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## User Guide

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This report contains a wide range of useful information about the liver transplant program at University of California San Diego Medical Center (CASD). The report has three main sections:

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

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

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

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

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



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confidence interval includes (crosses) 1.0, then we cannot say that this program's observed transplant rate is different from what would be expected. The observed transplant rate at this program was 35.6 per 100 person-years. Transplant rates are also provided for adult and pediatric patients separately along with comparisons to adult and pediatric rates in the DSA, the OPTN region, and the nation. Transplant rates are also presented excluding transplants from a living donor (Table B4D and Figures B1D-B3D). Please refer to the PSR Technical Methods documentation available at <http://www.srtr.org> for more detail regarding how expected rates are calculated.

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

Table B6 presents information on what happens to candidates on the waiting list by three different time points after listing: 6 months, 12 months, and 18 months. The table displays percentages of candidates who have died, been removed from the waiting list, been transplanted, or been transferred or lost-to-follow-up. Tables B7 and B8 provide more detail regarding how many candidates have received a deceased donor transplant by certain time points during the first 3 years after being put on the transplant waiting list. Each row of Tables B7 and B8 presents the percent of candidates who received a deceased donor transplant by each time point. Table B9 presents data on the time it took for different percentages of patients to be transplanted for candidates added to the list between 07/01/2011 and 12/31/2016. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this program was 0.1 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 06/30/2017 to calculate a particular percentile of transplant times.

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

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



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

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

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

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



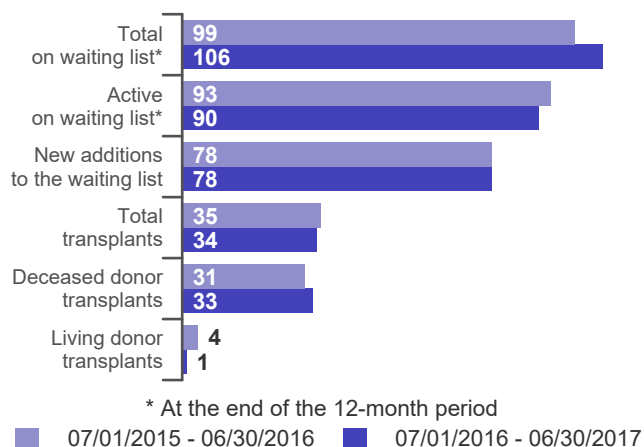
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## A. Program Summary

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

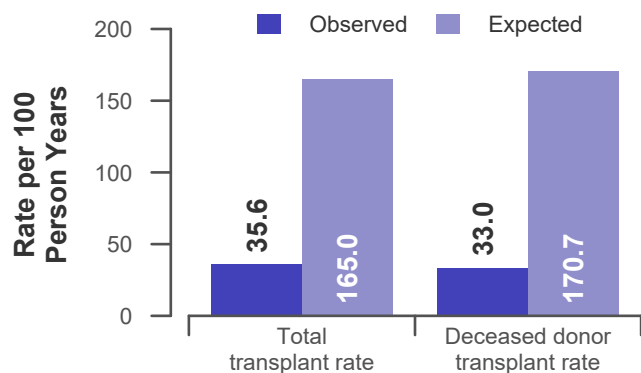


**Table A1. Census of transplant recipients**

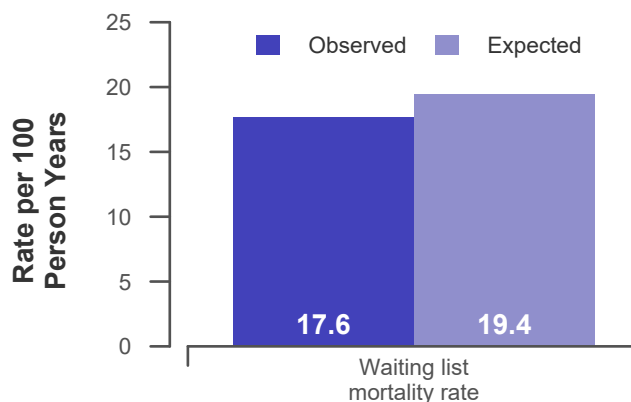
Recipients	07/01/2015-06/30/2016	07/01/2016-06/30/2017
Transplanted at this center	35	34
Followed by this center*	276	277
...transplanted at this program	251	247
...transplanted elsewhere	25	30

