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## COVID-19 Guide

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### Adjustments to Transplant Program and OPO Evaluation Metrics

The Scientific Registry of Transplant Recipients (SRTR), under contract from the Health Resources and Services Administration (HRSA), is charged with evaluating the performance of the nation's transplant system through publication of semi-annual transplant program-specific reports (PSRs) and organ procurement organization (OPO)-specific reports (OSRs). These reports contain performance metrics covering various time periods. For OPOs, these metrics include eligible death conversion rates and deceased donor organ yield. For transplant programs, they include pre-transplant mortality rates (formerly called waitlist mortality rates), transplant rates, organ offer acceptance rates, patient mortality after listing, and 1-month, 90-day, 1-year, 1-year conditional on 90-day, and 3-year posttransplant outcomes including graft survival and patient survival.

In response to the current global pandemic, SRTR modified the evaluation metrics for transplant programs and OPOs for the reports released in January 2021, July 2021 and January 2022. These reports made adjustments to transplant program and OPO performance metrics so that data beyond the declaration of a national public health emergency on March 13, 2020, were not included in the metrics.

Modifications for the July 2022 reporting cycle were considered at the Analytic Methods Subcommittee of the SRTR Review Committee (SRC) at its meeting on March 24, 2021, and the full SRC meetings April 27, 2021 and on January 11, 2022. Both the Analytic Methods Subcommittee and the full SRC recommended an ongoing carve out of the first quarter of the pandemic (March 13, 2020 through June 12, 2020) from adjusted performance metrics, as detailed below. These recommendations were reviewed by HRSA's Division of Transplantation, which oversees SRTR. HRSA approved these recommendations, which SRTR will implement for the July 2022 reporting cycle. These changes will remain in force beyond the July 2022 reporting cycle, unless otherwise amended:

Posttransplant Outcomes (including 1-month, 90-day, 1-year, 1-year conditional on 90-day, and 3-year graft and patient survival): Evaluation cohorts will exclude transplants performed between March 13, 2020 and June 12, 2020, inclusive of March 13 and June 12. Patients given transplants before March 13, 2020 will have follow-up censored on March 12, 2020. Patients given transplants after June 12, 2020 will resume normal follow-up. Follow-up will not resume for patients given transplants before March 13, 2020 who are alive with function on June 12, 2020; however, this may be reconsidered as SRTR continues to explore moving to a period-prevalent methodology:

1-month, 90-day, 1-year & 1-year conditional on 90-day Patient and Graft Survival Evaluations: Transplants 1/1/2019-3/12/2020, follow-up through 3/12/2020. Transplants 6/13/2020-6/30/2021, follow-up through 12/31/2021.

3-year Patient and Graft Survival Evaluations: Transplants 7/1/2016-12/31/2018; follow-up through 3/12/2020.

Pre-Transplant Mortality Rate (formerly called Waitlist Mortality Rate): Evaluation cohorts will exclude March 13, 2020 through June 12, 2020, inclusive of March 13 and June 12:



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Days after listing (and before transplant) between 1/1/2020-3/12/2020 and 6/13/2020-12/31/2021.

Transplant Rate: Evaluation cohorts will exclude March 13, 2020 through June 12, 2020, inclusive of March 13 and June 12:

Candidates on the waitlist 1/1/2020-3/12/2020 and 6/13/2020-12/31/2021.

Overall Rate of Mortality After Listing: Evaluation cohorts will exclude March 13, 2020 through June 12, 2020, inclusive of March 13 and June 12:

Evaluation period: 1/1/2020-3/12/2020 and 6/13/2020-12/31/2021.

Offer Acceptance Rate: These evaluations are based on normal reporting cohorts.

Offers received 1/1/2021-12/31/2021.

These decisions will apply to the evaluations released in the SRTR's semi-annual program-specific reports scheduled for release on July 6, 2022. These changes have been communicated to the leadership of the Organ Procurement and Transplantation Network's (OPTN) Membership and Professional Standards Committee (MSPC). These decisions will then be re-evaluated as more information becomes available in preparation for the release scheduled for January 2023.

As with the January 2022 reports, SRTR will continue to report descriptive data beyond March 12, 2020, e.g., waitlist counts, transplant counts, recipient characteristics, donor counts, donor characteristics, etc., but will alter data for performance evaluation metrics as described above.



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This report contains a wide range of useful information about the pancreas transplant program at University of Minnesota Medical Center, Fairview. The report has three main sections:

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

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

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

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

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



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confidence interval includes (crosses) 1.0, then we cannot say that this program's observed transplant rate is different from what would be expected. The observed deceased donor transplant rate at this program was 6.8 per 100 person-years. Transplant rates are also provided for adult and pediatric patients separately along with comparisons to adult and pediatric rates in the DSA, the OPTN region, and the nation. Please refer to the PSR Technical Methods documentation available at <http://www.srtr.org> for more detail regarding how expected rates are calculated.

The pre-transplant mortality rate (previously called the waiting list 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 this table and figures is to describe risk of death once candidates are listed rather than while they are listed, but before they are transplanted. 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>.

Survival from listing is presented in Table B6 and Figures B7-B9. These data are presented in the same way as the pre-transplant mortality rate data in the previous section. The intent of this table and figures is to describe risk of death once candidates are listed rather than while they are listed, including after a transplant. As with transplant rates, mortality rates should be interpreted carefully taking into consideration the interval displayed in Figure B8. 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 B7 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 B8 and B9 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 B8 and B9 presents the percent of candidates who received a deceased donor transplant by each time point. Table B10 presents data on the time it took for different percentages of patients to be transplanted for candidates added to the list between 01/01/2016 and 06/30/2021. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this program was 1.4 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 12/31/2021 to calculate a particular percentile of transplant times.

Table B11 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 B10 shows the distribution of program offer acceptance rates as well as the offer acceptance rate for this program. Figures B11 - B15 similarly show offer acceptance rates for subsets of offers.



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

Starting with Table C5, transplant outcomes are presented along with comparisons to what would be expected at this program and what happened in the nation as a whole. Tables C5-C14 (tables C5-C10 for Pancreas) 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-C14 present data on graft survival, Tables C15-C20 (tables C11-C20 for Pancreas) 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 C21 and C22 summarize the multiorgan transplant outcomes at this program. The summary statistics in these tables are descriptive and are not risk-adjusted for different donor and candidate characteristics.

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



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## A. Program Summary

Figure A1. Waiting list and transplant activity

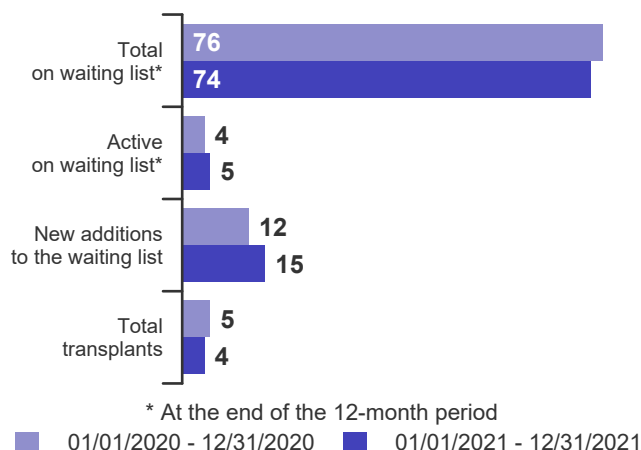


Table A1. Census of transplant recipients

Recipients	01/01/2020-12/31/2020	01/01/2021-12/31/2021
Transplanted at this center	5	4
Followed by this center*	217	219
...transplanted at this program	215	217
...transplanted elsewhere	2	2

\* 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  
01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021

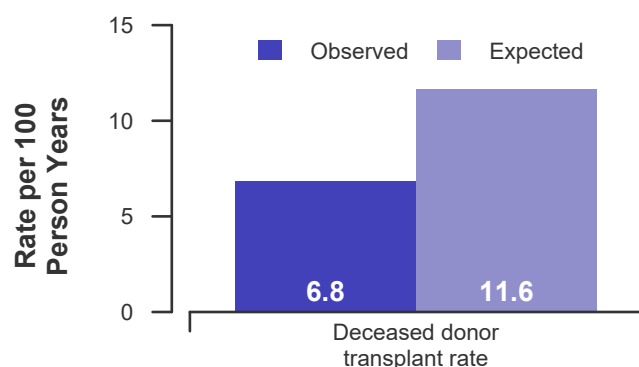


Figure A3. Pre-transplant mortality rates  
01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021

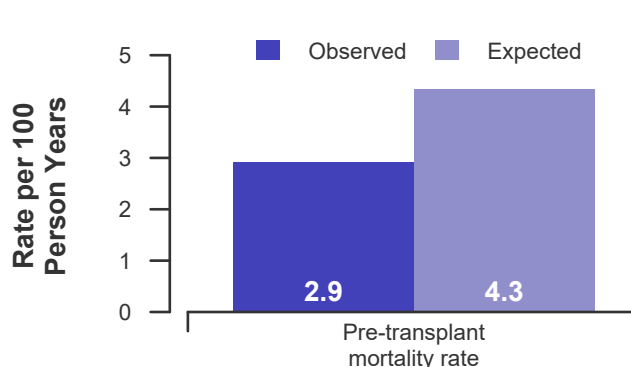


Figure A4. First-year adult patient survival:  
01/01/2019 - 03/12/2020, 06/13/2020 - 06/30/2021

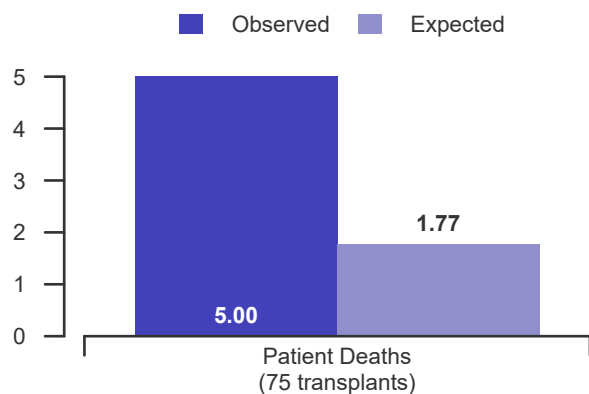


Figure A5. First-year pediatric patient survival:  
01/01/2019 - 03/12/2020, 06/13/2020 - 06/30/2021

This center did not perform any transplants relevant to this figure during 01/01/2019-06/30/2021





## B. Waiting List Information

Table B1. Waiting list activity summary: 01/01/2020 - 12/31/2021

Waiting List Registrations	Counts for this center		Activity for 01/01/2021 to 12/31/2021 as percent of registrants on waiting list on 01/01/2021		
	01/01/2020-12/31/2020	01/01/2021-12/31/2021	This Center (%)	OPTN Region (%)	U.S. (%)
<b>On waiting list at start</b>	72	76	100.0	100.0	100.0
<b>Additions</b>					
New listings at this center	12	15	19.7	33.1	44.7
<b>Removals</b>					
Transferred to another center	0	0	0.0	0.0	0.1
Received living donor transplant*	0	0	0.0	0.0	0.0
Received deceased donor transplant*	5	4	5.3	19.3	19.9
Died	2	3	3.9	2.2	2.0
Transplanted at another center	0	0	0.0	0.6	0.7
Deteriorated	0	3	3.9	2.2	3.5
Recovered	0	0	0.0	0.6	2.1
Other reasons	1	7	9.2	17.1	18.5
<b>On waiting list at end of period</b>	76	74	97.4	91.2	97.9

\* 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 01/01/2021 and 12/31/2021**

Demographic Characteristic	New Waiting List Registrations 01/01/2021 to 12/31/2021 (%)			All Waiting List Registrations on 12/31/2021 (%)		
	This Center (N=15)	OPTN Region (N=60)	U.S. (N=317)	This Center (N=74)	OPTN Region (N=165)	U.S. (N=694)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ethnicity/Race (%)*</b>						
White	93.3	76.7	65.0	85.1	81.8	63.8
African-American	0.0	11.7	15.8	5.4	7.9	18.3
Hispanic/Latino	6.7	10.0	15.1	5.4	7.3	14.6
Asian	0.0	0.0	2.8	1.4	0.6	2.2
Other	0.0	1.7	1.3	2.7	2.4	1.2
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Age (%)</b>						
<2 years	0.0	0.0	1.9	0.0	0.0	1.4
2-11 years	0.0	1.7	5.7	0.0	0.6	4.0
12-17 years	0.0	0.0	1.3	0.0	0.0	1.2
18-34 years	13.3	18.3	23.3	20.3	23.6	26.5
35-49 years	40.0	46.7	42.6	51.4	54.5	49.1
50-64 years	46.7	30.0	23.7	27.0	20.0	17.3
65-69 years	0.0	3.3	1.6	1.4	1.2	0.4
70+ years	0.0	0.0	0.0	0.0	0.0	0.0
<b>Gender (%)</b>						
Male	53.3	53.3	56.2	51.4	44.2	49.1
Female	46.7	46.7	43.8	48.6	55.8	50.9

\* 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 01/01/2021 and 12/31/2021

Medical Characteristic	New Waiting List Registrations 01/01/2021 to 12/31/2021 (%)			All Waiting List Registrations on 12/31/2021 (%)		
	This Center (N=15)	OPTN Region (N=60)	U.S. (N=317)	This Center (N=74)	OPTN Region (N=165)	U.S. (N=694)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Blood Type (%)						
O	73.3	48.3	45.4	54.1	47.3	45.2
A	26.7	35.0	40.4	32.4	37.0	39.3
B	0.0	10.0	9.8	9.5	10.9	11.1
AB	0.0	6.7	4.4	4.1	4.8	4.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Previous Transplant (%)						
Yes	46.7	43.3	42.6	66.2	50.9	49.3
No	53.3	56.7	57.4	33.8	49.1	50.7
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Years Since Diabetes Onset (%)						
Less than 20 Years	60.0	33.3	21.5	25.7	27.9	21.8
20 to 25 Years	0.0	11.7	15.1	17.6	17.6	18.4
25 to 30 Years	20.0	11.7	14.8	18.9	16.4	17.3
30 Years or More	6.7	30.0	22.1	32.4	32.1	24.9
Unknown	13.3	13.3	26.5	5.4	6.1	17.6



## B. Waiting List Information

**Table B4D. Deceased donor transplant rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**

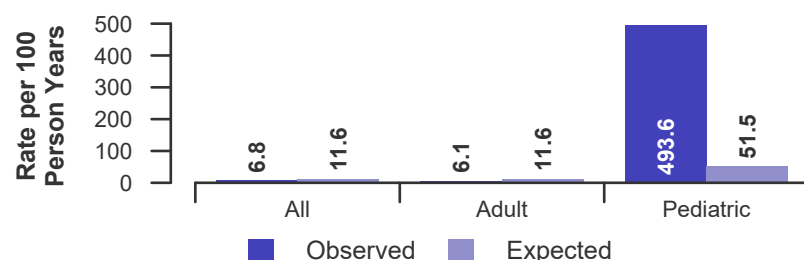
Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	72	291	475	2,323
Person Years**	131.8	506.2	817.3	4,125.5
Removals for Transplant	9	87	317	1,717
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	72	291	475	2,320
Person Years**	131.6	506.0	817.1	4,121.6
Removals for transplant	8	86	316	1,715
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	0	0	3
Person Years**	0.2	0.2	0.2	3.9
Removals for transplant	1	1	1	2

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

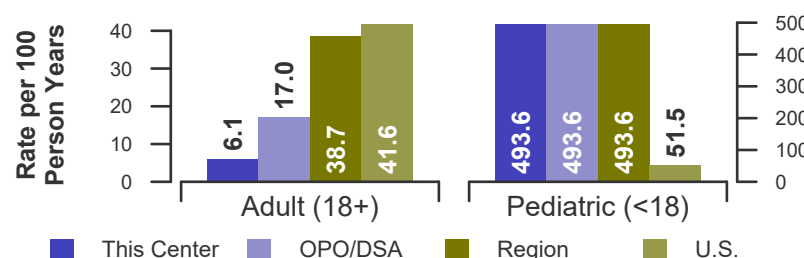
\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of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

\*\* Person years are calculated as days (converted to fractional years). The number of days from January 1 or from the date of first wait listing until death, transplant, removal from the waiting list or December 31. Person years excludes time on the waiting list between March 13, 2020 and June 12, 2020.

