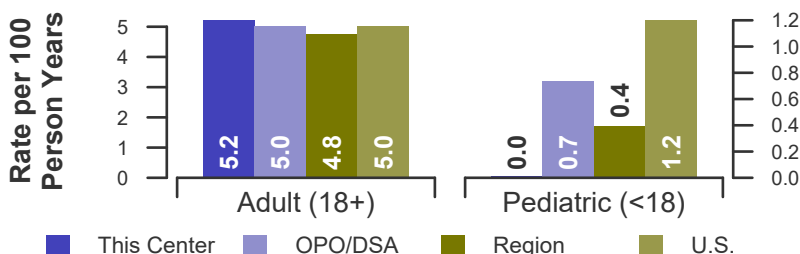


Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2017 - 06/30/2019





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=274)			U.S. (N=36,696)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
Alive on waiting list (%)	67.9	59.1	53.3	77.9	64.9	55.0
Died on the waiting list without transplant (%)	0.7	1.1	1.1	1.2	2.2	3.1
Removed without transplant (%):						
Condition worsened (status unknown)	0.7	1.5	2.9	0.7	1.5	2.4
Condition improved (status unknown)	0.7	0.7	0.7	0.1	0.2	0.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.0	0.1	0.2
Other	0.0	0.4	0.4	0.8	1.7	2.8
Transplant (living donor from waiting list only) (%):						
Functioning (alive)	19.7	20.8	15.3	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	0.4	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.0	0.1	0.1
Status Yet Unknown**	0.0	1.5	8.0	0.1	0.4	3.9
Transplant (deceased donor) (%):						
Functioning (alive)	8.8	11.7	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	0.7	0.4	0.4	0.1	0.1	0.0
Died	0.4	0.4	0.4	0.2	0.4	0.7
Status Yet Unknown*	0.0	1.8	4.7	1.6	3.6	9.4
Lost or Transferred (status unknown) (%)	0.4	0.7	0.7	0.3	0.7	1.2
TOTAL (%)	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	1.1	1.5	1.5	1.5	2.7	3.9
Total % known died or removed as unstable	1.8	2.9	4.4	2.1	4.2	6.3
Total % removed for transplant	29.6	36.5	40.9	18.9	28.7	35.1
Total % with known functioning transplant (alive)	28.5	32.5	27.0	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
All	915	4.0	9.6	12.8	17.4	94,041	2.8	13.4	20.1	25.4
Ethnicity/Race*										
White	346	6.9	11.6	14.5	16.8	37,492	3.2	14.7	21.5	26.6
African-American	283	2.8	8.1	11.7	17.3	30,238	2.4	12.7	19.6	24.8
Hispanic/Latino	204	1.5	10.3	13.7	21.6	17,228	2.8	12.9	19.5	24.9
Asian	76	2.6	5.3	7.9	10.5	7,575	1.6	10.0	16.4	21.9
Other	6	0.0	0.0	0.0	0.0	1,508	2.7	15.7	22.1	27.5
Unknown	0	--	--	--	--	0	--	--	--	--
Age										
<2 years	0	--	--	--	--	145	6.2	31.7	49.0	62.1
2-11 years	0	--	--	--	--	807	7.2	47.5	62.5	70.6
12-17 years	1	0.0	0.0	0.0	0.0	1,365	7.5	49.1	61.7	67.7
18-34 years	98	2.0	16.3	18.4	28.6	9,544	2.3	13.4	22.3	29.9
35-49 years	259	2.7	8.1	12.0	18.1	23,967	2.4	12.1	19.1	24.9
50-64 years	458	3.9	7.6	10.9	14.0	40,579	2.9	12.5	18.6	23.3
65-69 years	89	10.1	16.9	19.1	21.3	12,055	2.7	12.5	18.3	22.7
70+ years	10	10.0	10.0	10.0	10.0	5,579	2.4	13.1	18.7	22.5
Gender										
Male	561	3.9	9.3	12.1	17.1	58,154	2.9	13.1	19.4	24.5
Female	354	4.2	10.2	13.8	17.8	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	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
All	915	4.0	9.6	12.8	17.4	94,041	2.8	13.4	20.1	25.4
Blood Type										
O	449	3.3	6.9	9.6	12.9	46,674	2.5	11.5	17.2	21.7
A	277	4.7	13.4	16.6	23.8	29,604	3.3	16.0	24.3	30.9
B	158	3.2	9.5	11.4	13.3	14,235	2.0	10.8	16.5	21.0
AB	31	12.9	16.1	32.3	45.2	3,528	4.6	26.5	38.3	45.3
Previous Transplant										
Yes	159	3.1	8.8	11.9	15.7	13,106	2.3	13.5	21.8	27.5
No	756	4.2	9.8	13.0	17.7	80,935	2.8	13.4	19.8	25.0
Peak PRA/CPRA										
0-9%	911	4.1	9.7	12.8	17.3	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+%	3	0.0	0.0	0.0	33.3	7,085	2.2	17.8	28.1	33.7
Unknown	0	--	--	--	--	8	100.0	100.0	100.0	100.0
Primary Disease*										
Glomerular Diseases	172	0.6	7.0	11.6	20.9	16,899	2.1	14.2	22.6	29.4
Tubular & Interstitial Diseases	25	4.0	8.0	8.0	8.0	3,337	4.2	17.4	25.4	30.6
Polycystic Kidneys	58	0.0	6.9	13.8	15.5	6,182	1.6	11.9	19.4	26.3
Congenital, Familial, Metabolic	8	0.0	12.5	12.5	12.5	1,818	3.8	26.6	37.6	45.0
Diabetes	270	1.1	3.0	4.4	8.1	33,115	1.7	9.6	14.5	18.5
Renovascular & Vascular Diseases	2	0.0	0.0	0.0	0.0	135	4.4	15.6	23.7	28.9
Neoplasms	4	0.0	0.0	0.0	25.0	292	2.7	18.2	26.0	30.8
Hypertensive Nephrosclerosis	177	1.7	11.9	15.3	19.2	20,970	2.3	12.6	19.6	25.1
Other	197	14.7	20.3	23.9	27.4	10,890	8.0	22.4	30.1	35.0
Missing*	2	0.0	0.0	0.0	0.0	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	0.2	0.8	1	1.1
10th	1.1	2.9	2.8	2.9
25th	9.0	13.2	10.0	11.1
50th (median time to transplant)	45.4	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.
Overall				
Number of Offers	13,254	51,996	96,458	1,657,991
Number of Acceptances	113	547	1,005	14,558
Expected Acceptances	105.8	616.9	1,198.5	14,546.9
Offer Acceptance Ratio*	1.07	0.89	0.84	1.00
95% Credible Interval**	[0.88, 1.27]	--	--	--
Low-KDRI Donors (KDRI < 1.05)				
Number of Offers	2,933	10,538	20,459	231,877
Number of Acceptances	20	121	310	4,979
Expected Acceptances	31.5	187.5	431.0	4,980.4
Offer Acceptance Ratio*	0.66	0.65	0.72	1.00
95% Credible Interval**	[0.41, 0.96]	--	--	--
Medium-KDRI Donors (1.05 < KDRI < 1.75)				
Number of Offers	6,791	31,329	58,113	1,056,662
Number of Acceptances	63	326	552	7,967
Expected Acceptances	51.8	340.8	628.4	7,955.4
Offer Acceptance Ratio*	1.21	0.96	0.88	1.00
95% Credible Interval**	[0.93, 1.52]	--	--	--
High-KDRI Donors (KDRI > 1.75)				
Number of Offers	3,530	10,129	17,886	369,452
Number of Acceptances	30	100	143	1,612
Expected Acceptances	22.6	88.7	139.2	1,611.1
Offer Acceptance Ratio*	1.30	1.12	1.03	1.00
95% Credible Interval**	[0.89, 1.79]	--	--	--
Hard-to-Place Kidneys (Over 100 Offers)				
Number of Offers	9,992	37,619	71,785	1,398,185
Number of Acceptances	22	97	121	2,091
Expected Acceptances	24.6	81.1	135.7	2,096.5
Offer Acceptance Ratio*	0.90	1.19	0.89	1.00
95% Credible Interval**	[0.58, 1.30]	--	--	--

* The offer acceptance ratio estimates the relative offer acceptance practice of Northwestern Memorial Hospital (ILNM) 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, [0.88, 1.27], indicates the location of ILNM's true offer acceptance ratio with 95% probability. The best estimate is 7% more likely to accept an offer compared to national acceptance behavior, but ILNM's performance could plausibly range from 12% reduced acceptance up to 27% higher acceptance.