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

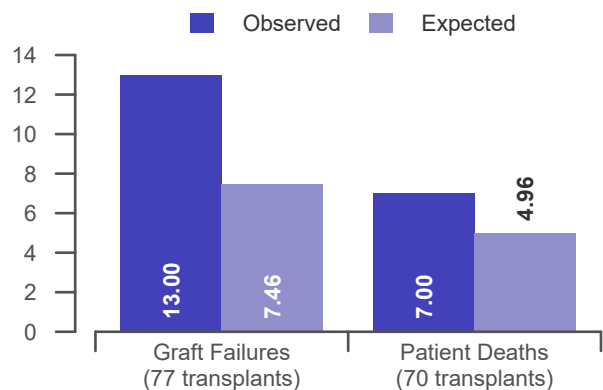
**Figure A2. Transplant rates**  
07/01/2015 - 06/30/2017



**Figure A3. Waiting list mortality rates**  
07/01/2015 - 06/30/2017



**Figure A4. First-year adult graft and patient survival: 07/01/2014 - 12/31/2016**



**Figure A5. First-year pediatric graft and patient survival: 07/01/2014 - 12/31/2016**

This center did not perform any transplants relevant to this figure during 07/01/2014-12/31/2016



## B. Waiting List Information

Table B1. Waiting list activity summary: 07/01/2015 - 06/30/2017

Waiting List Registrations	Counts for this center		Activity for 07/01/2016 to 06/30/2017 as percent of registrants on waiting list on 07/01/2016		
	07/01/2015-06/30/2016	07/01/2016-06/30/2017	This Center (%)	OPTN Region (%)	U.S. (%)
<b>On waiting list at start</b>	80	99	100.0	100.0	100.0
<b>Additions</b>					
New listings at this center	78	78	78.8	61.5	87.4
<b>Removals</b>					
Transferred to another center	1	1	1.0	1.5	1.3
Received living donor transplant*	4	1	1.0	1.9	2.4
Received deceased donor transplant*	31	33	33.3	34.6	51.6
Died	8	17	17.2	7.1	7.9
Transplanted at another center	2	4	4.0	2.0	2.7
Deteriorated	8	12	12.1	8.0	9.2
Recovered	3	1	1.0	4.9	5.8
Other reasons	2	2	2.0	8.3	8.0
<b>On waiting list at end of period</b>	99	106	107.1	93.2	98.5

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



## B. Waiting List Information

**Table B2. Demographic characteristics of waiting list candidates****Candidates registered on the waiting list between 07/01/2016 and 06/30/2017**

Demographic Characteristic	New Waiting List Registrations 07/01/2016 to 06/30/2017 (%)			All Waiting List Registrations on 06/30/2017 (%)		
	This Center (N=78)	OPTN Region (N=2,000)	U.S. (N=13,000)	This Center (N=106)	OPTN Region (N=3,030)	U.S. (N=14,661)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ethnicity/Race (%)*</b>						
White	52.6	47.7	69.7	50.0	48.0	68.1
African-American	0.0	3.4	8.6	0.9	3.8	7.7
Hispanic/Latino	43.6	35.5	15.9	43.4	34.4	17.6
Asian	3.8	10.5	4.4	5.7	11.5	5.2
Other	0.0	2.9	1.5	0.0	2.3	1.4
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Age (%)</b>						
<2 years	0.0	3.9	2.7	0.0	1.3	1.4
2-11 years	0.0	2.1	2.0	0.0	1.6	1.4
12-17 years	0.0	1.4	1.1	0.0	1.1	1.1
18-34 years	5.1	5.6	5.8	3.8	5.5	6.0
35-49 years	21.8	16.0	16.4	19.8	19.2	19.2
50-64 years	60.3	50.4	52.1	65.1	56.0	56.1
65+ years	12.8	20.6	19.9	11.3	15.3	14.9
Other (includes prenatal)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Gender (%)</b>						
Male	69.2	59.0	62.9	65.1	60.5	61.6
Female	30.8	41.0	37.1	34.9	39.5	38.4

\* 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%.