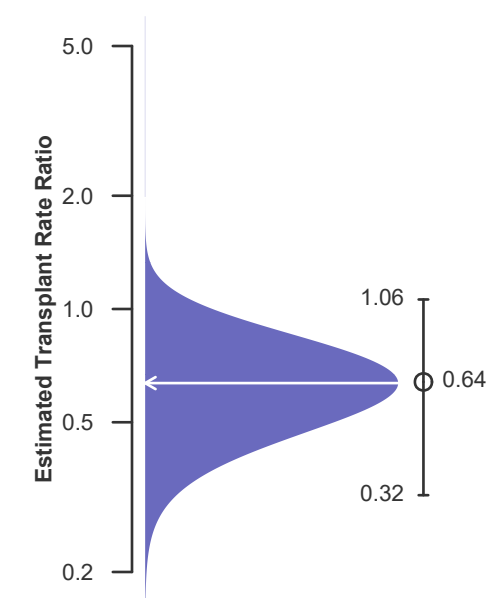
**Figure B1D. Observed and expected deceased donor transplant rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B2D. Deceased donor transplant rate ratio estimate**





## B. Waiting List Information

**Table B5. Pre-transplant mortality rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**

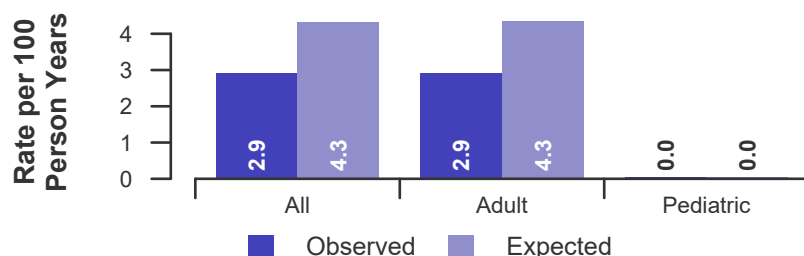
Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	72	291	475	2,323
Person Years**	137.4	545.8	895.7	4,682.3
Number of deaths	4	28	43	259
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	72	291	475	2,320
Person Years**	137.2	545.6	895.5	4,675.1
Number of deaths	4	28	43	259
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	0	0	3
Person Years**	0.2	0.2	0.2	7.2
Number of deaths	0	0	0	0

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

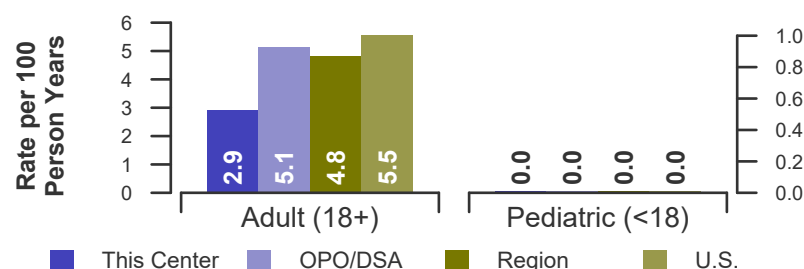
\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of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

\*\* Person years are calculated as days (converted to fractional years). The number of days from January 1 or from the date of first wait listing until death, transplant, 60 days after recovery, transfer or December 31. Person years excludes time on the waiting list between March 13, 2020 and June 12, 2020.

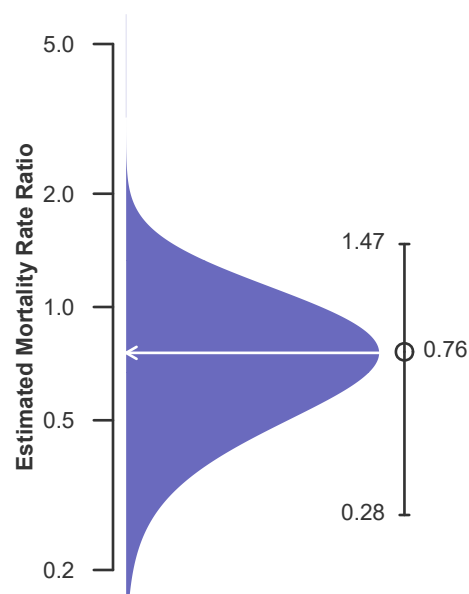
**Figure B4. Observed and expected pre-transplant mortality rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B6. Observed adult (18+) and pediatric (<18) pre-transplant mortality rates: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B5. Pre-transplant mortality rate ratio estimate**





## B. Waiting List Information

**Table B6. Rates of patient mortality after listing: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**

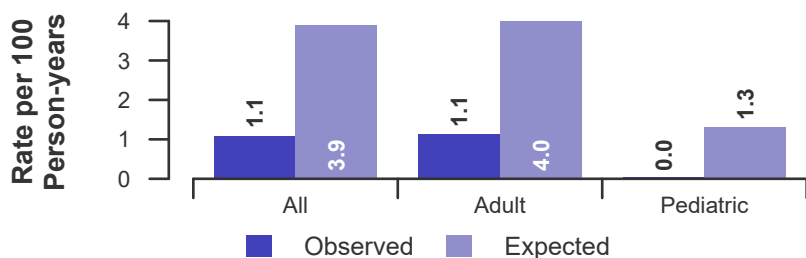
Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Patients</b>				
Count at risk during the evaluation period	83	147	352	1,065
Person-years*	92.8	169.4	419.9	1,279.5
Number of Deaths	1	4	11	39
<b>Adult (18+) Patients</b>				
Count at risk during the evaluation period	81	145	349	1,053
Person-years*	89.5	166.0	414.8	1,260.5
Number of Deaths	1	4	11	39
<b>Pediatric (&lt;18) Patients</b>				
Count at risk during the evaluation period	2	2	3	12
Person-years*	3.4	3.4	5.1	19.1
Number of Deaths	0	0	0	0

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

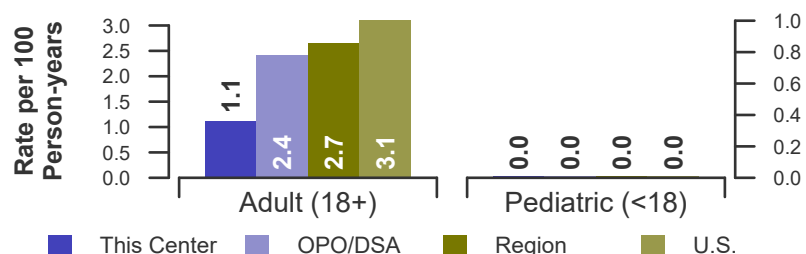
\* Person-years are calculated as days (converted to fractional years). The number of days from 01/01/2020, or from the date of first wait listing until death, reaching 5 years after listing or December 31, 2021. Person years excludes time on the waiting list between March 13, 2020 and June 12, 2020.

\*\* Patient mortality after listing describes the relative survival experience of patients after listing. It depends on many factors, some of which are outside of the control of the transplant program. For example, availability of organs may not be the same in every part of the country.

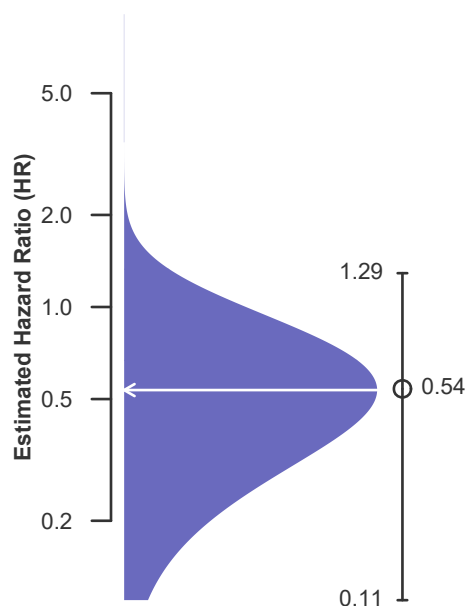
**Figure B7. Observed and expected rates of patient mortality after listing: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B9. Observed adult (18+) and pediatric (<18) rates of patient mortality after listing: 01/01/2020 - 03/12/2020, 06/13/2020 - 12/31/2021**



**Figure B8. HR estimate of patient mortality after listing**





## B. Waiting List Information

**Table B7. Waiting list candidate status after listing**  
**Candidates registered on waiting list between 07/01/2019 and 06/30/2020**

Waiting list status (survival status)	This Center (N=16)			U.S. (N=319)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	81.2	68.8	62.5	71.2	55.2	45.5
<b>Died on the waiting list without transplant (%)</b>	0.0	0.0	0.0	1.6	2.5	2.8
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	0.0	0.0	0.0	1.9	2.5	3.8
Condition improved (status unknown)	0.0	0.0	0.0	0.6	1.3	1.3
Refused transplant (status unknown)	0.0	0.0	0.0	0.9	1.9	2.2
Other	12.5	12.5	18.8	4.7	8.5	11.9
<b>Transplant (living or deceased donor) (%):</b>						
Functioning (alive)	6.2	18.8	12.5	16.3	22.6	16.9
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.3	0.3	0.6
Failed-alive not retransplanted	0.0	0.0	0.0	0.3	0.0	0.3
Died	0.0	0.0	0.0	0.6	1.3	1.6
Status Yet Unknown*	0.0	0.0	6.2	1.6	4.1	13.2
<b>Lost or Transferred (status unknown) (%)</b>	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.0	0.0	0.0	2.2	3.8	4.4
Total % known died or removed as unstable	0.0	0.0	0.0	4.1	6.3	8.2
Total % removed for transplant	6.2	18.8	18.8	19.1	28.2	32.6
Total % with known functioning transplant (alive)	6.2	18.8	12.5	16.3	22.6	16.9

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



## B. Waiting List Information

**Table B8. Percent of candidates with deceased donor transplants: demographic characteristics**  
Candidates registered on the waiting list between 01/01/2016 and 12/31/2018

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
<b>All</b>	49	4.1	28.6	32.7	34.7	1,187	8.9	37.2	44.3	47.5
<b>Ethnicity/Race*</b>										
White	41	4.9	34.1	39.0	39.0	867	8.8	38.8	46.1	49.4
African-American	3	0.0	0.0	0.0	0.0	165	9.1	34.5	38.2	40.6
Hispanic/Latino	2	0.0	0.0	0.0	50.0	116	10.3	32.8	41.4	44.0
Asian	1	0.0	0.0	0.0	0.0	23	13.0	34.8	43.5	52.2
Other	2	0.0	0.0	0.0	0.0	16	0.0	18.8	31.2	37.5
Unknown	0	--	--	--	--	0	--	--	--	--
<b>Age</b>										
<2 years	1	0.0	0.0	0.0	0.0	46	10.9	52.2	58.7	65.2
2-11 years	1	0.0	0.0	0.0	0.0	81	11.1	56.8	64.2	65.4
12-17 years	1	0.0	100.0	100.0	100.0	24	4.2	50.0	58.3	66.7
18-34 years	10	10.0	30.0	30.0	30.0	271	7.7	34.3	42.8	45.4
35-49 years	17	5.9	29.4	35.3	41.2	493	7.7	32.7	39.4	43.0
50-64 years	19	0.0	26.3	31.6	31.6	255	12.2	38.8	45.5	48.2
65-69 years	0	--	--	--	--	14	7.1	50.0	50.0	50.0
70+ years	0	--	--	--	--	3	0.0	0.0	0.0	0.0
<b>Gender</b>										
Male	28	3.6	25.0	28.6	32.1	612	9.5	40.5	47.4	49.3
Female	21	4.8	33.3	38.1	38.1	575	8.3	33.7	41.0	45.6

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





## B. Waiting List Information

**Table B9. Percent of candidates with deceased donor transplants: medical characteristics**  
Candidates registered on the waiting list between 01/01/2016 and 12/31/2018

Characteristic	N	Percent transplanted at time periods since listing									
		This Center					United States				
		30 day	1 year	2 years	3 years		30 day	1 year	2 years	3 years	
<b>All</b>	49	4.1	28.6	32.7	34.7	1,187	8.9	37.2	44.3	47.5	
<b>Blood Type</b>											
O	19	5.3	26.3	36.8	36.8	503	6.6	30.8	39.2	43.1	
A	19	5.3	31.6	31.6	31.6	484	11.0	41.3	48.1	51.4	
B	7	0.0	28.6	28.6	28.6	150	7.3	41.3	46.7	47.3	
AB	4	0.0	25.0	25.0	50.0	50	18.0	50.0	52.0	54.0	
<b>Previous Transplant</b>											
Yes	26	3.8	23.1	26.9	30.8	456	6.6	31.1	38.4	41.4	
No	23	4.3	34.8	39.1	39.1	731	10.4	41.0	48.0	51.3	
<b>Years Since Diabetes Onset</b>											
0-20	14	0.0	21.4	28.6	28.6	249	7.6	39.4	45.0	47.4	
20-30	17	5.9	29.4	29.4	35.3	308	9.1	28.6	38.3	41.9	
30 +	15	0.0	33.3	40.0	40.0	313	6.4	30.4	36.4	39.9	
Unknown	3	33.3	33.3	33.3	33.3	317	12.3	50.8	57.4	60.6	