B. Waiting List Information

Figure B7. Offer acceptance: Overall

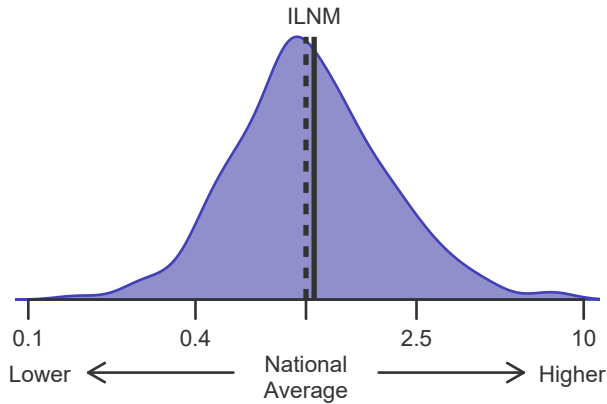


Figure B8. Offer acceptance: Low-KDRI

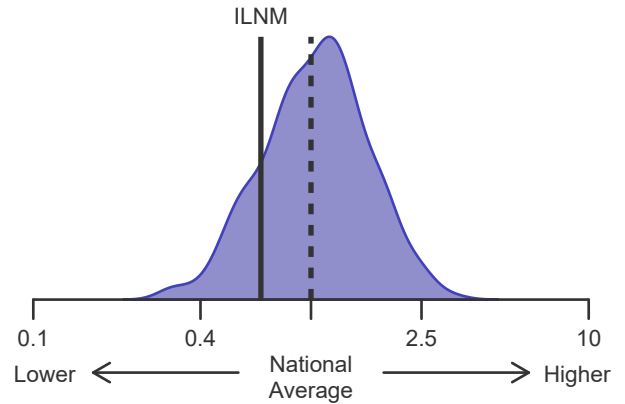


Figure B9. Offer acceptance: Medium-KDRI

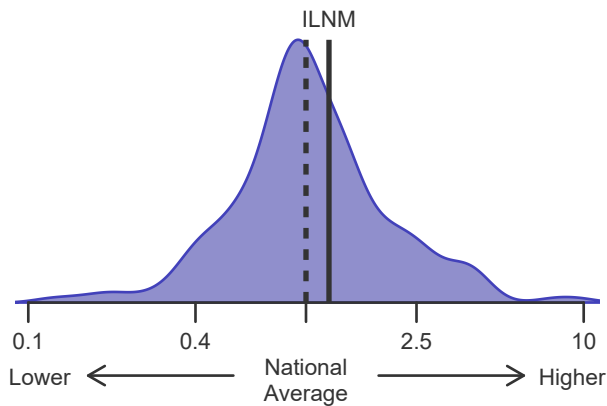


Figure B10. Offer acceptance: High-KDRI

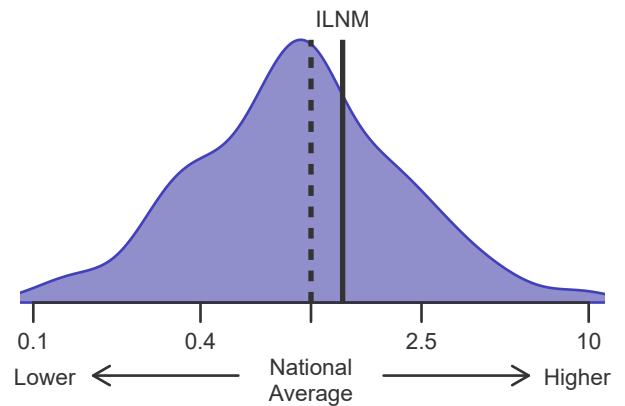
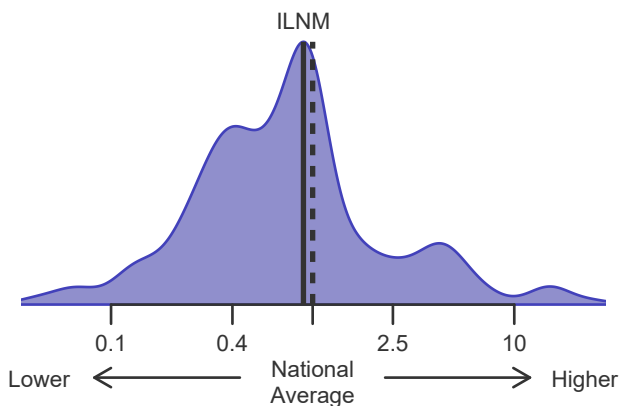


Figure B11. Offer acceptance: Offer number > 100





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=133)	Region (N=1,084)	U.S. (N=15,530)
Ethnicity/Race (%)*			
White	32.3	41.9	37.2
African-American	30.8	28.8	33.2
Hispanic/Latino	30.1	17.4	19.5
Asian	6.0	9.0	8.1
Other	0.8	2.9	1.9
Unknown	0.0	0.0	0.0
Age (%)			
<2 years	0.0	0.0	0.1
2-11 years	0.0	0.8	1.2
12-17	0.0	1.5	1.8
18-34	6.8	9.5	9.7
35-49 years	29.3	23.3	23.8
50-64 years	47.4	45.1	40.7
65-69 years	12.0	12.2	13.5
70+ years	4.5	7.6	9.3
Gender (%)			
Male	66.2	61.2	60.0
Female	33.8	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=105)	Region (N=752)	U.S. (N=6,687)
Ethnicity/Race (%)*			
White	64.8	69.7	63.7
African-American	10.5	11.8	12.6
Hispanic/Latino	18.1	12.0	16.1
Asian	6.7	4.1	6.2
Other	0.0	2.4	1.4
Unknown	0.0	0.0	0.0
Age (%)			
<2 years	0.0	0.1	0.1
2-11 years	0.0	2.4	2.0
12-17	0.0	1.7	1.7
18-34	16.2	14.4	16.2
35-49 years	29.5	24.3	26.2
50-64 years	38.1	37.0	35.9
65-69 years	8.6	11.4	9.9
70+ years	7.6	8.6	7.9
Gender (%)			
Male	59.0	60.2	62.6
Female	41.0	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=133)	Region (N=1,084)	U.S. (N=15,530)
Blood Type (%)			
O	42.9	42.3	46.4
A	33.1	34.4	33.7
B	18.0	16.9	14.5
AB	6.0	6.5	5.4
Previous Transplant (%)			
Yes	15.8	16.1	13.0
No	84.2	83.9	87.0
Peak PRA/CPRA Prior to Transplant (%)			
0-9%	75.2	60.2	59.3
10-79%	15.0	23.4	22.8
80+ %	9.8	16.3	17.9
Unknown	0.0	0.0	0.0
Body Mass Index (%)			
0-20	3.8	8.4	9.7
21-25	30.1	27.3	27.9
26-30	31.6	30.7	30.6
31-35	24.1	19.8	21.0
36-40	10.5	9.9	8.0
41+	0.0	2.0	1.4
Unknown	0.0	1.8	1.5
Primary Disease (%)*			
Glomerular Diseases	16.5	21.8	21.6
Tubular and Interstitial Disease	6.0	4.7	4.2
Polycystic Kidneys	2.3	6.5	7.5
Congenital, Familial, Metabolic	3.8	2.3	2.6
Diabetes	27.1	28.6	29.0
Renovascular & Vascular Diseases	0.0	0.3	0.2
Neoplasms	0.8	0.8	0.4
Hypertensive Nephrosclerosis	27.8	21.7	23.4
Other Kidney	15.0	12.8	10.8
Missing*	0.8	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=105)	Region (N=752)	U.S. (N=6,687)
Blood Type (%)			
O	38.1	43.2	44.5
A	41.9	39.2	37.8
B	15.2	12.8	13.5
AB	4.8	4.8	4.2
Previous Transplant (%)			
Yes	10.5	13.0	10.9
No	89.5	87.0	89.1
Peak PRA/CPRA Prior to Transplant (%)			
0-9%	94.3	71.1	75.0
10-79%	3.8	21.5	20.2
80+ %	1.9	7.0	4.7
Unknown	0.0	0.3	0.1
Body Mass Index (%)			
0-20	15.2	13.6	12.5
21-25	24.8	25.0	29.2
26-30	32.4	27.9	30.2
31-35	22.9	21.1	19.0
36-40	3.8	8.9	7.0
41+	1.0	3.3	1.3
Unknown	0.0	0.1	0.7
Primary Disease (%)*			
Glomerular Diseases	30.5	29.9	30.0
Tubular and Interstitial Disease	4.8	6.0	5.6
Polycystic Kidneys	8.6	12.6	12.3
Congenital, Familial, Metabolic	2.9	3.3	3.4
Diabetes	19.0	22.1	23.2
Renovascular & Vascular Diseases	0.0	0.0	0.3
Neoplasms	1.0	0.8	0.6
Hypertensive Nephrosclerosis	21.9	14.1	15.1
Other Kidney	11.4	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=133)	Region (N=1,084)	U.S. (N=15,530)
Cause of Death (%)			
Deceased: Stroke	27.1	25.4	23.5
Deceased: MVA	13.5	13.2	14.2
Deceased: Other	59.4	61.4	62.2
Ethnicity/Race (%)*			
White	66.9	71.7	67.6
African-American	17.3	16.1	13.7
Hispanic/Latino	12.0	9.8	14.8
Asian	3.8	1.8	2.6
Other	0.0	0.7	1.3
Not Reported	0.0	0.0	0.0
Age (%)			
<2 years	0.0	1.8	0.9
2-11 years	1.5	2.9	2.9
12-17	0.8	3.8	4.1
18-34	30.8	29.6	32.8
35-49 years	21.8	30.3	32.1
50-64 years	39.1	29.1	24.5
65-69 years	6.0	1.9	2.0
70+ years	0.0	0.6	0.6
Gender (%)			
Male	67.7	61.0	61.2
Female	32.3	39.0	38.8
Blood Type (%)			
O	43.6	44.4	48.3
A	33.1	35.2	36.2
B	18.0	15.7	12.0
AB	5.3	4.7	3.5
Unknown	0.0	0.0	0.0
No	73.7	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=105)	Region (N=752)	U.S. (N=6,687)
Ethnicity/Race (%)*			
White	65.7	74.1	69.8
African-American	7.6	8.9	8.9
Hispanic/Latino	21.0	12.0	15.1
Asian	4.8	3.9	4.6
Other	1.0	1.2	1.6
Not Reported	0.0	0.0	0.0
Age (%)			
0-11 years	0.0	0.0	0.0
12-17	0.0	0.0	0.0
18-34	30.5	27.1	26.3
35-49 years	32.4	36.0	38.9
50-64 years	34.3	31.4	30.2
65-69 years	1.9	3.7	3.5
70+ years	1.0	1.7	1.1
Gender (%)			
Male	45.7	41.1	34.9
Female	54.3	58.9	65.1
Blood Type (%)			
O	66.7	60.4	63.0
A	25.7	30.7	27.7
B	6.7	7.4	8.1
AB	1.0	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	Percentage in each category		
	Center (N=133)	Region (N=1,084)	U.S. (N=15,530)
Cold Ischemic Time (Hours): Local (%)			
Deceased: 0-11 hr	26.3	35.1	34.8
Deceased: 12-21 hr	61.6	53.5	47.4
Deceased: 22-31 hr	12.1	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
Cold Ischemic Time (Hours): Shared (%)			
Deceased: 0-11 hr	14.7	12.8	8.7
Deceased: 12-21 hr	67.6	59.7	39.7
Deceased: 22-31 hr	17.6	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
Level of Mismatch (%)			
A Locus Mismatches (%)			
0	10.5	13.3	11.7
1	32.3	37.0	38.4
2	49.6	48.3	49.3
Not Reported	7.5	1.4	0.5
B Locus Mismatches (%)			
0	7.5	9.2	7.5
1	15.8	23.1	24.2
2	69.2	66.3	67.8
Not Reported	7.5	1.4	0.5
DR Locus Mismatches (%)			
0	17.3	18.3	16.6
1	33.8	44.5	47.4
2	41.4	35.9	35.4
Not Reported	7.5	1.4	0.5
Total Mismatches (%)			
0	5.3	6.3	4.7
1	0.8	1.5	1.3
2	1.5	4.0	4.6
3	12.8	13.0	13.5
4	22.6	26.8	27.7
5	27.8	32.6	32.5
6	21.8	14.6	15.2
Not Reported	7.5	1.4	0.5
Procedure Type (%)			
Kidney alone	85.7	92.7	94.1
Kidney and another organ	14.3	7.3	5.9
Dialysis in First Week After Transplant (%)			
Yes	26.3	27.3	29.6
No	73.7	72.7	70.1
Not Reported	0.0	0.0	0.4
Sharing (%)			
Local	74.4	77.6	68.1
Shared	25.6	22.4	31.9
Median Time in Hospital After Transplant*	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=105)	Region (N=752)	U.S. (N=6,687)
Relation with Donor (%)			
Related	45.7	40.3	40.0
Unrelated	54.3	59.7	59.8
Not Reported	0.0	0.0	0.1
Level of Mismatch (%)			
A Locus Mismatches (%)			
0	18.1	18.2	16.9
1	51.4	52.0	48.9
2	29.5	29.4	30.8
Not Reported	1.0	0.4	3.4
B Locus Mismatches (%)			
0	14.3	11.0	10.3
1	44.8	44.1	41.9
2	40.0	44.4	44.5
Not Reported	1.0	0.4	3.4
DR Locus Mismatches (%)			
0	18.1	17.8	15.8
1	56.2	51.6	48.1
2	24.8	30.2	32.8
Not Reported	1.0	0.4	3.4
Total Mismatches (%)			
0	8.6	5.9	5.2
1	2.9	3.7	3.6
2	11.4	14.2	12.4
3	26.7	23.4	22.5
4	19.0	19.3	18.0
5	23.8	22.5	22.5
6	6.7	10.6	12.5
Not Reported	1.0	0.4	3.4
Procedure Type (%)			
Kidney alone	100.0	100.0	100.0
Kidney and another organ	0.0	0.0	0.0
Dialysis in First Week After Transplant (%)			
Yes	1.9	2.3	3.1
No	98.1	97.7	96.4
Not Reported	0.0	0.0	0.5
Median Time in Hospital After Transplant*	2.0 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

	ILNM	U.S.
Number of transplants evaluated	556	46,453
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	98.38%	98.61%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.73%	--
Number of observed graft failures (including deaths) during the first month after transplant	9	645
Number of expected graft failures (including deaths) during the first month after transplant	7.08	--
Estimated hazard ratio*	1.21	--
95% credible interval for the hazard ratio**	[0.60, 2.03]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.60, 2.03], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 21% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 40% reduced risk up to 103% increased risk.

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

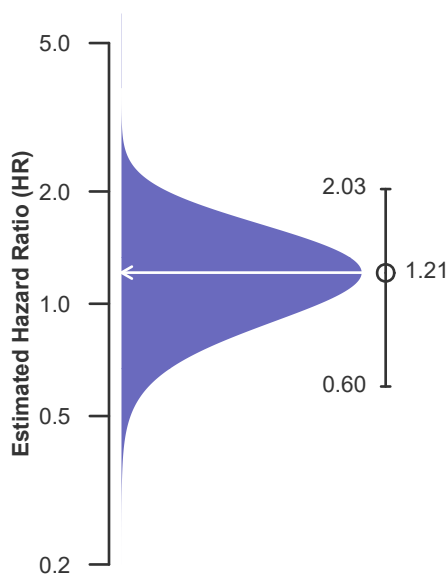
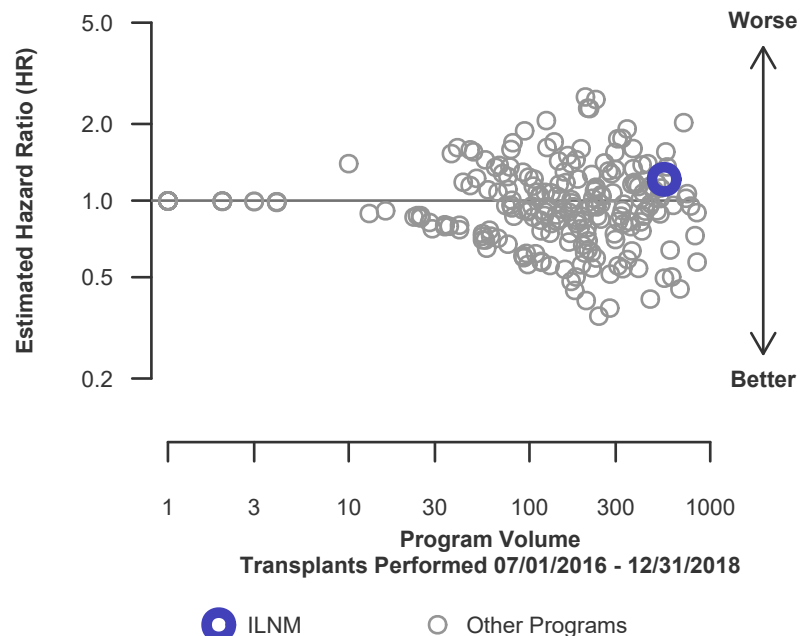


Figure C2. Adult (18+) 1-month graft failure HR program comparison





C. Transplant Information

Table C5D. Adult (18+) 1-month survival with a functioning deceased donor graft
Single organ transplants performed between 07/01/2016 and 12/31/2018
Deaths and retransplants are considered graft failures

	ILNM	U.S.
Number of transplants evaluated	303	31,966
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	98.35%	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	5	538
Number of expected graft failures (including deaths) during the first month after transplant	5.39	--
Estimated hazard ratio*	0.95	--
95% credible interval for the hazard ratio**	[0.38, 1.77]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.38, 1.77], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 5% lower risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 62% reduced risk up to 77% increased risk.

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

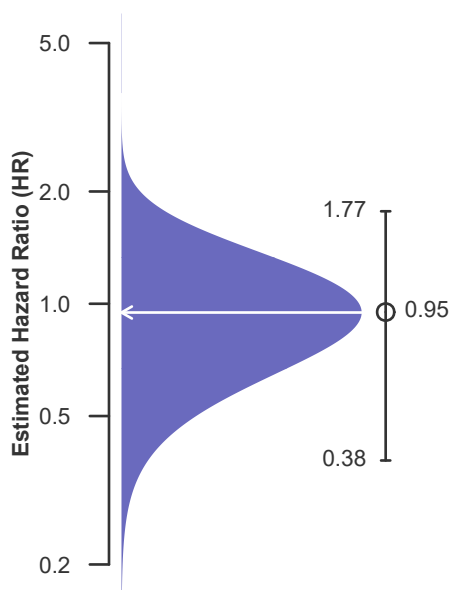
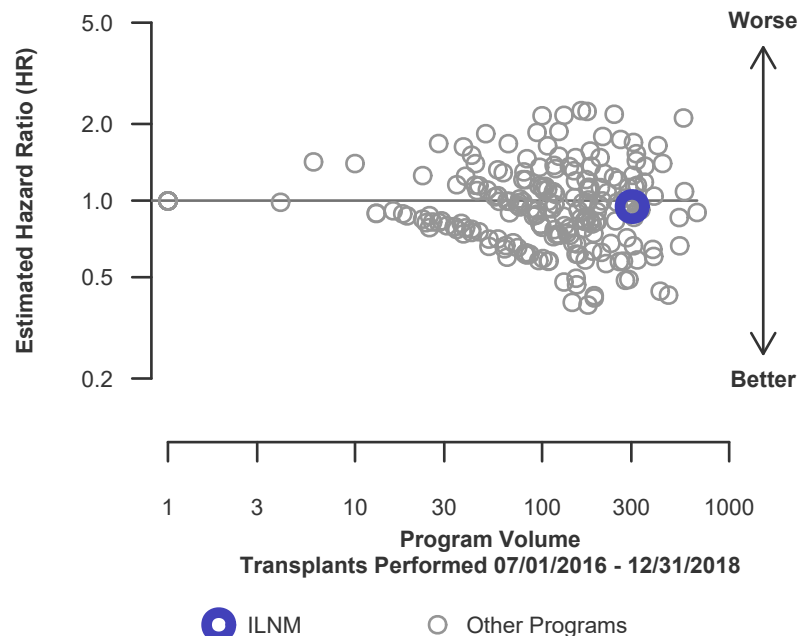


Figure C2D. Adult (18+) 1-month deceased donor graft failure HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	253	14,487
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	98.42%	99.26%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.33%	--
Number of observed graft failures (including deaths) during the first month after transplant	4	107
Number of expected graft failures (including deaths) during the first month after transplant	1.69	--
Estimated hazard ratio*	1.63	--
95% credible interval for the hazard ratio**	[0.60, 3.16]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.60, 3.16], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 63% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 40% reduced risk up to 216% increased risk.