## B. Waiting List Information

Table B10. Time to transplant for waiting list candidates\*

Candidates registered on the waiting list between 01/01/2016 and 06/30/2021

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	1.4	3.2	0.5	0.6
10th	3.3	5.3	1.4	1.3
25th	9.6	20.8	4.8	6
50th (median time to transplant)	Not Observed	Not Observed	31.0	Not Observed
75th	Not Observed	Not Observed	Not Observed	Not Observed

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

\*\* Censored on 12/31/2021. 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 B11. Offer Acceptance Practices: 01/01/2021 - 12/31/2021

Offers Acceptance Characteristics	This Center	OPO/DSA	Region	U.S.
<b>Overall</b>				
Number of Offers	31	189	391	1,678
Number of Acceptances	5	10	36	108
Expected Acceptances	2.4	10.0	22.4	107.1
Offer Acceptance Ratio*	1.60	1.00	1.56	1.01
95% Credible Interval**	[0.64, 2.98]	--	--	--
<b>PHS increased infectious risk</b>				
Number of Offers	11	60	114	501
Number of Acceptances	1	2	3	17
Expected Acceptances	0.5	1.5	2.8	17.0
Offer Acceptance Ratio*	1.22	1.13	1.04	1.00
95% Credible Interval**	[0.25, 2.95]	--	--	--
<b>High risk donor</b>				
Number of Offers	4	30	78	197
Number of Acceptances	1	1	9	9
Expected Acceptances	0.4	1.4	4.2	9.8
Offer Acceptance Ratio*	1.23	0.87	1.78	0.93
95% Credible Interval**	[0.25, 2.97]	--	--	--
<b>Donor BMI &gt; 28</b>				
Number of Offers	4	17	42	221
Number of Acceptances	1	1	3	13
Expected Acceptances	0.3	0.8	1.9	12.5
Offer Acceptance Ratio*	1.32	1.07	1.28	1.04
95% Credible Interval**	[0.27, 3.18]	--	--	--
<b>Hard-to-Place Pancreas (Over 10 Offers)</b>				
Number of Offers	25	137	264	1,042
Number of Acceptances	2	2	15	42
Expected Acceptances	1.3	5.2	10.2	39.4
Offer Acceptance Ratio*	1.20	0.56	1.39	1.06
95% Credible Interval**	[0.33, 2.62]	--	--	--
<b>Donor more than 250 miles away</b>				
Number of Offers	27	148	258	794
Number of Acceptances	3	4	16	38
Expected Acceptances	1.8	5.8	10.1	37.2
Offer Acceptance Ratio*	1.30	0.77	1.49	1.02
95% Credible Interval**	[0.42, 2.67]	--	--	--

\* The offer acceptance ratio estimates the relative offer acceptance practice of University of Minnesota Medical Center, Fairview 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, [0.64, 2.98], indicates the location of MNUM's true offer acceptance ratio with 95% probability. The best estimate is 60% more likely to accept an offer compared to national acceptance behavior, but MNUM's performance could plausibly range from 36% reduced acceptance up to 198% higher acceptance.



## B. Waiting List Information

Figure B10. Offer acceptance: Overall

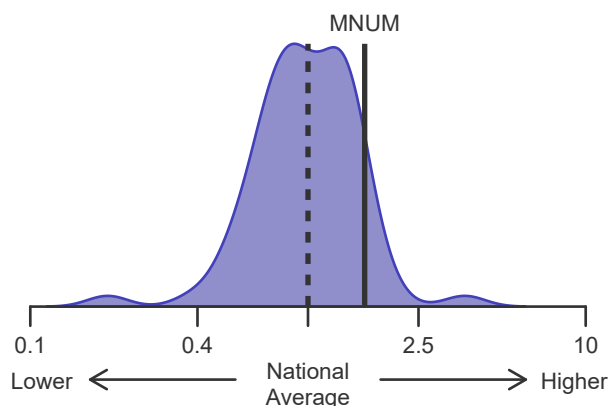


Figure B11. Offer acceptance:  
PHS increased infectious risk

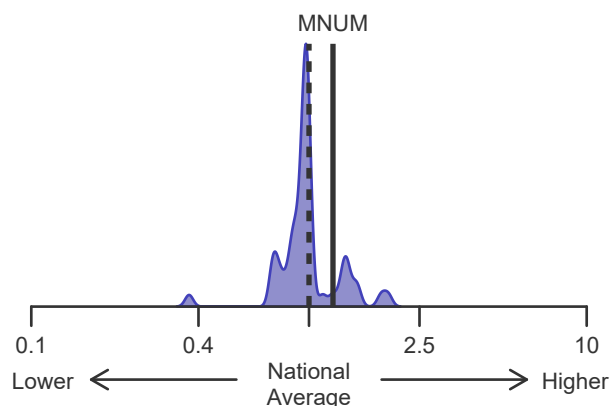


Figure B12. Offer acceptance:  
High risk donor

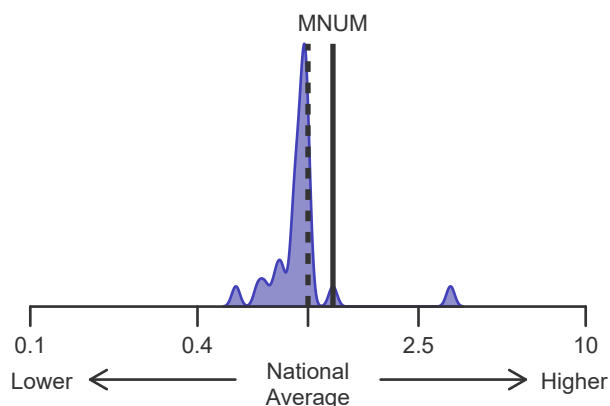


Figure B13. Offer acceptance:  
Donor BMI > 28

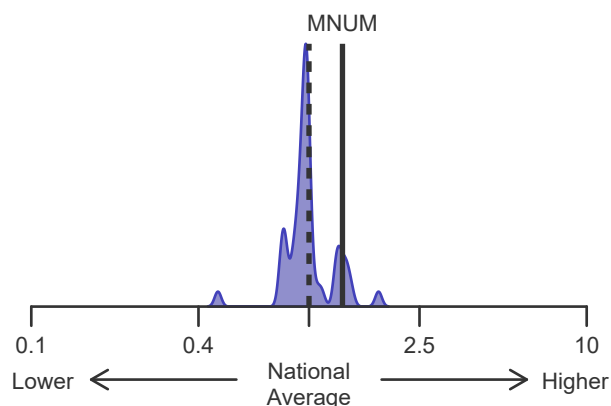


Figure B14. Offer acceptance: Offer number > 10

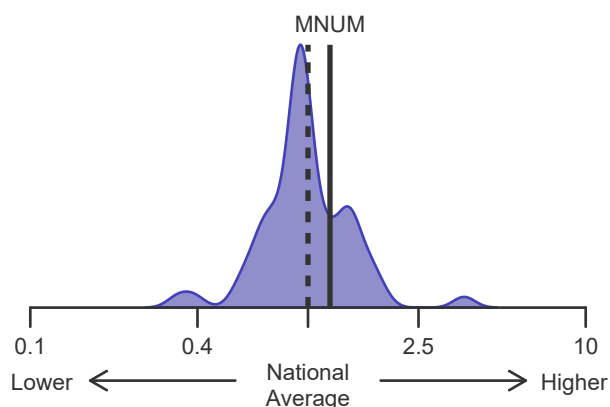
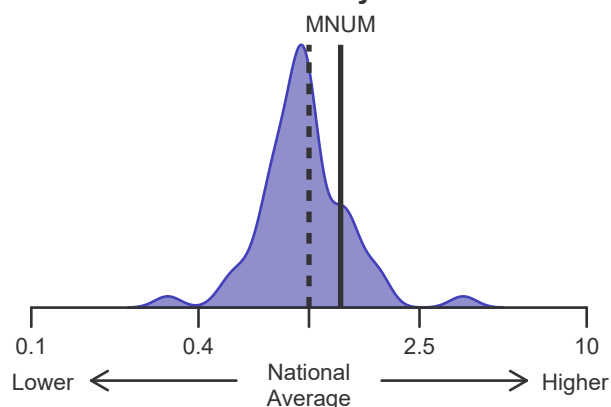


Figure B15. Offer acceptance:  
Donor more than 250 miles away





## C. Transplant Information

**Table C1D. Deceased donor transplant recipient demographic characteristics****Patients transplanted between 01/01/2021 and 12/31/2021**

Characteristic	Percentage in each category		
	Center (N=4)	Region (N=35)	U.S. (N=143)
<b>Ethnicity/Race (%)*</b>			
White	100.0	85.7	73.4
African-American	0.0	5.7	13.3
Hispanic/Latino	0.0	5.7	9.8
Asian	0.0	0.0	2.8
Other	0.0	2.9	0.7
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.0	2.8
2-11 years	0.0	0.0	9.8
12-17	0.0	0.0	1.4
18-34	25.0	20.0	18.2
35-49 years	0.0	34.3	42.7
50-64 years	25.0	34.3	22.4
65-69 years	0.0	5.7	1.4
70+ years	50.0	5.7	1.4
<b>Gender (%)</b>			
Male	25.0	42.9	47.6
Female	75.0	57.1	52.4

\* 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 01/01/2021 and 12/31/2021

Characteristic	Percentage in each category		
	Center (N=4)	Region (N=35)	U.S. (N=143)
<b>Blood Type (%)</b>			
O	50.0	45.7	45.5
A	25.0	45.7	44.1
B	25.0	5.7	9.1
AB	0.0	2.9	1.4
<b>Previous Transplant (%)</b>			
Yes	25.0	45.7	46.9
No	75.0	54.3	53.1
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	25.0	68.6	77.6
10-79%	50.0	14.3	11.2
80+ %	25.0	17.1	11.2
Unknown	0.0	0.0	0.0
<b>Body Mass Index (%)</b>			
0-20	0.0	17.1	28.0
21-25	25.0	31.4	30.1
26-30	75.0	45.7	30.8
31-35	0.0	5.7	8.4
36-40	0.0	0.0	0.7
41+	0.0	0.0	0.0
Unknown	0.0	0.0	2.1



## C. Transplant Information

**Table C3D. Deceased donor characteristics****Transplants performed between 01/01/2021 and 12/31/2021**

Donor Characteristic	Percentage in each category		
	Center (N=4)	Region (N=35)	U.S. (N=143)
<b>Cause of Death (%)</b>			
Deceased: Stroke	50.0	17.1	9.8
Deceased: MVA	0.0	14.3	14.7
Deceased: Other	50.0	68.6	75.5
<b>Ethnicity/Race (%)*</b>			
White	75.0	68.6	62.9
African-American	0.0	11.4	12.6
Hispanic/Latino	25.0	20.0	22.4
Asian	0.0	0.0	1.4
Other	0.0	0.0	0.7
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.0	7.0
2-11 years	0.0	0.0	8.4
12-17	0.0	8.6	14.0
18-34	75.0	77.1	55.9
35-49 years	25.0	14.3	14.0
50-64 years	0.0	0.0	0.7
65-69 years	0.0	0.0	0.0
70+ years	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	50.0	68.6	66.4
Female	50.0	31.4	33.6
<b>Blood Type (%)</b>			
O	75.0	71.4	67.1
A	25.0	25.7	29.4
B	0.0	0.0	2.8
AB	0.0	2.9	0.7
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 01/01/2021 and 12/31/2021

Transplant Characteristic	Percentage in each category		
	Center (N=4)	Region (N=35)	U.S. (N=143)
<b>Total Ischemic Time (Hours): Local (%)</b>			
Deceased: 0-11 hr	--	84.6	88.0
Deceased: 12-21 hr	--	15.4	10.0
Deceased: 22-31 hr	--	0.0	0.0
Deceased: 32-41 hr	--	0.0	0.0
Deceased: 42+ hr	--	0.0	0.0
Not Reported	--	0.0	2.0
<b>Total Ischemic Time (Hours): Shared (%)</b>			
Deceased: 0-11 hr	25.0	40.9	67.7
Deceased: 12-21 hr	75.0	59.1	28.0
Deceased: 22-31 hr	0.0	0.0	0.0
Deceased: 32-41 hr	0.0	0.0	0.0
Deceased: 42+ hr	0.0	0.0	0.0
Not Reported	0.0	0.0	4.3
<b>Procedure Type (%)</b>			
Single organ	100.0	100.0	69.2
Multi organ	0.0	0.0	30.8
<b>Donor Location (%)</b>			
Local Donation Service Area (DSA)	0.0	37.1	35.0
Another Donation Service Area (DSA)	100.0	62.9	65.0
<b>Median Time in Hospital After Transplant</b>	11.0 Days	6.0 Days	8.0 Days



## C. Transplant Information

**Table C5ALL. Adult (18+) 1-month survival with a functioning deceased donor graft:**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C1ALL. Adult (18+)  
1-month deceased donor graft  
failure HR estimate: (ALL)**

Graft failure has not been  
defined for pancreas grafts

**Figure C2ALL. Adult (18+) 1-month deceased donor graft  
failure HR program comparison: (ALL)**

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

**Table C5PAK. Adult (18+) 1-month survival with a functioning deceased donor graft:**

**Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

**Figure C1PAK. Adult (18+)  
1-month deceased donor graft  
failure HR estimate: (PAK)**

Graft failure has not been  
defined for pancreas grafts

**Figure C2PAK. Adult (18+) 1-month deceased donor graft  
failure HR program comparison: (PAK)**

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

**Table C5PTA. Adult (18+) 1-month survival with a functioning deceased donor graft:**

**Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

**Figure C1PTA. Adult (18+)  
1-month deceased donor graft  
failure HR estimate: (PTA)**

Graft failure has not been  
defined for pancreas grafts

**Figure C2PTA. Adult (18+) 1-month deceased donor graft  
failure HR program comparison: (PTA)**

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

**Table C5SPK. Adult (18+) 1-month survival with a functioning deceased donor graft:**

**Simultaneous pancreas-kidney (SPK)**

**SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

**Graft failure has not been defined for pancreas grafts**

**Figure C1SPK. Adult (18+)  
1-month deceased donor graft  
failure HR estimate: (SPK)**

**Graft failure has not been  
defined for pancreas grafts**

**Figure C2SPK. Adult (18+) 1-month deceased donor graft  
failure HR program comparison: (SPK)**

**Graft failure has not been  
defined for pancreas grafts**



## C. Transplant Information

**Table C6ALL. Adult (18+) 1-year survival with a functioning deceased donor graft:**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C3ALL. Adult (18+) 1-year deceased donor graft failure HR estimate: (ALL)**