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

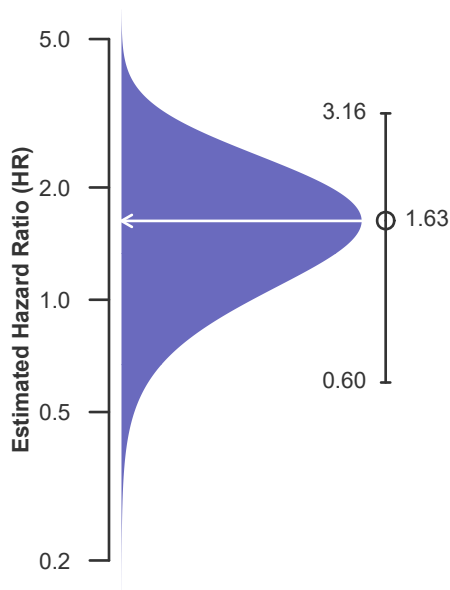
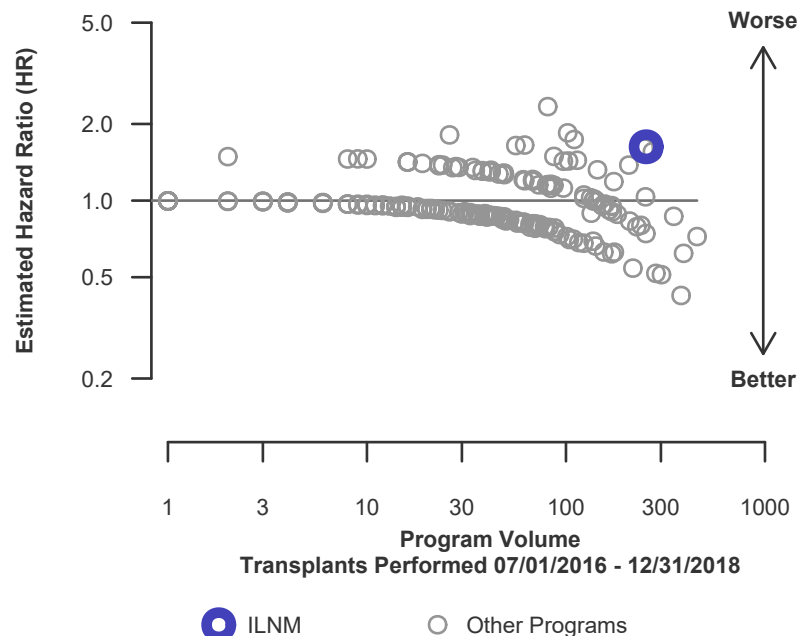


Figure C2L. Adult (18+) 1-month living donor graft failure HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	556	46,453
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	95.89%	95.90%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	96.28%	--
Number of observed graft failures (including deaths) during the first year after transplant	22	1,787
Number of expected graft failures (including deaths) during the first year after transplant	19.29	--
Estimated hazard ratio*	1.13	--
95% credible interval for the hazard ratio**	[0.72, 1.62]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.72, 1.62], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 13% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 28% reduced risk up to 62% increased risk.

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

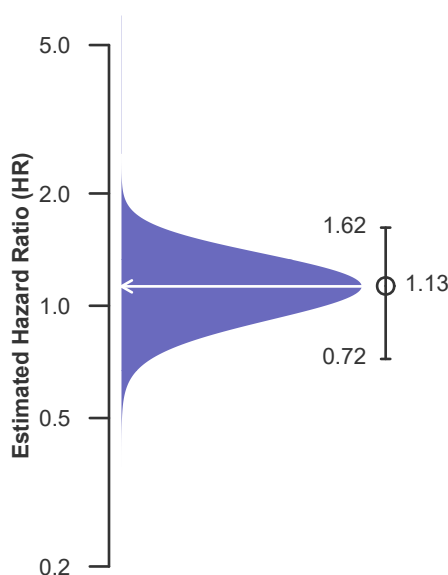
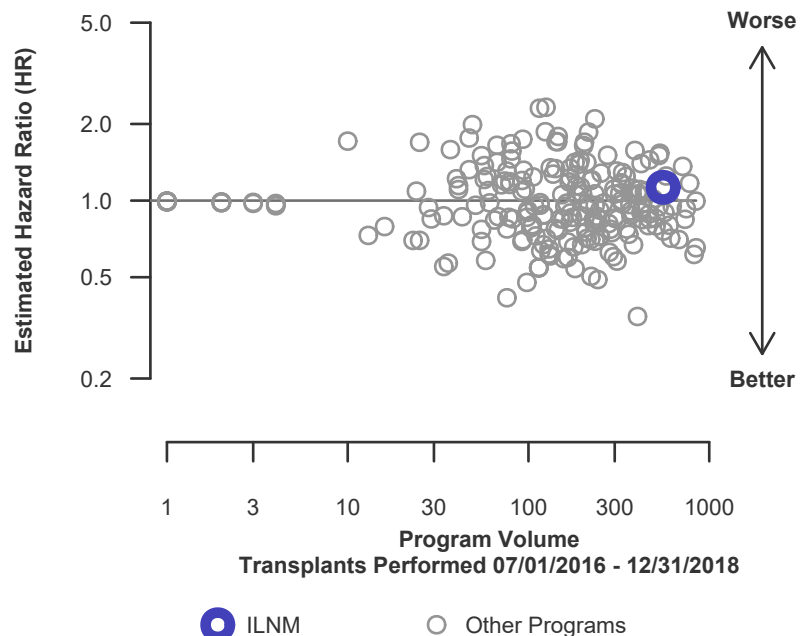


Figure C4. Adult (18+) 1-year graft failure HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	303	31,966
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	94.54%	94.91%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	94.62%	--
Number of observed graft failures (including deaths) during the first year after transplant	16	1,529
Number of expected graft failures (including deaths) during the first year after transplant	15.25	--
Estimated hazard ratio*	1.04	--
95% credible interval for the hazard ratio**	[0.62, 1.58]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.62, 1.58], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 4% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 38% reduced risk up to 58% increased risk.

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

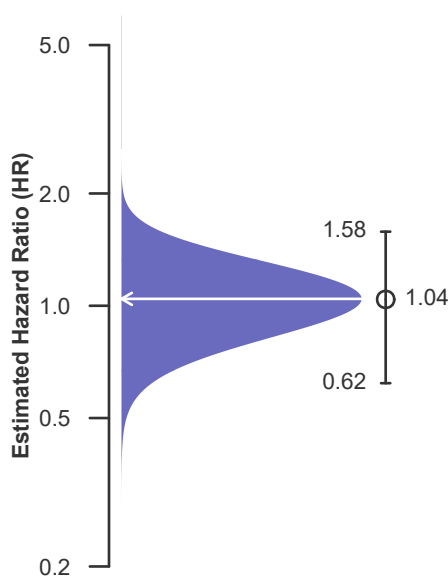
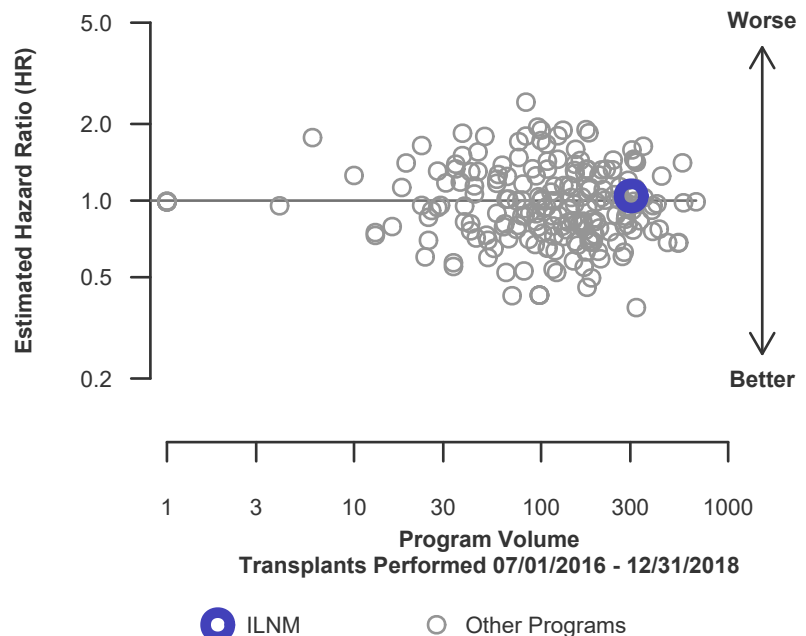


Figure C4D. Adult (18+) 1-year deceased donor graft failure HR program comparison





C. Transplant Information

Table C6L. Adult (18+) 1-year survival with a functioning living donor graft
Single organ transplants performed between 07/01/2016 and 12/31/2018
Deaths and retransplants are considered graft failures

	ILNM	U.S.
Number of transplants evaluated	253	14,487
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	97.51%	98.09%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	98.26%	--
Number of observed graft failures (including deaths) during the first year after transplant	6	258
Number of expected graft failures (including deaths) during the first year after transplant	4.04	--
Estimated hazard ratio*	1.32	--
95% credible interval for the hazard ratio**	[0.57, 2.39]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.57, 2.39], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 32% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 43% reduced risk up to 139% increased risk.