Graft failure has not been defined for pancreas grafts

**Figure C4ALL. Adult (18+) 1-year deceased donor graft failure HR program comparison: (ALL)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C6PAK. Adult (18+) 1-year survival with a functioning deceased donor graft:**

**Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

**Figure C3PAK. Adult (18+) 1-year deceased donor graft failure HR estimate: (PAK)**

Graft failure has not been defined for pancreas grafts

**Figure C4PAK. Adult (18+) 1-year deceased donor graft failure HR program comparison: (PAK)**

Graft failure has not been defined for pancreas grafts





## C. Transplant Information

**Table C6PTA. Adult (18+) 1-year survival with a functioning deceased donor graft:**

**Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

**Figure C3PTA. Adult (18+) 1-year deceased donor graft failure HR estimate: (PTA)**

Graft failure has not been defined for pancreas grafts

**Figure C4PTA. Adult (18+) 1-year deceased donor graft failure HR program comparison: (PTA)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C6SPK. Adult (18+) 1-year survival with a functioning deceased donor graft:**

**Simultaneous pancreas-kidney (SPK)**

**SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C3SPK. Adult (18+) 1-year deceased donor graft failure HR estimate: (SPK)**

Graft failure has not been defined for pancreas grafts

**Figure C4SPK. Adult (18+) 1-year deceased donor graft failure HR program comparison: (SPK)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C7ALL. Adult (18+) 3-year survival with a functioning deceased donor graft:**

**All transplant types (ALL)**

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

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C5ALL. Adult (18+) 3-year deceased donor graft failure HR estimate: (ALL)**

Graft failure has not been defined for pancreas grafts

**Figure C6ALL. Adult (18+) 3-year deceased donor graft failure HR program comparison: (ALL)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C7PAK. Adult (18+) 3-year survival with a functioning deceased donor graft:**

**Pancreas after kidney (PAK)**

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

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C5PAK. Adult (18+) 3-year deceased donor graft failure HR estimate: (PAK)**

Graft failure has not been defined for pancreas grafts

**Figure C6PAK. Adult (18+) 3-year deceased donor graft failure HR program comparison: (PAK)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C7PTA. Adult (18+) 3-year survival with a functioning deceased donor graft:**

**Pancreas transplant alone (PTA)**

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

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C5PTA. Adult (18+) 3-year deceased donor graft failure HR estimate: (PTA)**

Graft failure has not been defined for pancreas grafts

**Figure C6PTA. Adult (18+) 3-year deceased donor graft failure HR program comparison: (PTA)**

Graft failure has not been defined for pancreas grafts



## C. Transplant Information

**Table C7SPK. Adult (18+) 3-year survival with a functioning deceased donor graft:**

**Simultaneous pancreas-kidney (SPK)**

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

**Deaths and retransplants are considered graft failures**

**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

Graft failure has not been defined for pancreas grafts

**Figure C5SPK. Adult (18+) 3-year  
deceased donor graft failure HR  
estimate: (SPK)**

Graft failure has not been  
defined for pancreas grafts

**Figure C6SPK. Adult (18+) 3-year deceased donor graft failure  
HR program comparison: (SPK)**

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

### Table C8D. Pediatric (<18) 1-month survival with a functioning deceased donor graft

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts





## C. Transplant Information

### Table C9D. Pediatric (<18) 1-year survival with a functioning deceased donor graft

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

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

#### All transplant types (ALL)

Pancreas transplants performed between 07/01/2016 and 12/31/2018

Deaths and retransplants are considered graft failures

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

Graft failure has not been defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts

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

Graft failure has not been  
defined for pancreas grafts



## C. Transplant Information

**Table C11ALL. Adult (18+) 1-month patient survival (deceased donor graft recipients):**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Retransplants excluded**

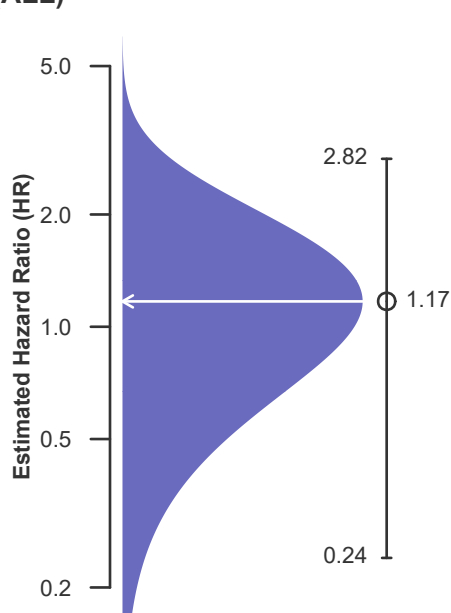
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	75	2,140
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	98.61%	99.34%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.23%	--
Number of observed deaths during the first month after transplant	1	14
Number of expected deaths during the first month after transplant	0.57	14
Estimated hazard ratio*	1.17	1.00
95% credible interval for the hazard ratio**	[0.24, 2.82]	--

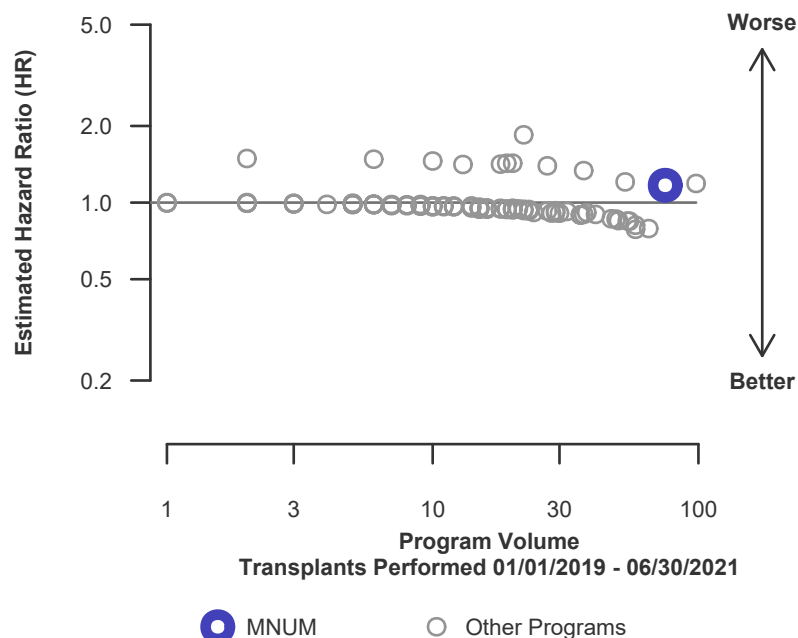
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.24, 2.82], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 17% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 76% reduced risk up to 182% increased risk.

**Figure C13ALL. Adult (18+) 1-month patient death HR estimate (deceased donor grafts): (ALL)**



**Figure C14ALL. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts): (ALL)**





## C. Transplant Information

**Table C11PAK. Adult (18+) 1-month patient survival (deceased donor graft recipients):**

**Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

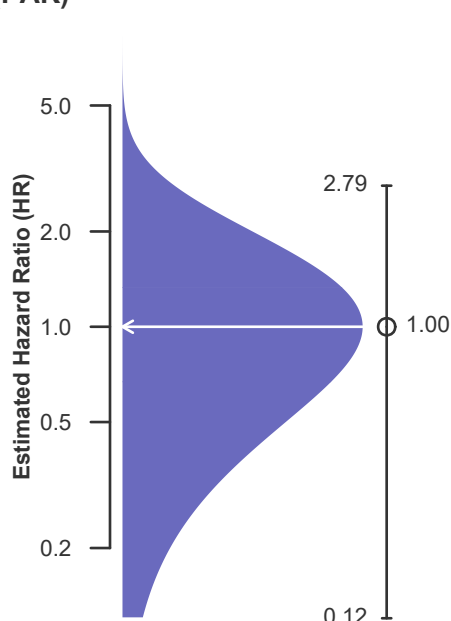
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	2	81
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	100.00%	--
Number of observed deaths during the first month after transplant	0	0
Number of expected deaths during the first month after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

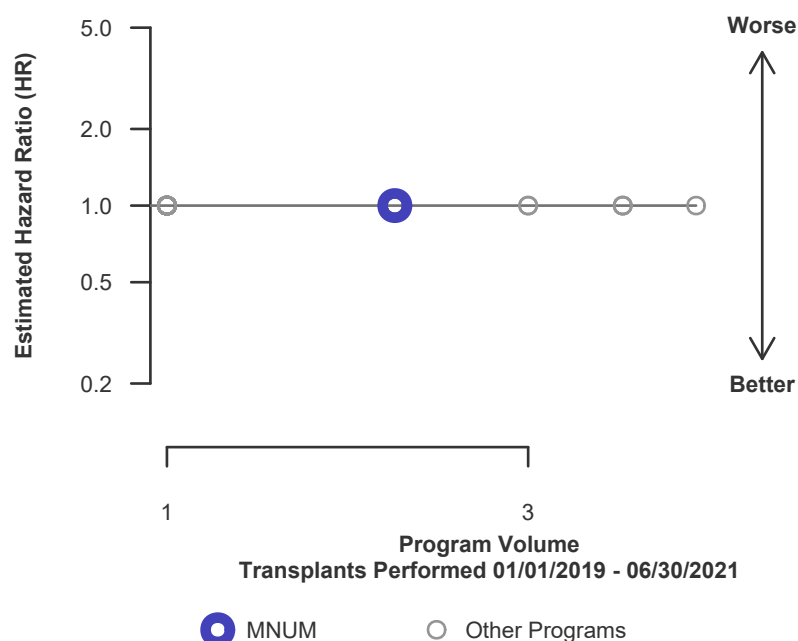
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C13PAK. Adult (18+) 1-month patient death HR estimate (deceased donor grafts): (PAK)**



**Figure C14PAK. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts): (PAK)**





## C. Transplant Information

**Table C11PTA. Adult (18+) 1-month patient survival (deceased donor graft recipients):**

**Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

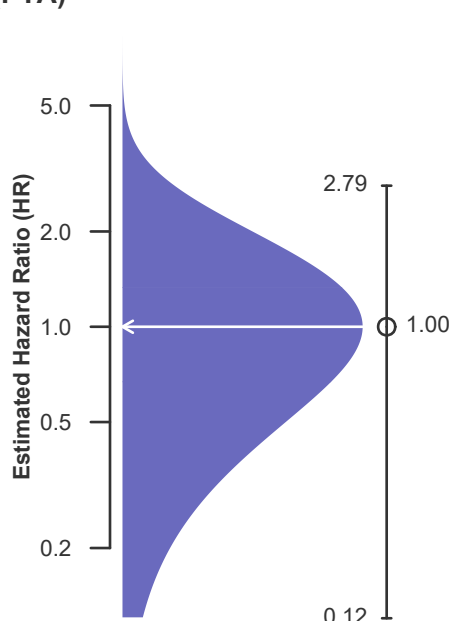
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	8	110
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	100.00%	--
Number of observed deaths during the first month after transplant	0	0
Number of expected deaths during the first month after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

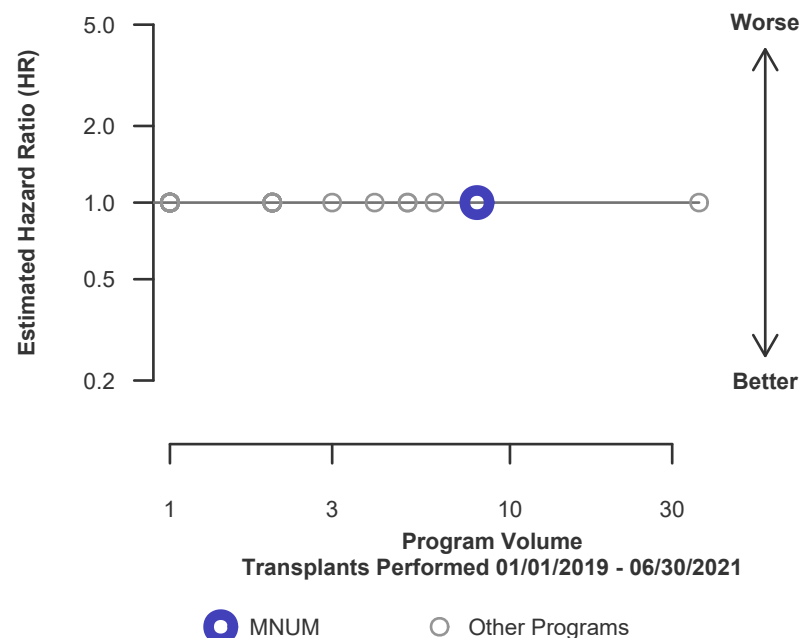
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C13PTA. Adult (18+) 1-month patient death HR estimate (deceased donor grafts): (PTA)**



**Figure C14PTA. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts): (PTA)**





## C. Transplant Information

**Table C11SPK. Adult (18+) 1-month patient survival (deceased donor graft recipients):**

**Simultaneous pancreas-kidney (SPK)**

SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

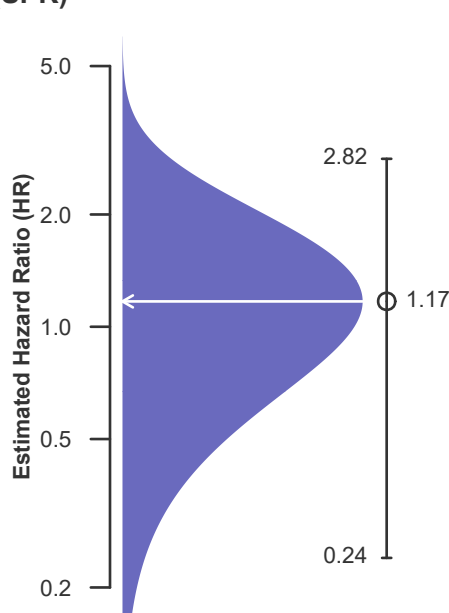
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	65	1,949
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	98.41%	99.27%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.12%	--
Number of observed deaths during the first month after transplant	1	14
Number of expected deaths during the first month after transplant	0.57	14
Estimated hazard ratio*	1.17	1.00
95% credible interval for the hazard ratio**	[0.24, 2.82]	--

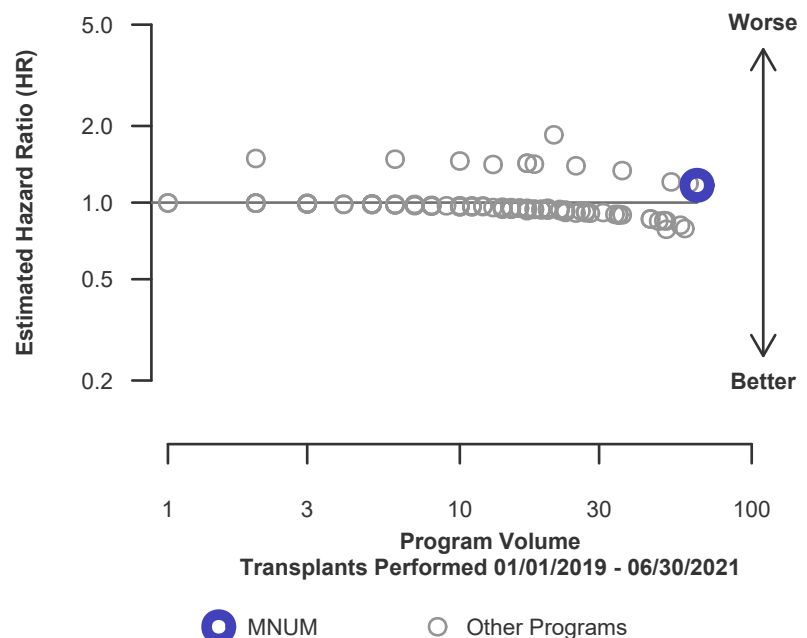
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.24, 2.82], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 17% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 76% reduced risk up to 182% increased risk.