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

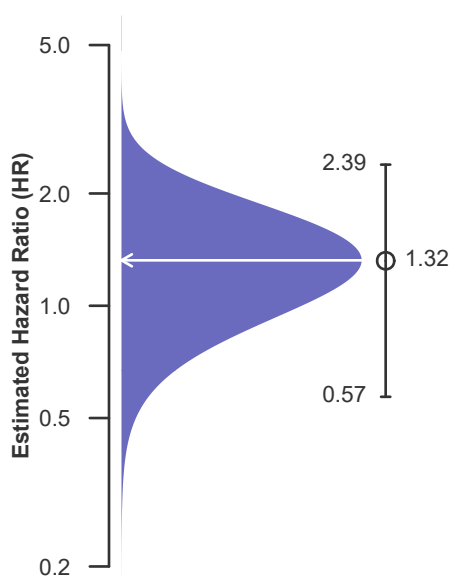
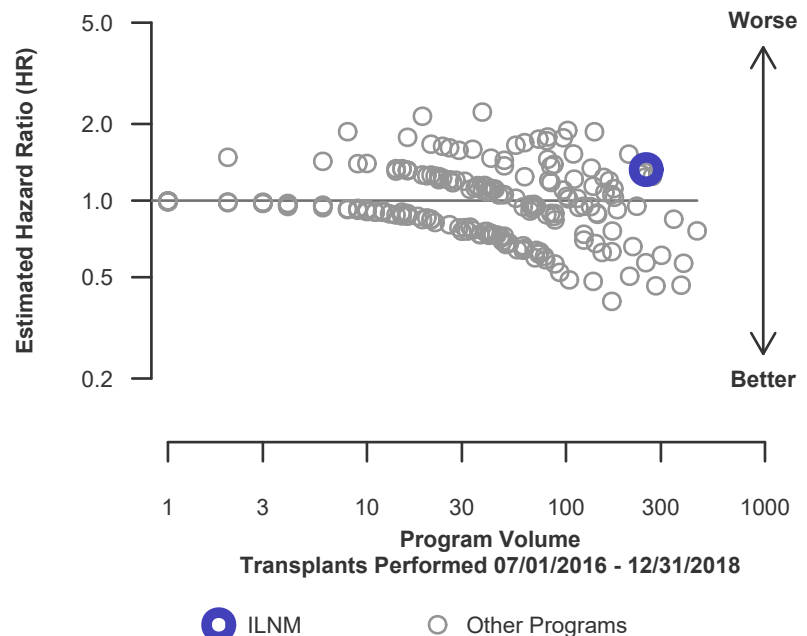


Figure C4L. Adult (18+) 1-year living donor graft failure HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	436	40,310
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	92.20%	89.02%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	91.37%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	34	4,426
Number of expected graft failures (including deaths) during the first 3 years after transplant	37.94	--
Estimated hazard ratio*	0.90	--
95% credible interval for the hazard ratio**	[0.63, 1.22]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.63, 1.22], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 10% lower risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 37% reduced risk up to 22% increased risk.

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

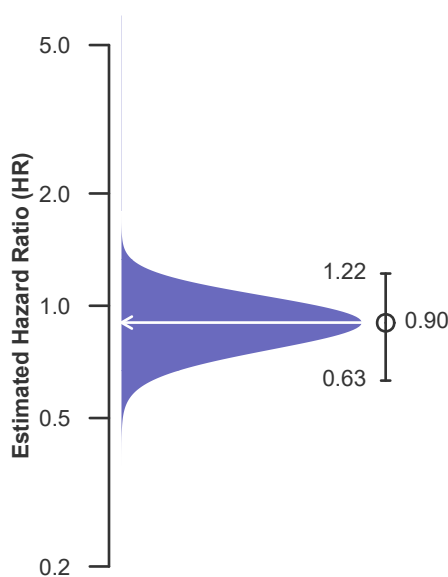
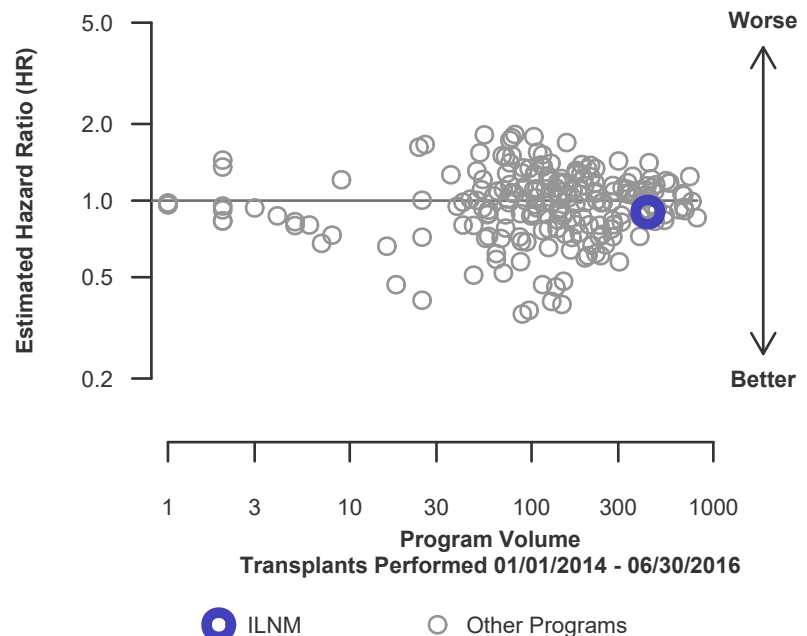


Figure C6. Adult (18+) 3-year graft failure HR program comparison





C. Transplant Information

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

	ILNM	U.S.
Number of transplants evaluated	201	27,101
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	90.55%	86.62%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	87.60%	--
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	25.34	--
Estimated hazard ratio*	0.77	--
95% credible interval for the hazard ratio**	[0.48, 1.13]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.48, 1.13], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 23% lower risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 52% reduced risk up to 13% increased risk.

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

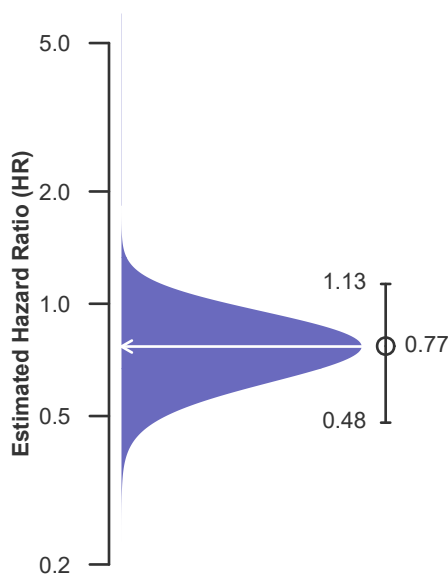
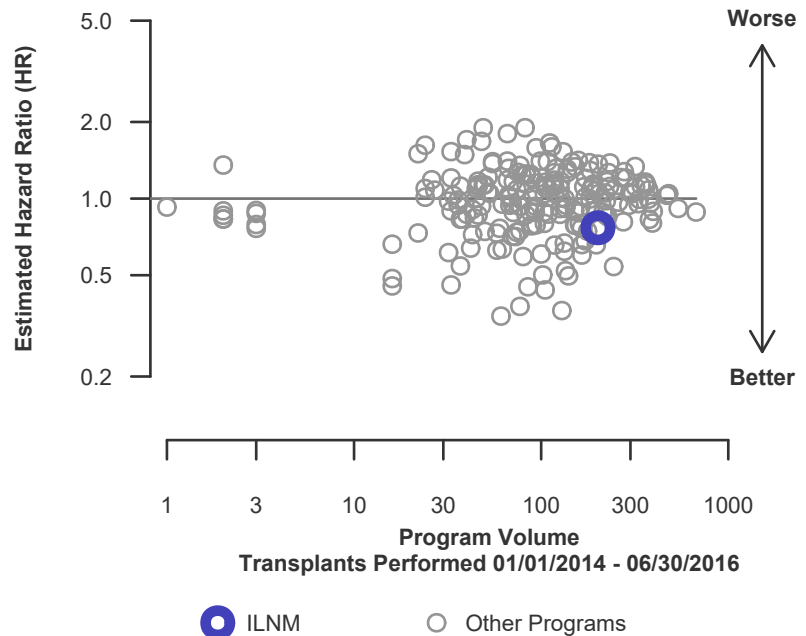


Figure C6D. Adult (18+) 3-year deceased donor graft failure HR program comparison





C. Transplant Information

Table C7L. Adult (18+) 3-year survival with a functioning living donor graft
Single organ transplants performed between 01/01/2014 and 06/30/2016
Deaths and retransplants are considered graft failures

	ILNM	U.S.
Number of transplants evaluated	235	13,209
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	93.62%	93.94%
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	15	800
Number of expected graft failures (including deaths) during the first 3 years after transplant	12.60	--
Estimated hazard ratio*	1.16	--
95% credible interval for the hazard ratio**	[0.68, 1.78]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.68, 1.78], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 16% higher risk of graft failure compared to an average program, but ILNM's performance could plausibly range from 32% reduced risk up to 78% increased risk.

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

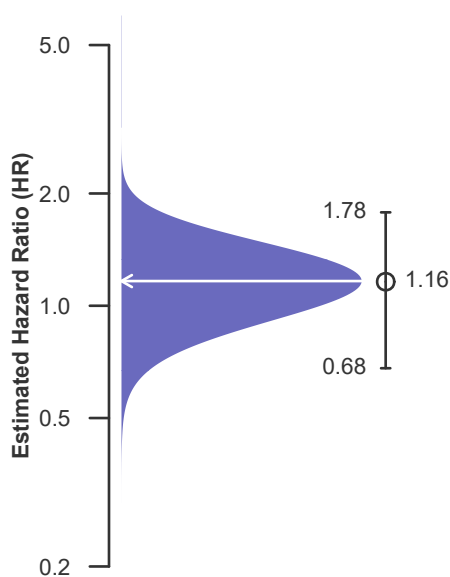
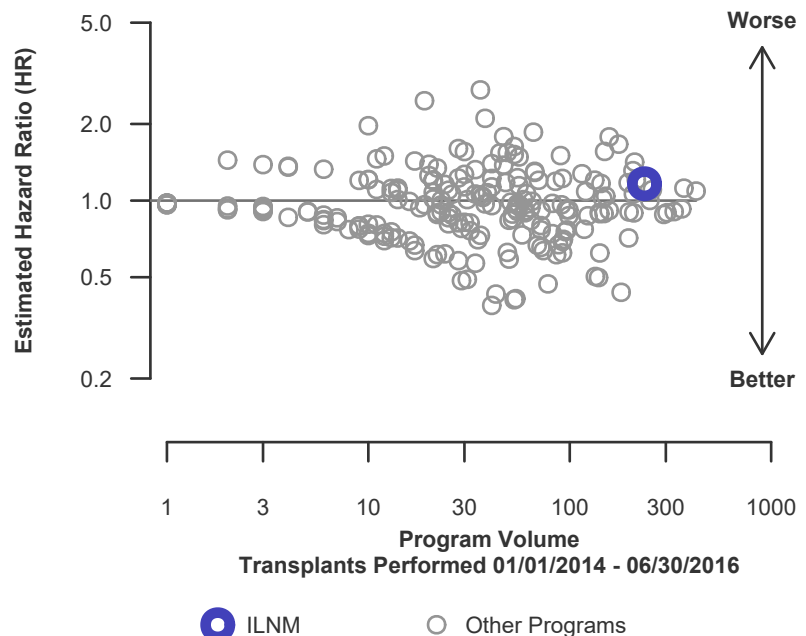


Figure C6L. Adult (18+) 3-year living donor graft failure HR program comparison





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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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

	ILNM	U.S.
Number of transplants evaluated	480	40,946
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	99.38%	99.57%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.64%	--
Number of observed deaths during the first month after transplant	3	178
Number of expected deaths during the first month after transplant	1.75	--
Estimated hazard ratio*	1.33	--
95% credible interval for the hazard ratio**	[0.43, 2.73]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.43, 2.73], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 33% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 57% reduced risk up to 173% increased risk.