**Figure C13SPK. Adult (18+) 1-month patient death HR estimate (deceased donor grafts): (SPK)**



**Figure C14SPK. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts): (SPK)**





## C. Transplant Information

**Table C12ALL. Adult (18+) 90-Day patient survival (deceased donor graft recipients):**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Retransplants excluded**

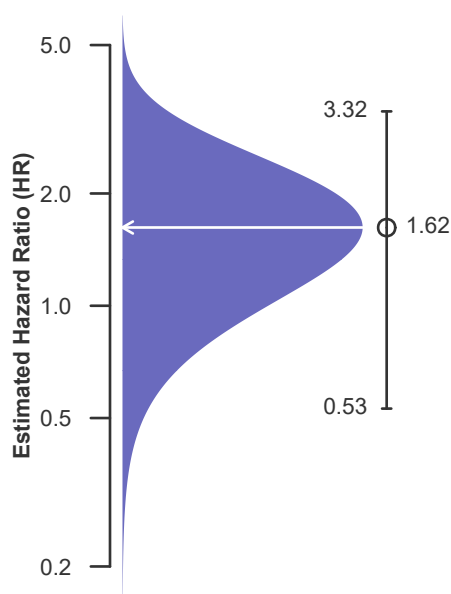
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	75	2,140
Estimated probability of surviving at 90 days (unadjusted for patient and donor characteristics)	95.75%	98.69%
Expected probability of surviving at 90 days (adjusted for patient and donor characteristics)	--%	--
Number of observed deaths during the first 90 days after transplant	3	27
Number of expected deaths during the first 90 days after transplant	1.08	27
Estimated hazard ratio*	1.62	1.00
95% credible interval for the hazard ratio**	[0.53, 3.32]	--

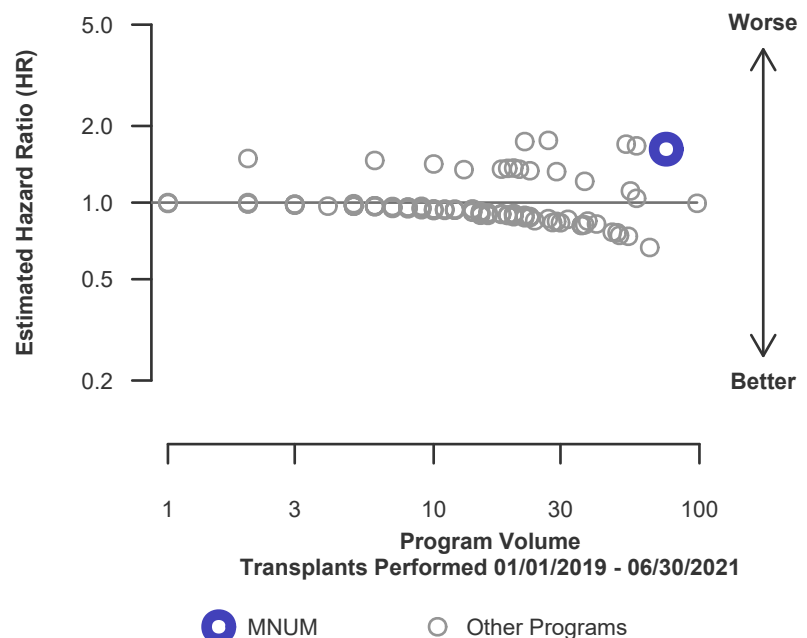
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.53, 3.32], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 62% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 47% reduced risk up to 232% increased risk.

**Figure C15ALL. Adult (18+) 90-Day patient death HR estimate (deceased donor grafts): (ALL)**



**Figure C16ALL. Adult (18+) 90-Day patient death HR program comparison (deceased donor grafts): (ALL)**





## C. Transplant Information

**Table C12PAK. Adult (18+) 90-Day patient survival (deceased donor graft recipients):**

**Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

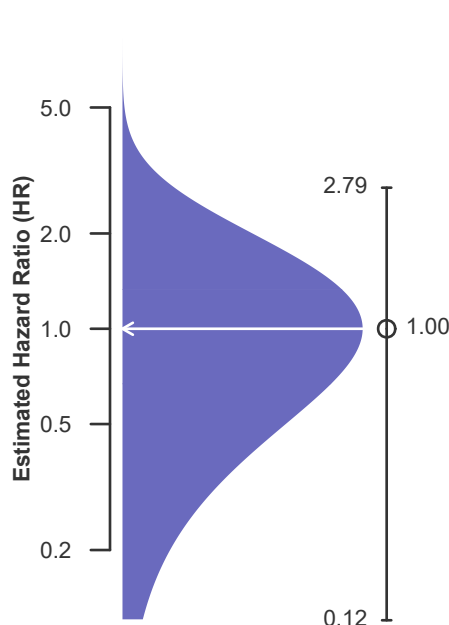
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	2	81
Estimated probability of surviving at 90 days (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 90 days (adjusted for patient and donor characteristics)	100.00%	--
Number of observed deaths during the first 90 days after transplant	0	0
Number of expected deaths during the first 90 days after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

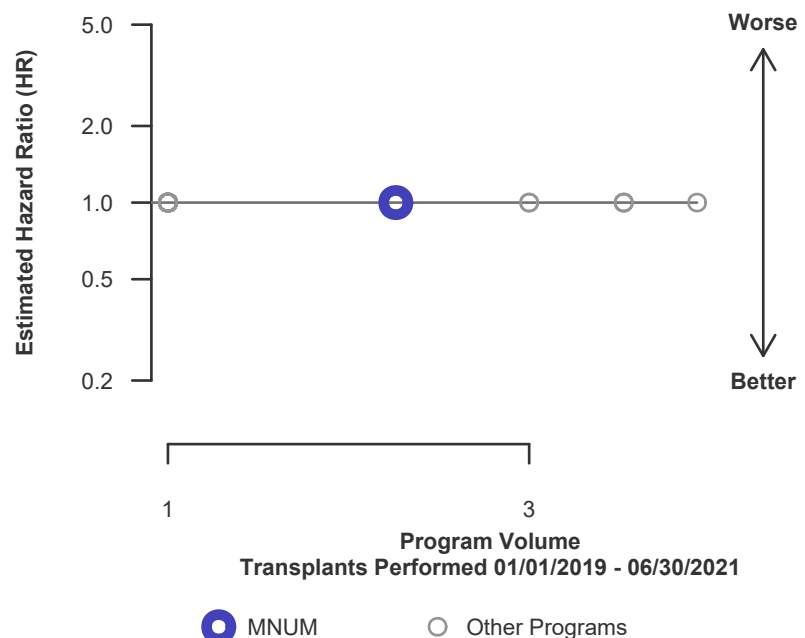
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C15PAK. Adult (18+) 90-Day patient death HR estimate (deceased donor grafts): (PAK)**



**Figure C16PAK. Adult (18+) 90-Day patient death HR program comparison (deceased donor grafts): (PAK)**







## C. Transplant Information

**Table C12PTA. Adult (18+) 90-Day patient survival (deceased donor graft recipients):**

**Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

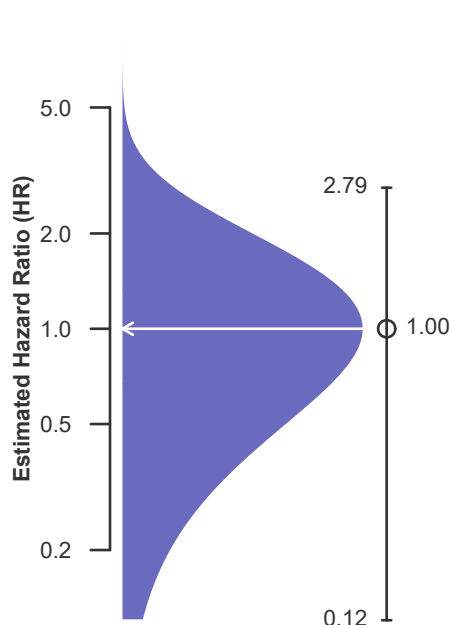
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	8	110
Estimated probability of surviving at 90 days (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 90 days (adjusted for patient and donor characteristics)	--%	--
Number of observed deaths during the first 90 days after transplant	0	0
Number of expected deaths during the first 90 days after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

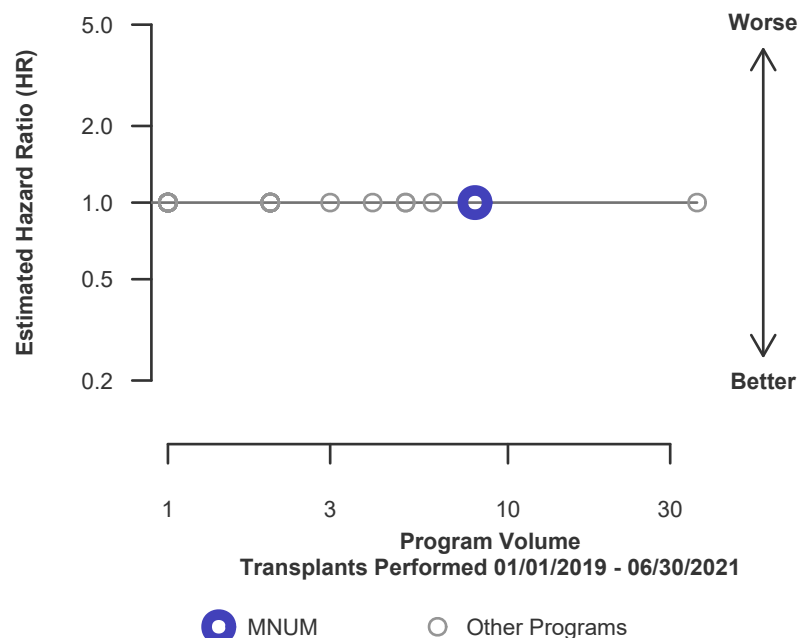
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C15PTA. Adult (18+) 90-Day patient death HR estimate (deceased donor grafts): (PTA)**



**Figure C16PTA. Adult (18+) 90-Day patient death HR program comparison (deceased donor grafts): (PTA)**





## C. Transplant Information

**Table C12SPK. Adult (18+) 90-Day patient survival (deceased donor graft recipients):**

**Simultaneous pancreas-kidney (SPK)**

**SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Retransplants excluded**

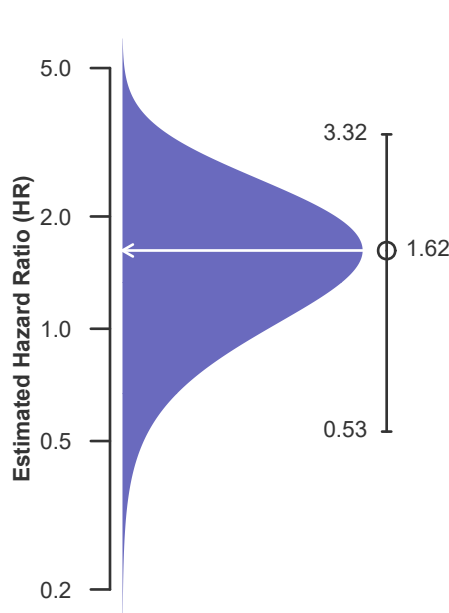
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	65	1,949
Estimated probability of surviving at 90 days (unadjusted for patient and donor characteristics)	95.13%	98.56%
Expected probability of surviving at 90 days (adjusted for patient and donor characteristics)	98.25%	--
Number of observed deaths during the first 90 days after transplant	3	27
Number of expected deaths during the first 90 days after transplant	1.08	27
Estimated hazard ratio*	1.62	1.00
95% credible interval for the hazard ratio**	[0.53, 3.32]	--

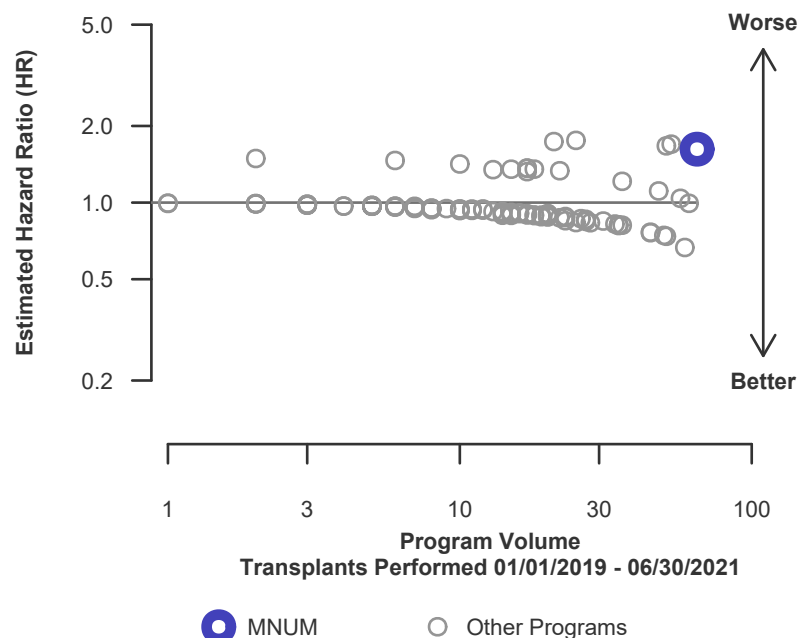
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.53, 3.32], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 62% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 47% reduced risk up to 232% increased risk.

**Figure C15SPK. Adult (18+) 90-Day patient death HR estimate (deceased donor grafts): (SPK)**



**Figure C16SPK. Adult (18+) 90-Day patient death HR program comparison (deceased donor grafts): (SPK)**





## C. Transplant Information

**Table C13ALL. Adult (18+) 1-year patient survival (deceased donor graft recipients):**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Retransplants excluded**

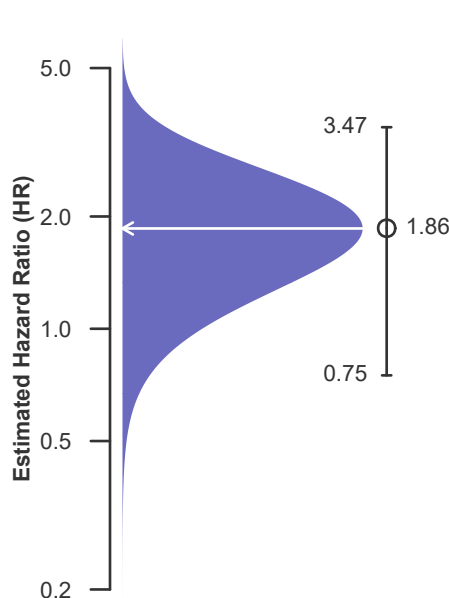
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	75	2,140
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	91.84%	97.25%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.89%	--
Number of observed deaths during the first year after transplant	5	44
Number of expected deaths during the first year after transplant	1.77	44
Estimated hazard ratio*	1.86	1.00
95% credible interval for the hazard ratio**	[0.75, 3.47]	--

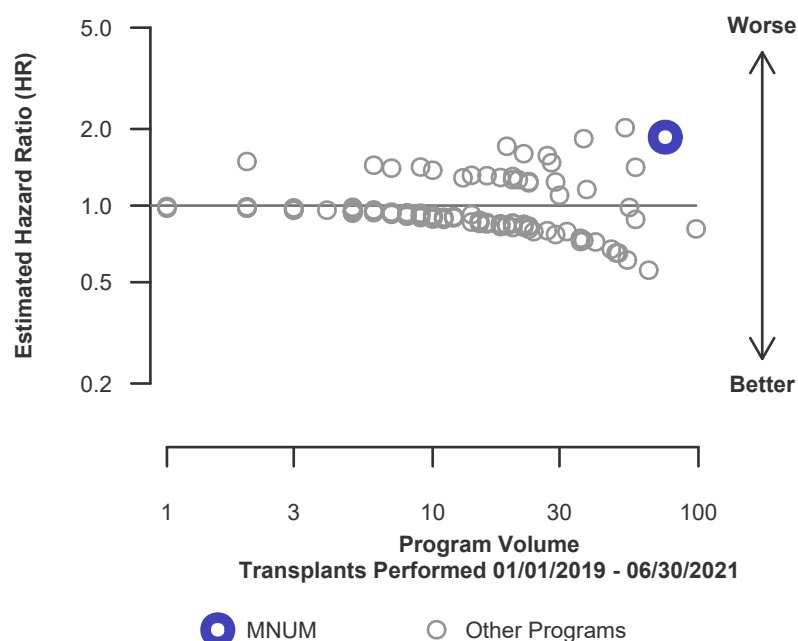
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.75, 3.47], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 86% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 25% reduced risk up to 247% increased risk.

**Figure C17ALL. Adult (18+) 1-year patient death HR estimate (deceased donor grafts): (ALL)**



**Figure C18ALL. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts): (ALL)**





## C. Transplant Information

**Table C13PAK. Adult (18+) 1-year patient survival (deceased donor graft recipients):**

**Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

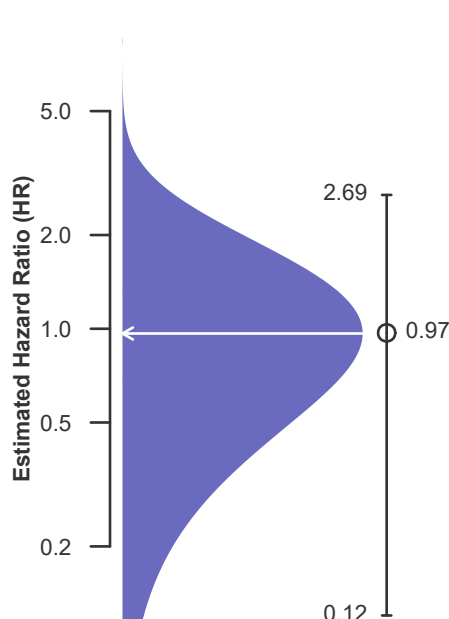
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	2	81
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	96.16%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.50%	--
Number of observed deaths during the first year after transplant	0	2
Number of expected deaths during the first year after transplant	0.07	2
Estimated hazard ratio*	0.97	1.00
95% credible interval for the hazard ratio**	[0.12, 2.69]	--

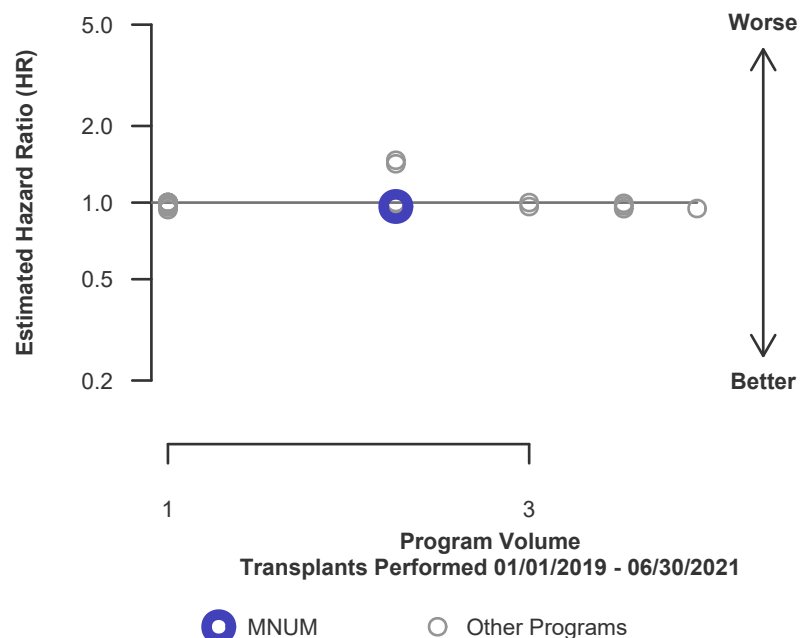
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.69], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 3% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 169% increased risk.

**Figure C17PAK. Adult (18+) 1-year patient death HR estimate (deceased donor grafts): (PAK)**



**Figure C18PAK. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts): (PAK)**





## C. Transplant Information

**Table C13PTA. Adult (18+) 1-year patient survival (deceased donor graft recipients):**

**Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

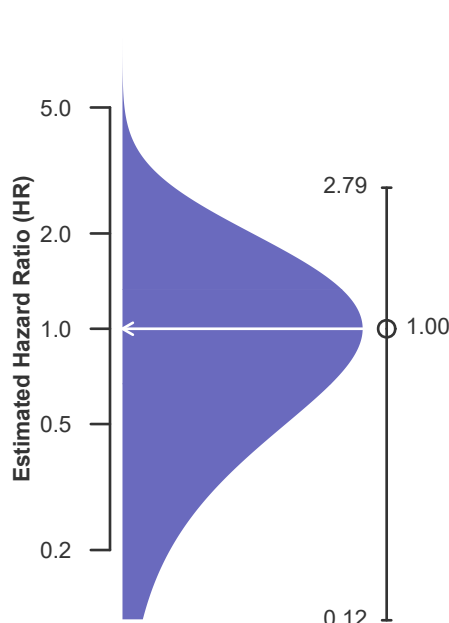
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	8	110
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	100.00%	--
Number of observed deaths during the first year after transplant	0	0
Number of expected deaths during the first year after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

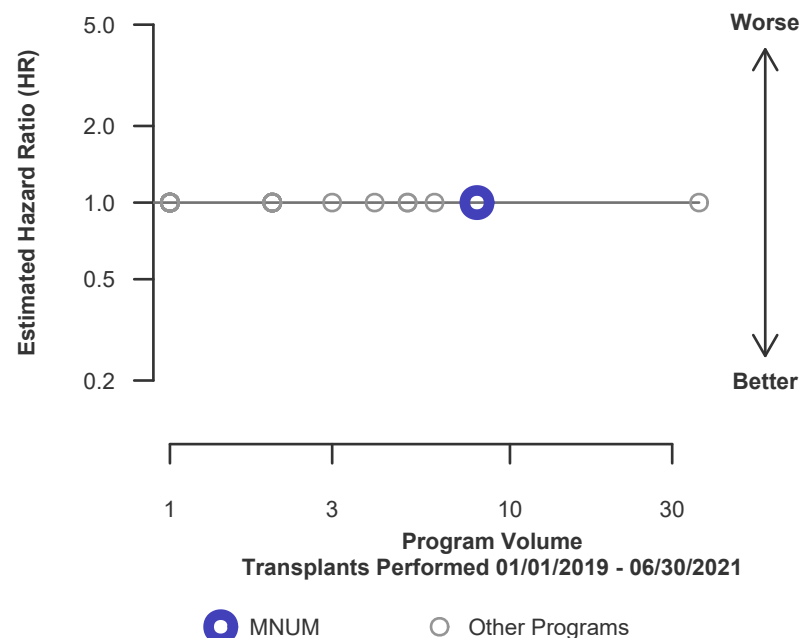
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C17PTA. Adult (18+) 1-year patient death HR estimate (deceased donor grafts): (PTA)**



**Figure C18PTA. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts): (PTA)**





## C. Transplant Information

**Table C13SPK. Adult (18+) 1-year patient survival (deceased donor graft recipients):**

**Simultaneous pancreas-kidney (SPK)**

SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

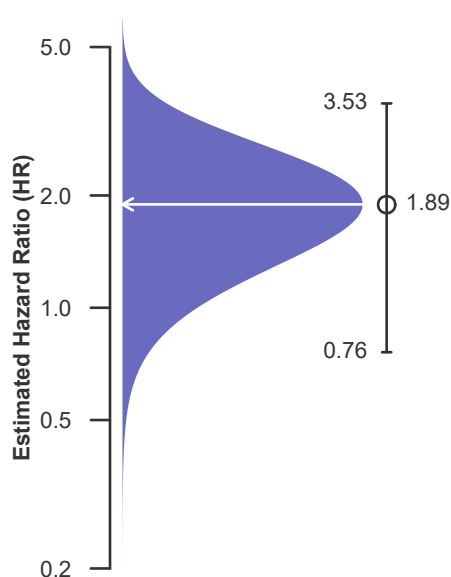
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	65	1,949
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	90.65%	97.14%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.52%	--
Number of observed deaths during the first year after transplant	5	42
Number of expected deaths during the first year after transplant	1.70	42
Estimated hazard ratio*	1.89	1.00
95% credible interval for the hazard ratio**	[0.76, 3.53]	--

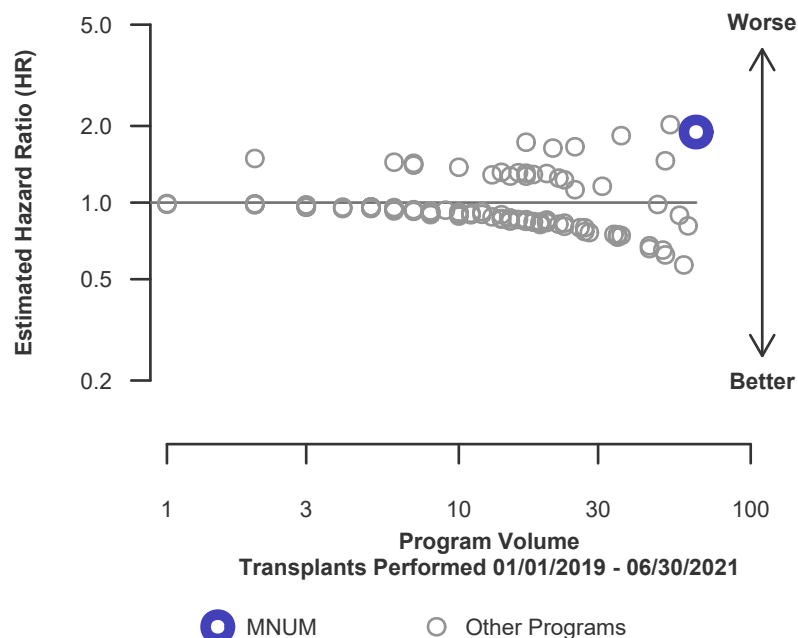
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.76, 3.53], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 89% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 24% reduced risk up to 253% increased risk.