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

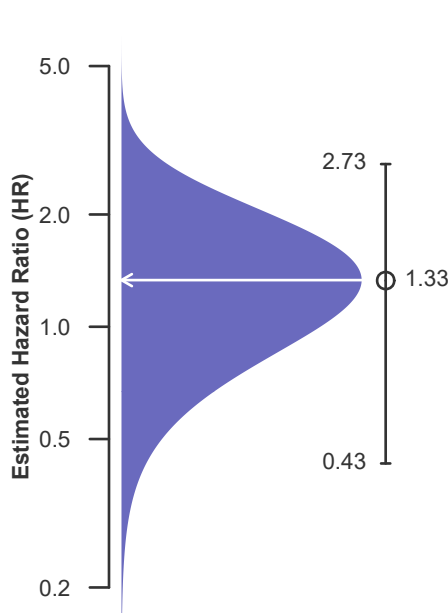
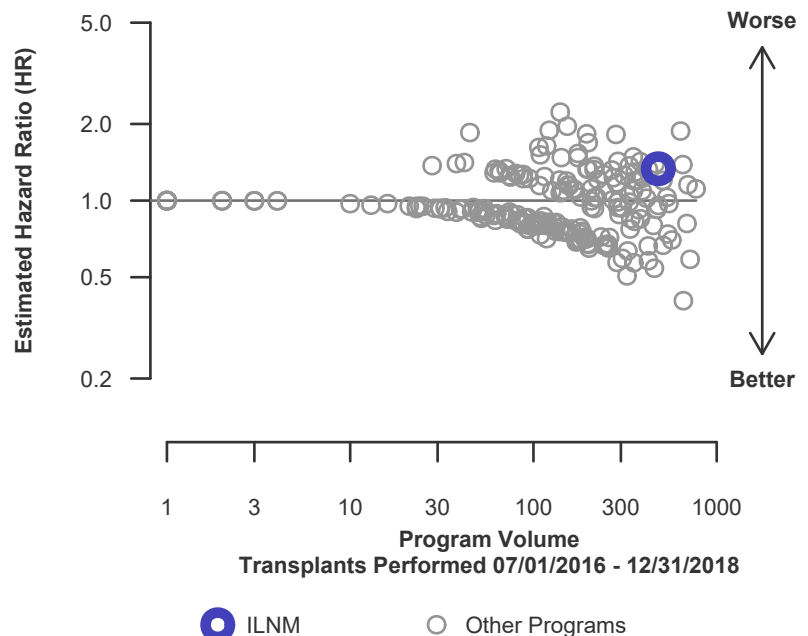


Figure C14. Adult (18+) 1-month patient death HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	255	27,873
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	99.22%	99.44%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.46%	--
Number of observed deaths during the first month after transplant	2	155
Number of expected deaths during the first month after transplant	1.39	--
Estimated hazard ratio*	1.18	--
95% credible interval for the hazard ratio**	[0.32, 2.59]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.32, 2.59], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 18% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 68% reduced risk up to 159% increased risk.

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

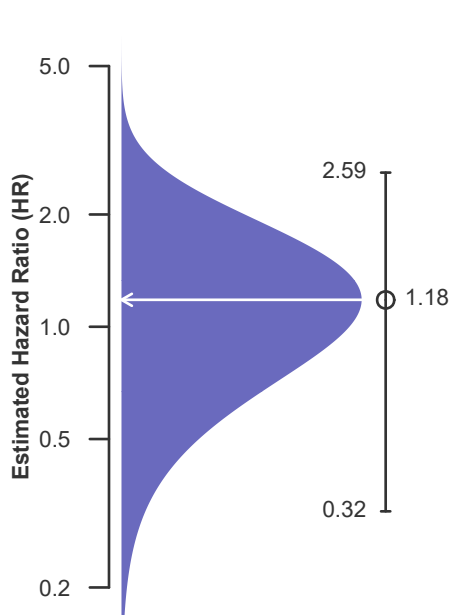
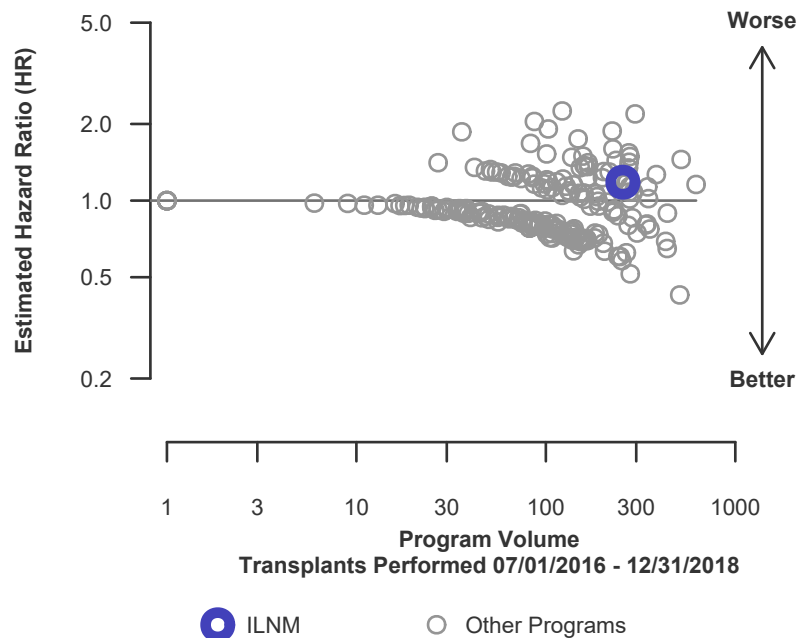


Figure C14D. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts)





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

	ILNM	U.S.
Number of transplants evaluated	225	13,073
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	99.56%	99.82%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.84%	--
Number of observed deaths during the first month after transplant	1	23
Number of expected deaths during the first month 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 Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death 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 ILNM's true hazard ratio with 95% probability. The best estimate is 27% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 74% reduced risk up to 206% increased risk.

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

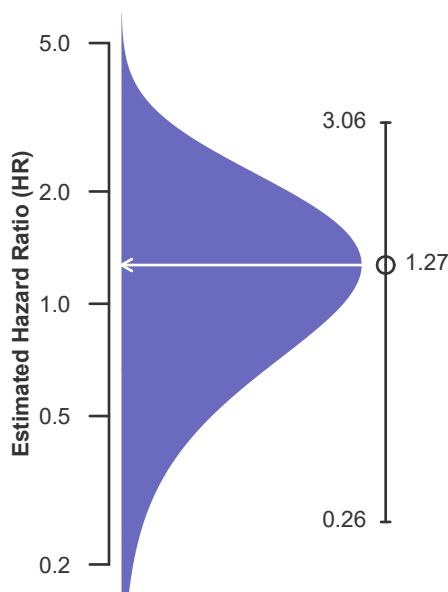
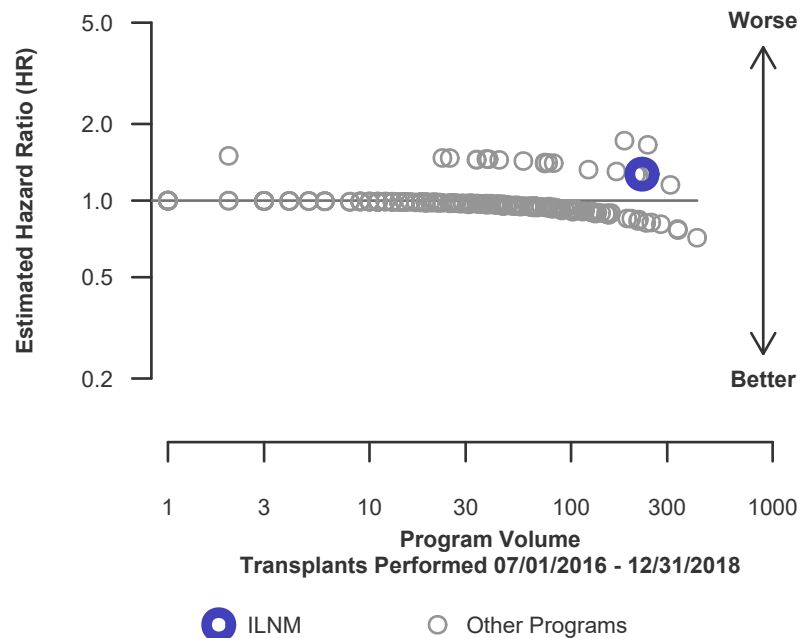


Figure C14L. Adult (18+) 1-month patient death HR program comparison (living donor grafts)





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

	ILNM	U.S.
Number of transplants evaluated	480	40,946
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	97.58%	97.71%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	98.08%	--
Number of observed deaths during the first year after transplant	11	856
Number of expected deaths during the first year after transplant	8.37	--
Estimated hazard ratio*	1.25	--
95% credible interval for the hazard ratio**	[0.67, 2.02]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.67, 2.02], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 25% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 33% reduced risk up to 102% increased risk.

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

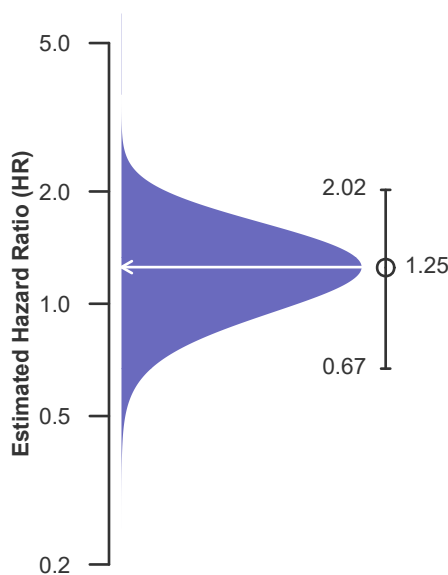
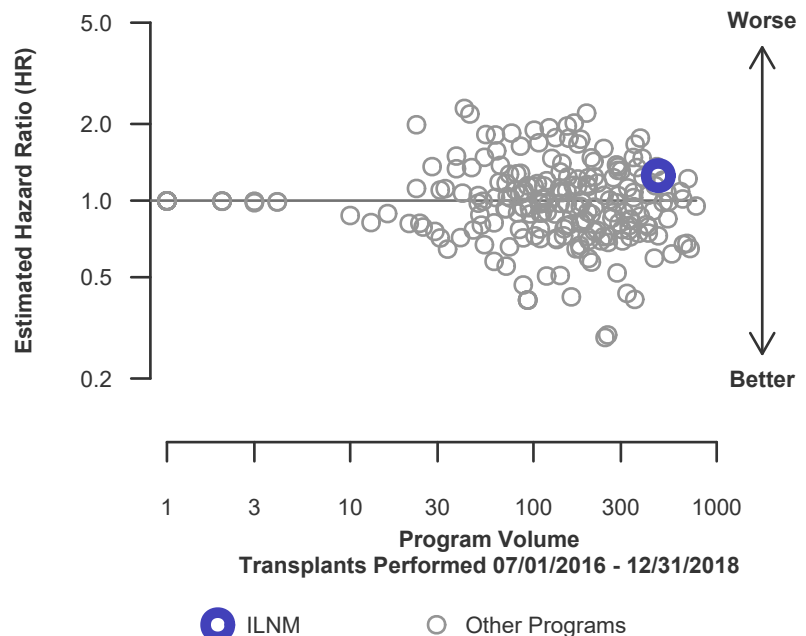


Figure C16. Adult (18+) 1-year patient death HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	255	27,873
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	96.75%	97.05%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	97.11%	--
Number of observed deaths during the first year after transplant	8	751
Number of expected deaths during the first year after transplant	6.74	--
Estimated hazard ratio*	1.14	--
95% credible interval for the hazard ratio**	[0.55, 1.96]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.55, 1.96], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 14% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 45% reduced risk up to 96% increased risk.

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

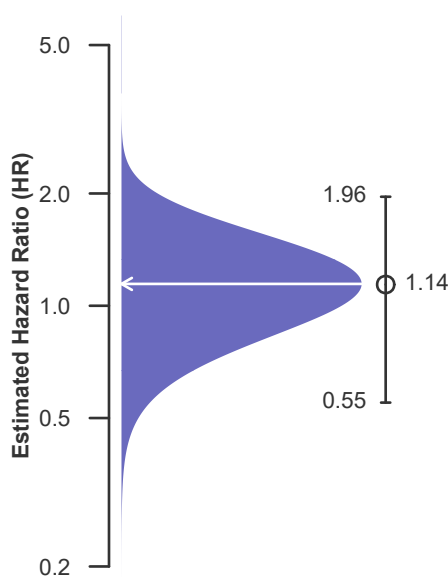
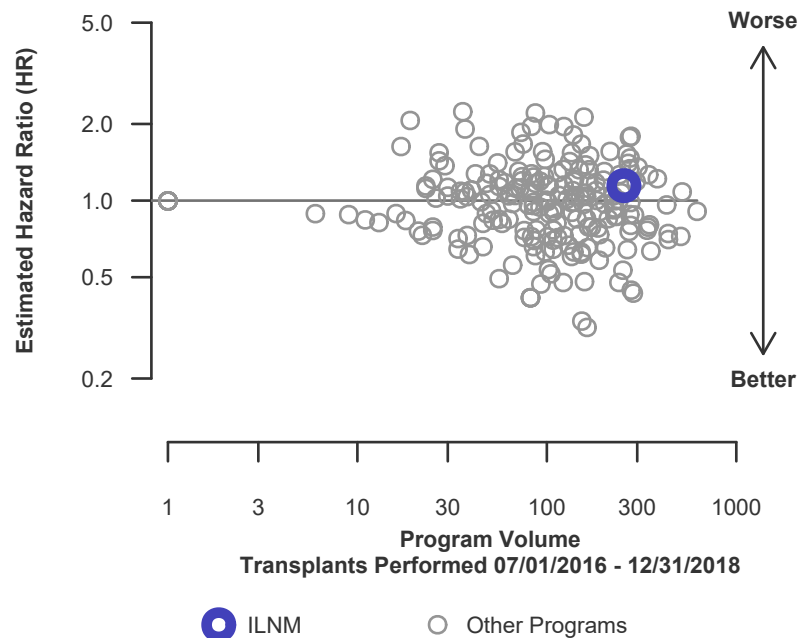


Figure C16D. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts)





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

	ILNM	U.S.
Number of transplants evaluated	225	13,073
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	98.53%	99.12%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	99.19%	--
Number of observed deaths during the first year after transplant	3	105
Number of expected deaths during the first year after transplant	1.63	--
Estimated hazard ratio*	1.38	--
95% credible interval for the hazard ratio**	[0.45, 2.82]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.45, 2.82], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 38% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 55% reduced risk up to 182% increased risk.

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

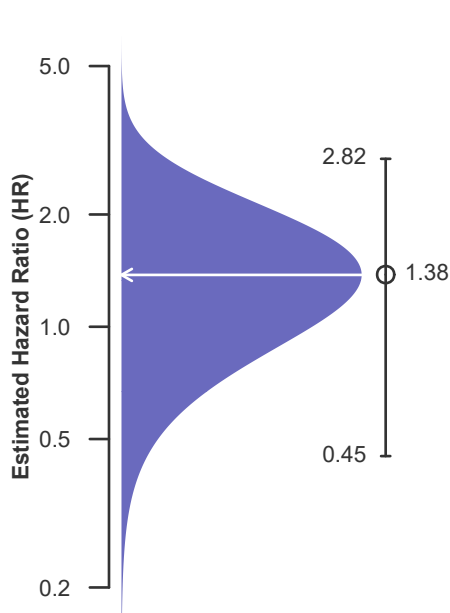
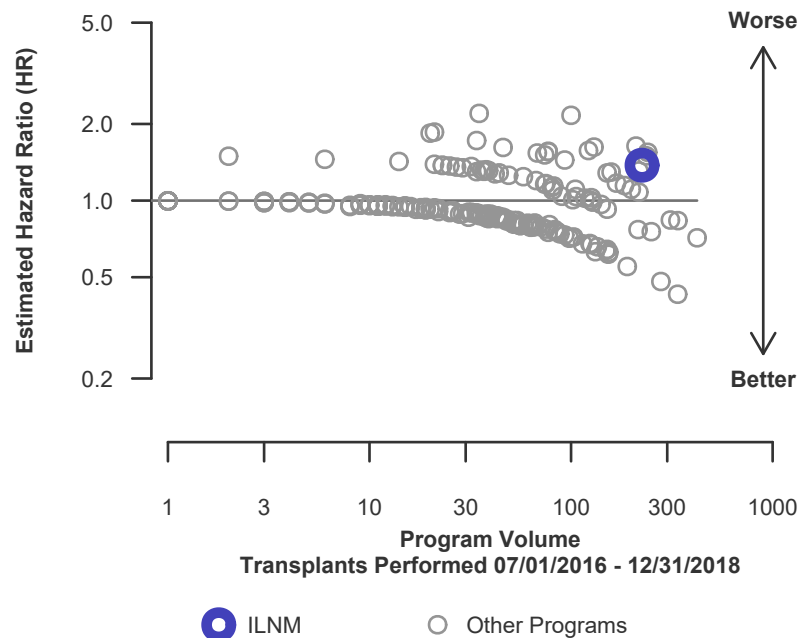


Figure C16L. Adult (18+) 1-year patient death HR program comparison (living donor grafts)





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

	ILNM	U.S.
Number of transplants evaluated	382	34,940
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	96.60%	93.49%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	95.57%	--
Number of observed deaths during the first 3 years after transplant	13	2,276
Number of expected deaths during the first 3 years after transplant	17.25	--
Estimated hazard ratio*	0.78	--
95% credible interval for the hazard ratio**	[0.44, 1.22]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.44, 1.22], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 22% lower risk of patient death compared to an average program, but ILNM's performance could plausibly range from 56% reduced risk up to 22% increased risk.