**Figure C17SPK. Adult (18+) 1-year patient death HR estimate (deceased donor grafts): (SPK)**



**Figure C18SPK. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts): (SPK)**





## C. Transplant Information

**Table C14ALL. Adult (18+) 1-year Conditional patient survival (deceased donor graft recipients):**

**All transplant types (ALL)**

**Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021**

**Retransplants excluded**

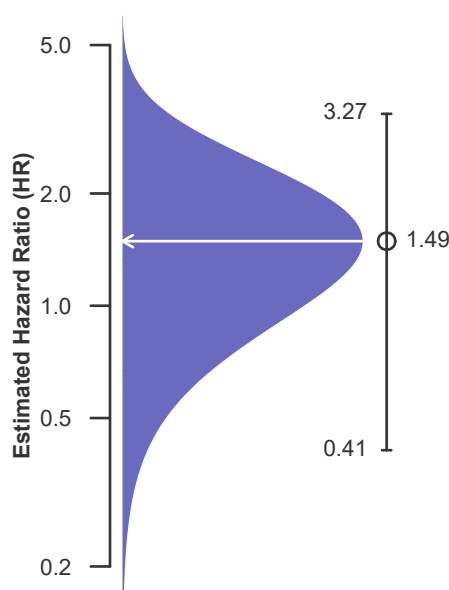
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	66	1,904
Estimated probability of surviving at 1 year, among patients alive at day 90 (unadjusted for patient and donor characteristics)	95.91%	98.55%
Expected probability of surviving at 1 year, among patients alive at day 90 (adjusted for patient and donor characteristics)	--%	--
Number of observed deaths from day 91 through day 365 after transplant	2	17
Number of expected deaths from day 91 through day 365 after transplant	0.68	17
Estimated hazard ratio*	1.49	1.00
95% credible interval for the hazard ratio**	[0.41, 3.27]	--

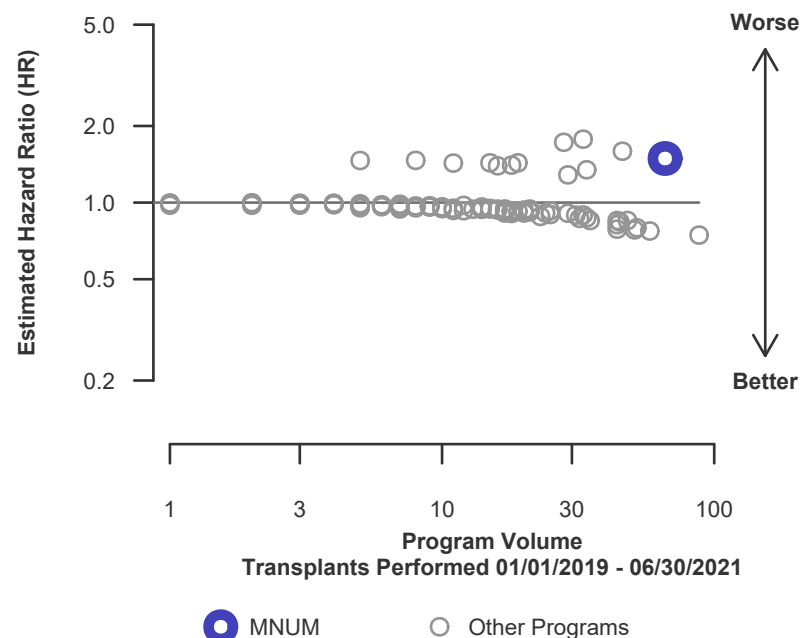
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.41, 3.27], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 49% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 59% reduced risk up to 227% increased risk.

**Figure C19ALL. Adult (18+) 1-year Conditional patient death HR estimate (deceased donor grafts): (ALL)**



**Figure C20ALL. Adult (18+) 1-year Conditional patient death HR program comparison (deceased donor grafts): (ALL)**







## C. Transplant Information

**Table C14PAK. Adult (18+) 1-year Conditional patient survival (deceased donor graft recipients): Pancreas after kidney (PAK)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

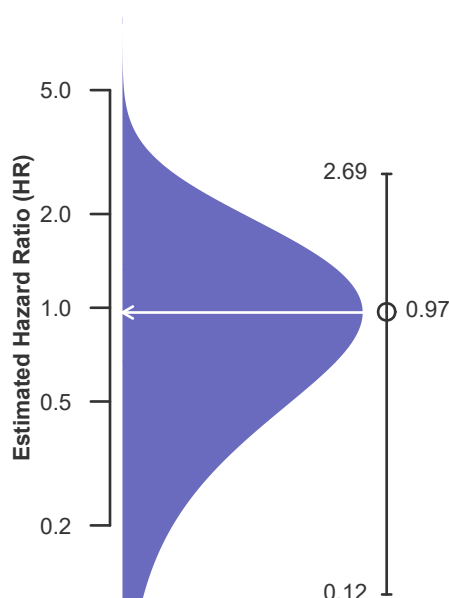
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	2	70
Estimated probability of surviving at 1 year, among patients alive at day 90 (unadjusted for patient and donor characteristics)	100.00%	96.16%
Expected probability of surviving at 1 year, among patients alive at day 90 (adjusted for patient and donor characteristics)	96.50%	--
Number of observed deaths from day 91 through day 365 after transplant	0	2
Number of expected deaths from day 91 through day 365 after transplant	0.07	2
Estimated hazard ratio*	0.97	1.00
95% credible interval for the hazard ratio**	[0.12, 2.69]	--

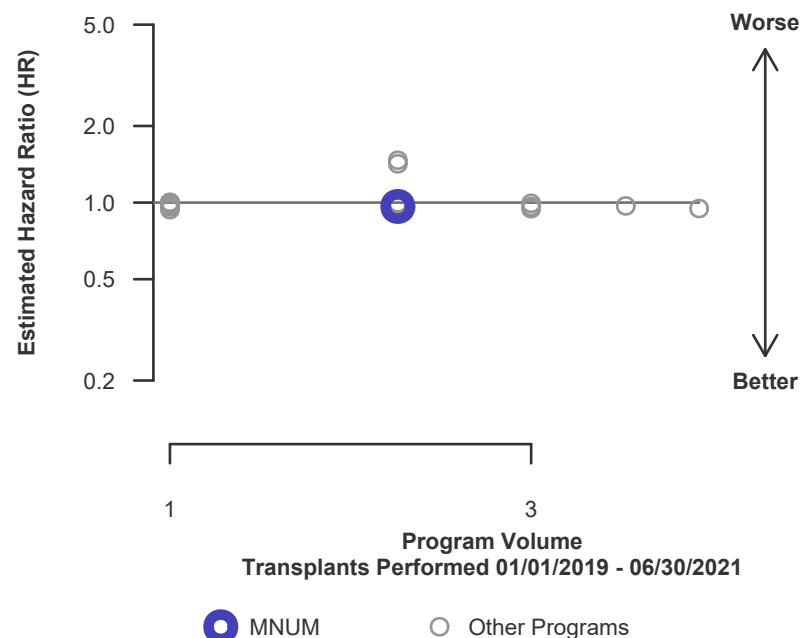
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.69], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 3% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 169% increased risk.

**Figure C19PAK. Adult (18+) 1-year Conditional patient death HR estimate (deceased donor grafts): (PAK)**



**Figure C20PAK. Adult (18+) 1-year Conditional patient death HR program comparison (deceased donor grafts): (PAK)**







## C. Transplant Information

**Table C14PTA. Adult (18+) 1-year Conditional patient survival (deceased donor graft recipients): Pancreas transplant alone (PTA)**

Single organ transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

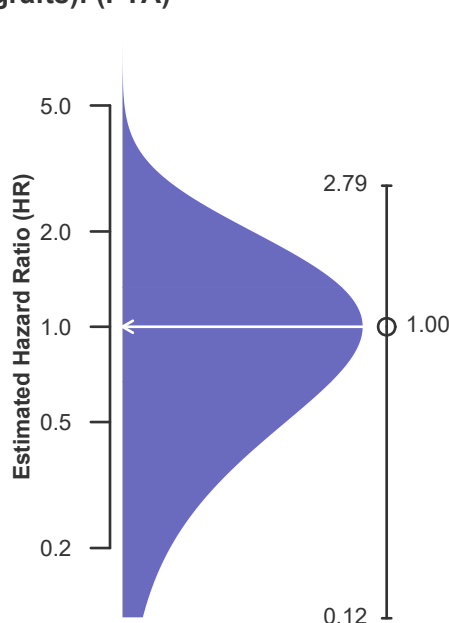
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	7	102
Estimated probability of surviving at 1 year, among patients alive at day 90 (unadjusted for patient and donor characteristics)	100.00%	100.00%
Expected probability of surviving at 1 year, among patients alive at day 90 (adjusted for patient and donor characteristics)	--%	--
Number of observed deaths from day 91 through day 365 after transplant	0	0
Number of expected deaths from day 91 through day 365 after transplant	0.00	0
Estimated hazard ratio*	1.00	1.00
95% credible interval for the hazard ratio**	[0.12, 2.79]	--

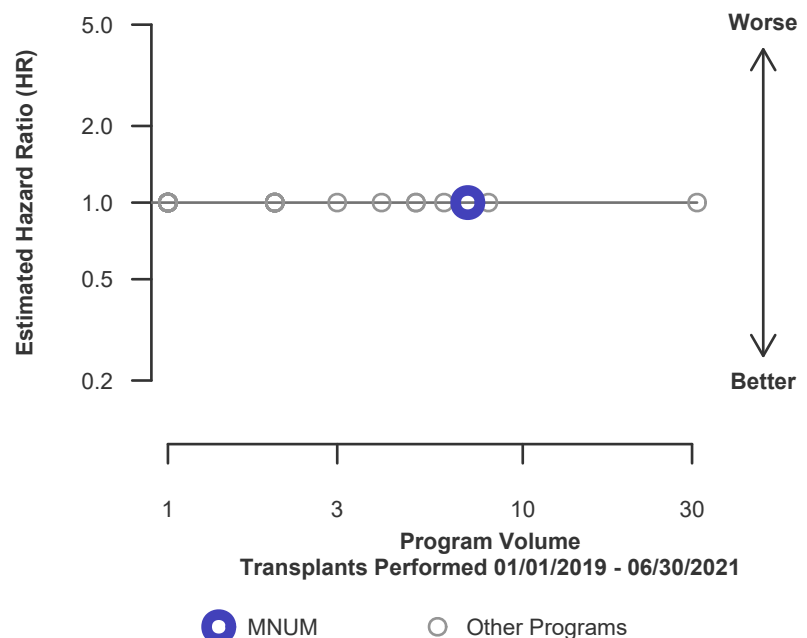
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.12, 2.79], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 0% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 179% increased risk.

**Figure C19PTA. Adult (18+) 1-year Conditional patient death HR estimate (deceased donor grafts): (PTA)**



**Figure C20PTA. Adult (18+) 1-year Conditional patient death HR program comparison (deceased donor grafts): (PTA)**





## C. Transplant Information

**Table C14SPK. Adult (18+) 1-year Conditional patient survival (deceased donor graft recipients):**

**Simultaneous pancreas-kidney (SPK)**

SPK transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

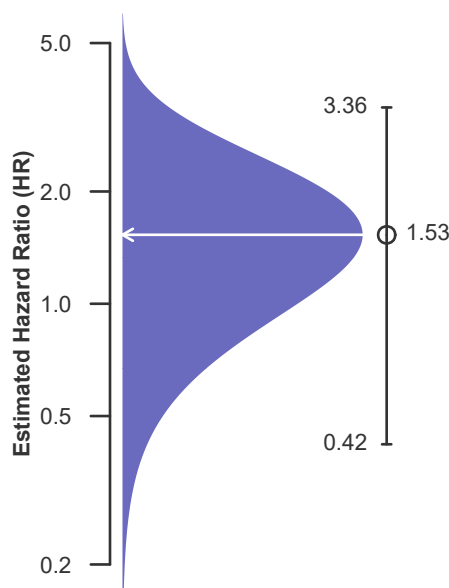
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	57	1,732
Estimated probability of surviving at 1 year, among patients alive at day 90 (unadjusted for patient and donor characteristics)	95.29%	98.56%
Expected probability of surviving at 1 year, among patients alive at day 90 (adjusted for patient and donor characteristics)	98.24%	--
Number of observed deaths from day 91 through day 365 after transplant	2	15
Number of expected deaths from day 91 through day 365 after transplant	0.61	15
Estimated hazard ratio*	1.53	1.00
95% credible interval for the hazard ratio**	[0.42, 3.36]	--

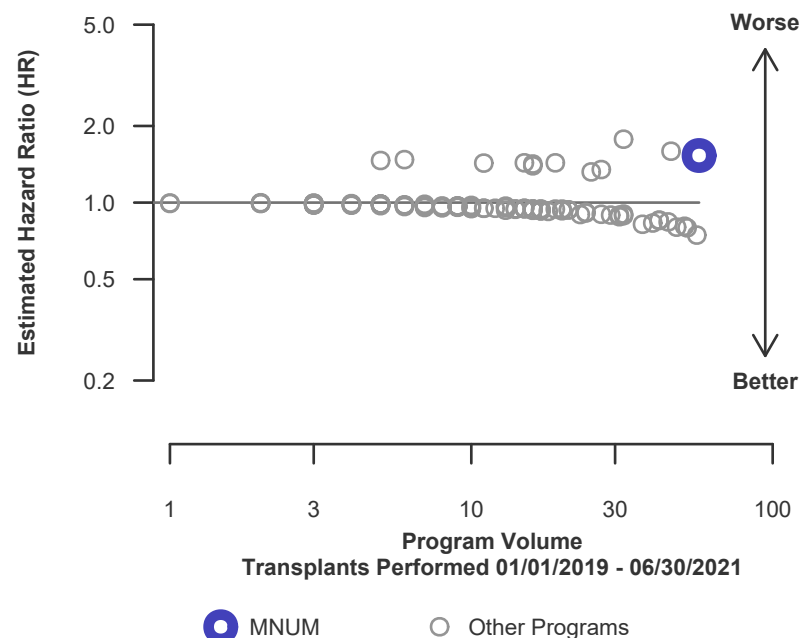
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.42, 3.36], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 53% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 58% reduced risk up to 236% increased risk.

**Figure C19SPK. Adult (18+) 1-year Conditional patient death HR estimate (deceased donor grafts): (SPK)**



**Figure C20SPK. Adult (18+) 1-year Conditional patient death HR program comparison (deceased donor grafts): (SPK)**





## C. Transplant Information

**Table C15ALL. Adult (18+) 3-year patient survival (deceased donor graft recipients):**

**All transplant types (ALL)**

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

**Retransplants excluded**

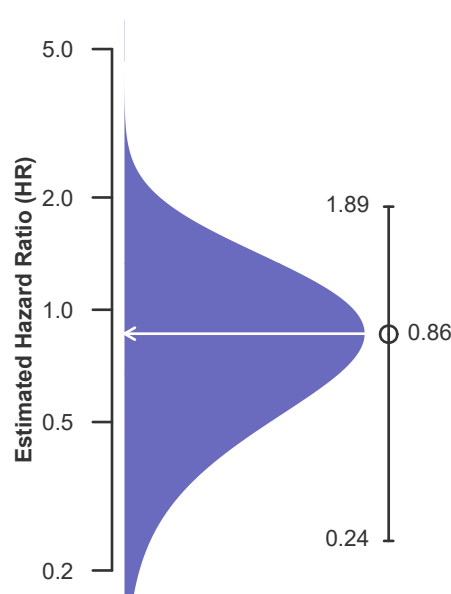
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	71	2,273
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	97.18%	95.70%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	95.45%	--
Number of observed deaths during the first 3 years after transplant	2	80
Number of expected deaths during the first 3 years after transplant	2.64	80
Estimated hazard ratio*	0.86	1.00
95% credible interval for the hazard ratio**	[0.24, 1.89]	--

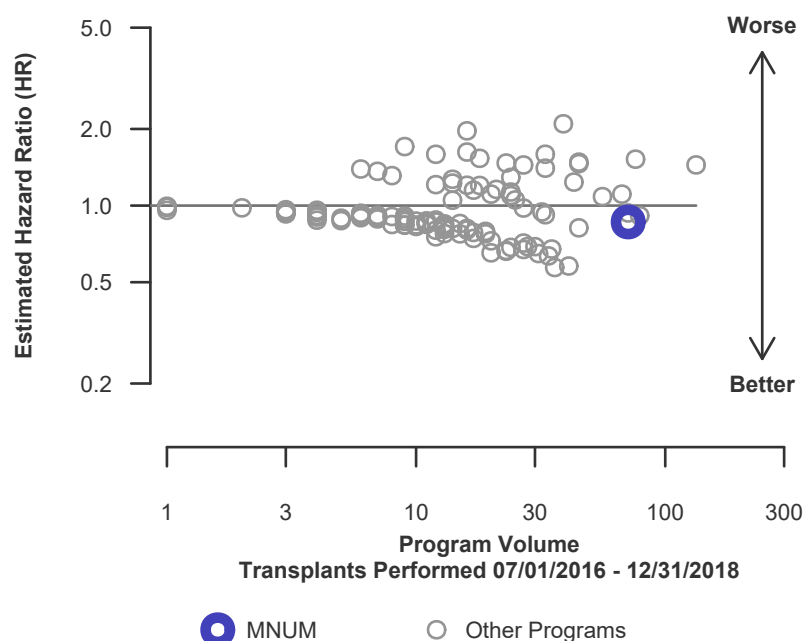
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.24, 1.89], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 14% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 76% reduced risk up to 89% increased risk.

**Figure C21ALL. Adult (18+) 3-year patient death HR estimate (deceased donor grafts): (ALL)**



**Figure C22ALL. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts): (ALL)**





## C. Transplant Information

**Table C15PAK. Adult (18+) 3-year patient survival (deceased donor graft recipients):**

**Pancreas after kidney (PAK)**

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

Retransplants excluded

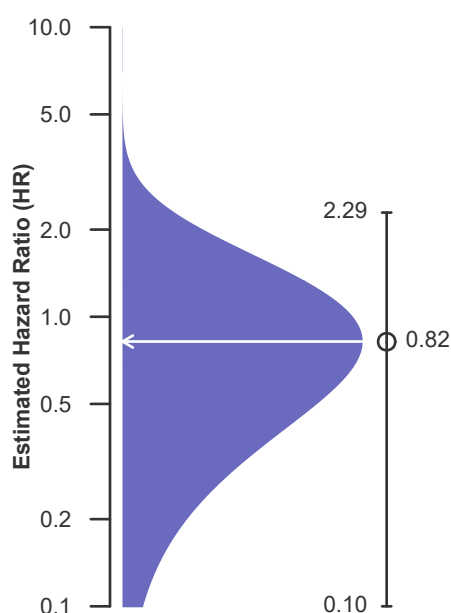
Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

	MNUM	U.S.
Number of transplants evaluated	8	131
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	94.57%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	94.62%	--
Number of observed deaths during the first 3 years after transplant	0	7
Number of expected deaths during the first 3 years after transplant	0.44	7
Estimated hazard ratio*	0.82	1.00
95% credible interval for the hazard ratio**	[0.10, 2.29]	--

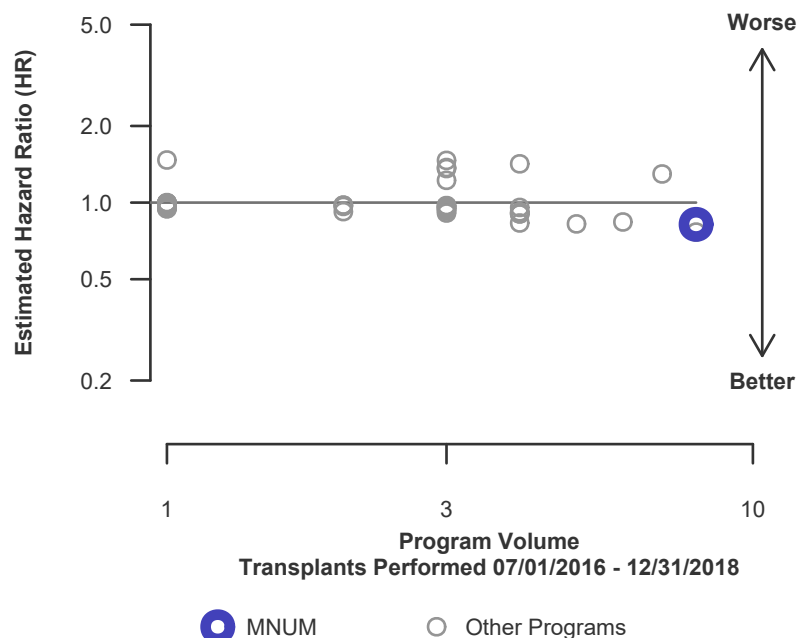
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.10, 2.29], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 18% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 90% reduced risk up to 129% increased risk.

**Figure C21PAK. Adult (18+) 3-year patient death HR estimate (deceased donor grafts): (PAK)**



**Figure C22PAK. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts): (PAK)**





## C. Transplant Information

**Table C15PTA. Adult (18+) 3-year patient survival (deceased donor graft recipients):**

**Pancreas transplant alone (PTA)**

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

**Retransplants excluded**

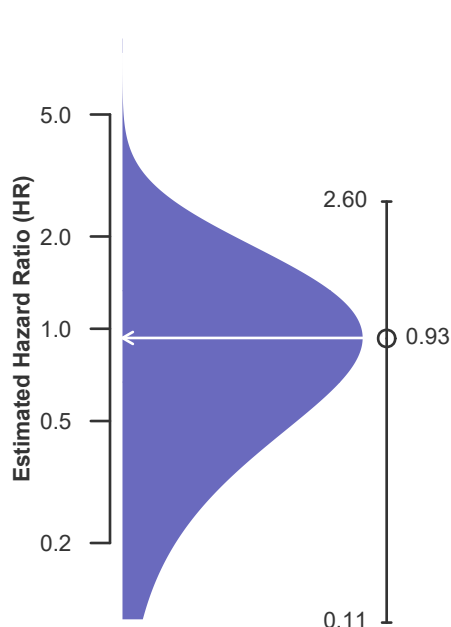
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	6	156
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	96.75%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	97.65%	--
Number of observed deaths during the first 3 years after transplant	0	5
Number of expected deaths during the first 3 years after transplant	0.14	5
Estimated hazard ratio*	0.93	1.00
95% credible interval for the hazard ratio**	[0.11, 2.60]	--

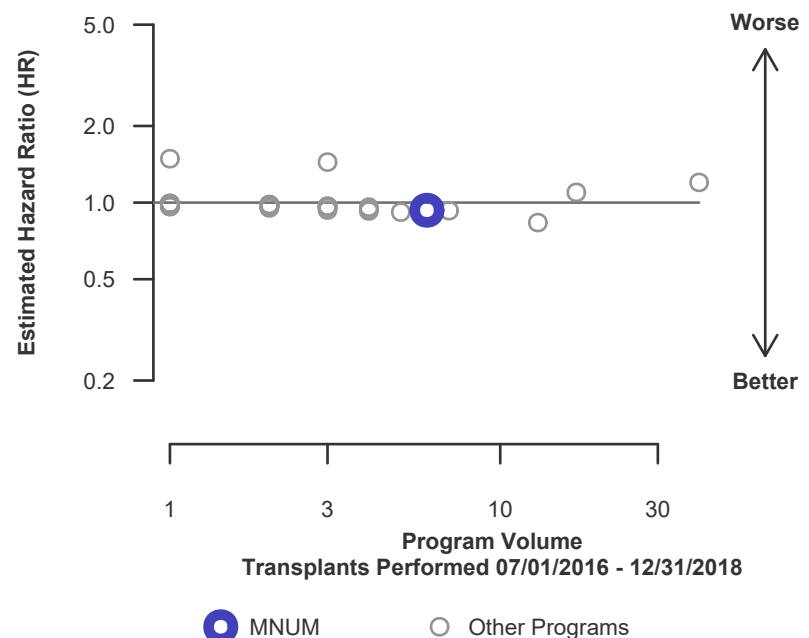
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.11, 2.60], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 7% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 160% increased risk.

**Figure C21PTA. Adult (18+) 3-year patient death HR estimate (deceased donor grafts): (PTA)**



**Figure C22PTA. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts): (PTA)**





## C. Transplant Information

**Table C15SPK. Adult (18+) 3-year patient survival (deceased donor graft recipients):**

**Simultaneous pancreas-kidney (SPK)**

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

**Retransplants excluded**

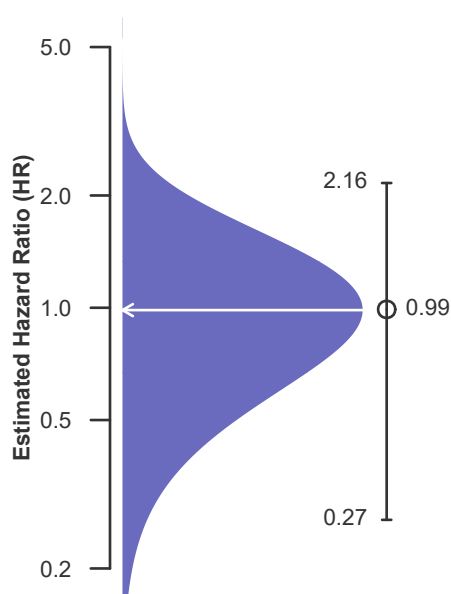
**Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020**

	MNUM	U.S.
Number of transplants evaluated	57	1,986
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	96.49%	95.67%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	95.34%	--
Number of observed deaths during the first 3 years after transplant	2	68
Number of expected deaths during the first 3 years after transplant	2.06	68
Estimated hazard ratio*	0.99	1.00
95% credible interval for the hazard ratio**	[0.27, 2.16]	--

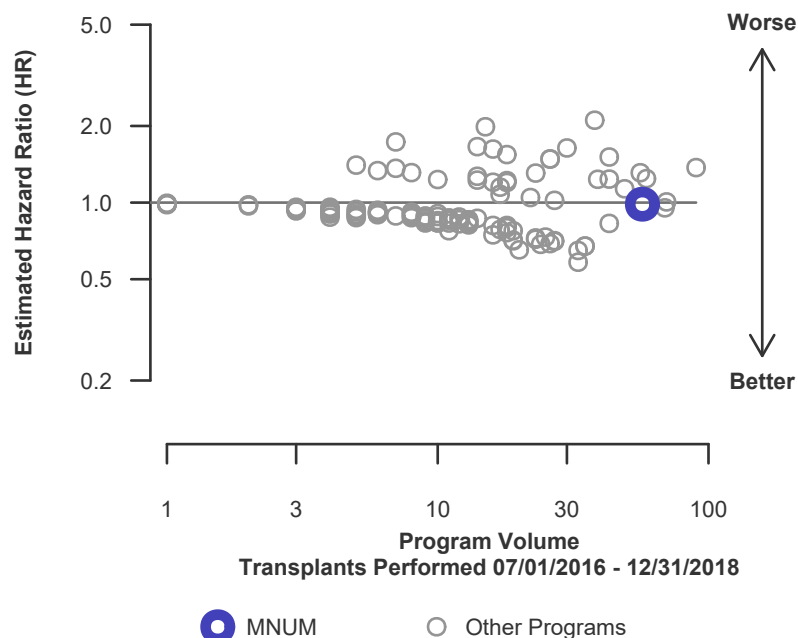
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview's results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would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

\*\* The 95% credible interval, [0.27, 2.16], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 1% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 73% reduced risk up to 116% increased risk.

**Figure C21SPK. Adult (18+) 3-year patient death HR estimate (deceased donor grafts): (SPK)**



**Figure C22SPK. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts): (SPK)**





## C. Transplant Information

### Table C16D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

This center did not perform any  
transplants relevant to  
this table during  
01/01/2019-06/30/2021

### Figure C23D. Pediatric (<18) 1-month patient death HR estimate (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021

### Figure C24D. Pediatric (<18) 1-month patient death HR program comparison (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021



## C. Transplant Information

### Table C17D. Pediatric (<18) 90-Day patient survival (deceased donor graft recipients)

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

This center did not perform any  
transplants relevant to  
this table during  
01/01/2019-06/30/2021

### Figure C25D. Pediatric (<18) 90-Day patient death HR estimate (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021

### Figure C26D. Pediatric (<18) 90-Day patient death HR program comparison (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021





## C. Transplant Information

### Table C18D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

This center did not perform any  
transplants relevant to  
this table during  
01/01/2019-06/30/2021

### Figure C27D. Pediatric (<18) 1-year patient death HR estimate (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021

### Figure C28D. Pediatric (<18) 1-year patient death HR program comparison (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021



## C. Transplant Information

### Table C19D. Pediatric (<18) 1-year Conditional patient survival (deceased donor graft recipients)

#### All transplant types (ALL)

Pancreas transplants performed between 01/01/2019 and 03/12/2020, and 06/13/2020 and 06/30/2021

Retransplants excluded

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

This center did not perform any  
transplants relevant to  
this table during  
01/01/2019-06/30/2021

### Figure C29D. Pediatric (<18) 1-year Conditional patient death HR estimate (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021

### Figure C30D. Pediatric (<18) 1-year Conditional patient death HR program comparison (deceased donor grafts)

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2019-06/30/2021



## C. Transplant Information

### Table C20D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)

#### All transplant types (ALL)

Pancreas transplants performed between 07/01/2016 and 12/31/2018

Retransplants excluded

Follow-up ends on 3/12/2020 for recipients transplanted prior to 3/13/2020

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

### Figure C31D. Pediatric (<18) 3-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 C32D. Pediatric (<18) 3-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 C21. Multi-organ transplant graft survival: 01/01/2019 - 06/30/2021

### Adult (18+) Transplants

#### First-Year Outcomes

Transplant Type	Transplants Performed		Pancreas Graft Failures		Estimated Pancreas Graft Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Kidney-Pancreas	73	2,127	--	--		

### Pediatric (<18) Transplants

#### First-Year Outcomes

Transplant Type	Transplants Performed		Pancreas Graft Failures		Estimated Pancreas Graft Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Pancreas-Liver	1	1	--	--		

Table C22. Multi-organ transplant patient survival: 01/01/2019 - 06/30/2021

### Adult (18+) Transplants

#### First-Year Outcomes

Transplant Type	Transplants Performed		Patient Deaths		Estimated Patient Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Kidney-Pancreas	73	2,127	5	68	92.8%	96.5%

### Pediatric (<18) Transplants

#### First-Year Outcomes

Transplant Type	Transplants Performed		Patient Deaths		Estimated Patient Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Pancreas-Liver	1	1	0	0	100.0%	100.0%