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

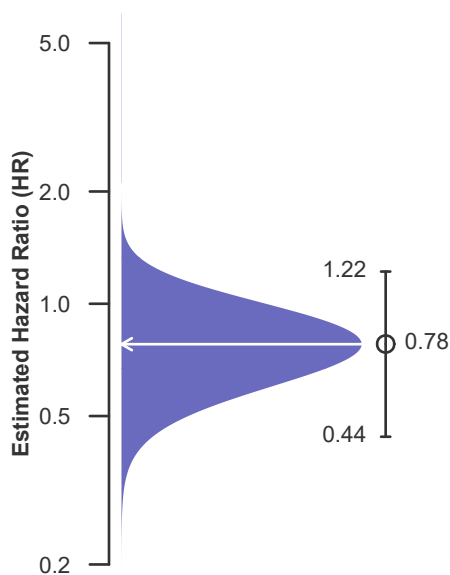
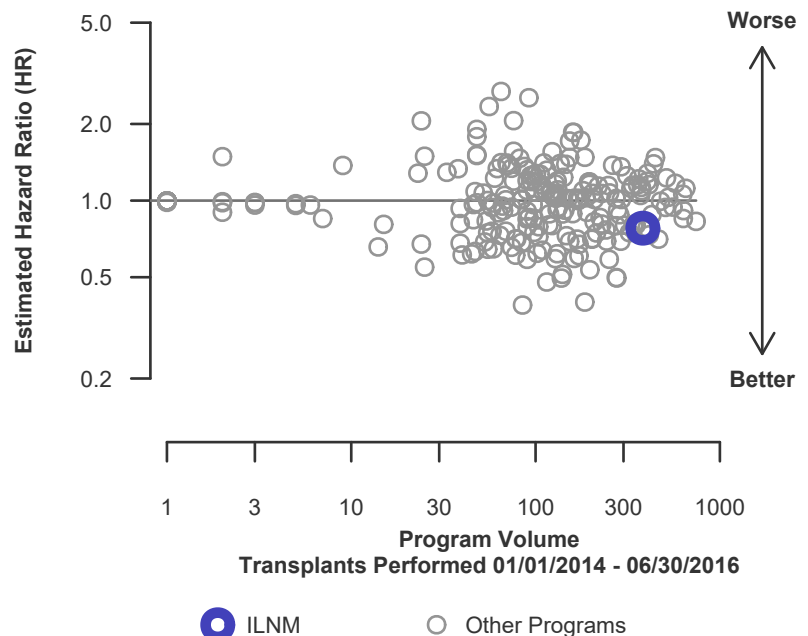


Figure C18. Adult (18+) 3-year patient death HR program comparison





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

	ILNM	U.S.
Number of transplants evaluated	174	23,108
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	95.98%	91.86%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	93.37%	--
Number of observed deaths during the first 3 years after transplant	7	1,880
Number of expected deaths during the first 3 years after transplant	11.84	--
Estimated hazard ratio*	0.65	--
95% credible interval for the hazard ratio**	[0.30, 1.14]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.30, 1.14], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 35% lower risk of patient death compared to an average program, but ILNM's performance could plausibly range from 70% reduced risk up to 14% increased risk.

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

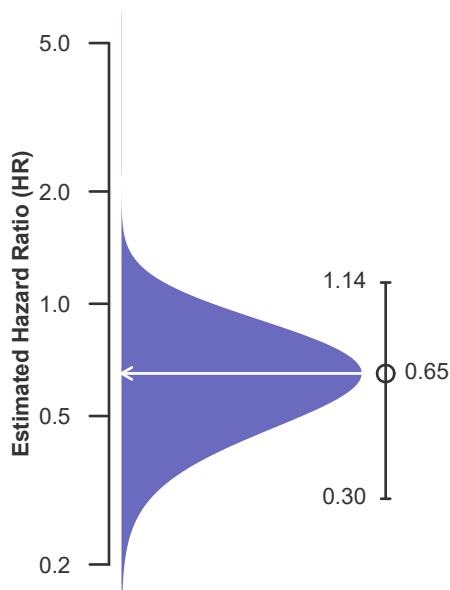
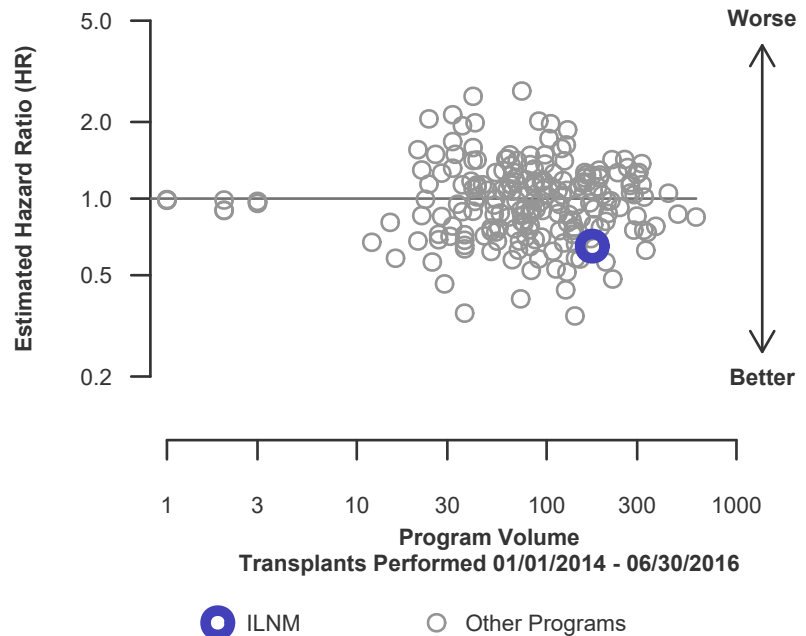


Figure C18D. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts)





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

	ILNM	U.S.
Number of transplants evaluated	208	11,832
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	97.12%	96.65%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	97.41%	--
Number of observed deaths during the first 3 years after transplant	6	396
Number of expected deaths during the first 3 years after transplant	5.42	--
Estimated hazard ratio*	1.08	--
95% credible interval for the hazard ratio**	[0.47, 1.94]	--

* The hazard ratio provides an estimate of how Northwestern Memorial Hospital (ILNM)'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 ILNM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

** The 95% credible interval, [0.47, 1.94], indicates the location of ILNM's true hazard ratio with 95% probability. The best estimate is 8% higher risk of patient death compared to an average program, but ILNM's performance could plausibly range from 53% reduced risk up to 94% increased risk.

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

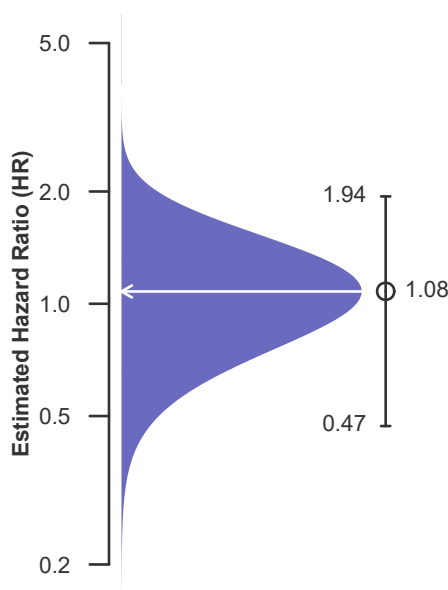
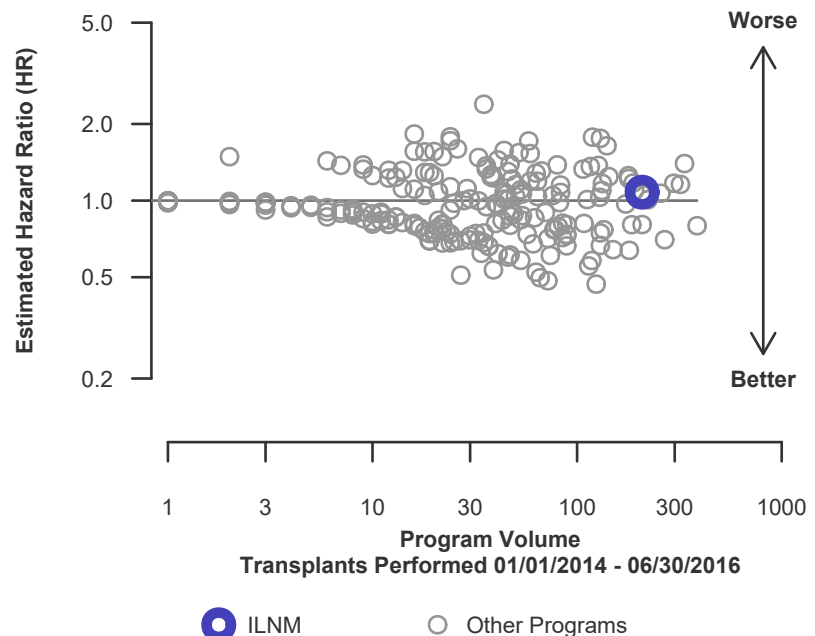


Figure C18L. Adult (18+) 3-year patient death HR program comparison (living donor grafts)





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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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

This center did not perform any
transplants relevant to
this table during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016

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

This center did not perform any
transplants relevant to
this figure during
01/01/2014-06/30/2016



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	
	ILNM-TX1	USA	ILNM-TX1	USA	ILNM-TX1	USA
Kidney-Heart	6	463	2	61	66.7%	86.4%
Kidney-Liver	24	1,742	3	203	87.5%	87.9%
Kidney-Pancreas	39	2,007	3	70	90.6%	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	
	ILNM-TX1	USA	ILNM-TX1	USA	ILNM-TX1	USA
Kidney-Heart	6	463	0	43	100.0%	90.3%
Kidney-Liver	24	1,742	1	167	95.8%	89.9%
Kidney-Pancreas	39	2,007	2	43	93.8%	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
Number of Living Donors	106	103	65	5,722	6,153	3,303
6-Month Follow-Up						
Donors due for follow-up	105	103	64	5,719	6,152	3,298
Timely clinical data	90 85.7%	88 85.4%	53 82.8%	5,100 89.2%	5,392 87.6%	2,864 86.8%
Timely lab data	83 79.0%	80 77.7%	54 84.4%	4,876 85.3%	5,210 84.7%	2,743 83.2%
12-Month Follow-Up						
Donors due for follow-up	105	103		5,719	6,150	
Timely clinical data	79 75.2%	90 87.4%		4,817 84.2%	5,087 82.7%	
Timely lab data	66 62.9%	81 78.6%		4,565 79.8%	4,811 78.2%	
24-Month Follow-Up						
Donors due for follow-up	105			5,718		
Timely clinical data	79 75.2%			4,368 76.4%		
Timely lab data	69 65.7%			4,002 70.0%		

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