## B. Waiting List Information

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

**Candidates registered on the waiting list between 07/01/2016 and 06/30/2017**

Medical Characteristic	New Waiting List Registrations 07/01/2016 to 06/30/2017 (%)			All Waiting List Registrations on 06/30/2017 (%)		
	This Center (N=78)	OPTN Region (N=2,000)	U.S. (N=13,000)	This Center (N=106)	OPTN Region (N=3,030)	U.S. (N=14,661)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Blood Type (%)</b>						
O	44.9	47.1	46.5	40.6	50.2	48.2
A	41.0	35.2	37.1	38.7	34.2	38.1
B	12.8	13.1	12.2	18.9	12.3	11.2
AB	1.3	4.5	4.2	1.9	3.3	2.5
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Previous Transplant (%)</b>						
Yes	1.3	5.2	4.9	0.9	3.4	3.6
No	98.7	94.8	95.1	99.1	96.6	96.4
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Primary Disease (%)</b>						
Acute Hepatic Necrosis	7.7	6.0	4.1	2.8	2.5	2.0
Non-Cholestatic Cirrhosis	85.9	65.3	67.0	85.8	73.7	72.8
Cholestatic Liver Disease/Cirrhosis	2.6	6.4	7.8	6.6	6.0	8.1
Biliary Atresia	0.0	3.1	2.2	0.0	1.7	1.7
Metabolic Diseases	2.6	1.6	2.4	0.9	0.9	1.7
Malignant Neoplasms	0.0	11.2	11.3	0.9	8.4	8.2
Other	1.3	6.3	5.0	2.8	6.8	5.3
Missing	0.0	0.0	0.2	0.0	0.1	0.2
<b>Medical Urgency Status/MELD/PELD at Listing (%)*</b>						
Status 1A	1.3	3.8	2.9	0.0	0.5	0.3
Status 1B	0.0	0.8	0.5	0.0	0.1	0.1
Status 2A	0.0	0.0	0.0	0.0	0.0	0.0
Status 2B	0.0	0.0	0.0	0.0	0.1	0.1
Status 3	0.0	0.0	0.0	0.9	1.8	1.1
MELD 6-10	20.5	19.8	19.7	26.4	27.5	29.5
MELD 11-14	17.9	17.6	19.4	33.0	27.8	29.9
MELD 15-20	19.2	18.5	23.1	26.4	21.9	24.2
MELD 21-30	23.1	15.3	17.5	11.3	8.1	8.1
MELD 31-40	17.9	15.8	10.4	0.9	1.3	0.8
PELD less than or equal to 10	0.0	2.1	1.9	0.0	1.7	1.8
PELD 11-14	0.0	0.1	0.3	0.0	0.1	0.2
PELD 15-20	0.0	0.8	0.6	0.0	0.4	0.3
PELD 21-30	0.0	0.8	0.6	0.0	0.2	0.1
PELD 31 or greater	0.0	0.4	0.2	0.0	0.0	0.0
Temporarily Inactive	0.0	4.1	3.0	0.9	8.6	3.5

\* MELD/PELD score based on laboratory measures is shown for listings beginning 2/27/2002 unless patient is Status 1 or Temporarily Inactive. MELD/PELD scores based on exception rules are not used. Status 1 separated into 1A and 1B in August 2005.





## B. Waiting List Information

Table B4. Transplant rates: 07/01/2015 - 06/30/2017

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	80	168	3,323	15,566
Person Years**	193.9	378.4	6,458.1	29,986.8
Removals for Transplant	69	139	2,262	15,507
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	80	164	3,227	15,068
Person Years**	193.5	375.0	6,251.7	28,948.3
Removals for transplant	69	137	2,057	14,327
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	4	96	498
Person Years**	0.4	3.3	206.3	1,038.5
Removals for transplant	0	2	205	1,180

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

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

Figure B1. Observed and expected transplant rates: 07/01/2015 - 06/30/2017

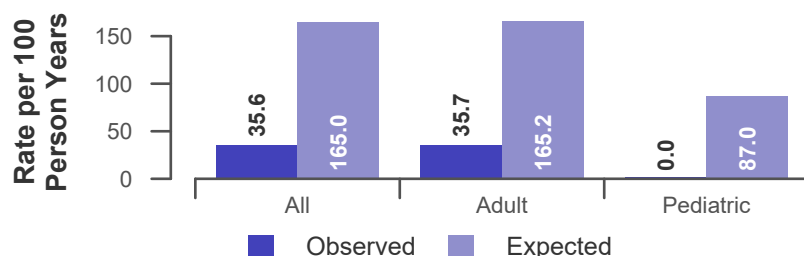


Figure B2. Transplant rate ratio estimate

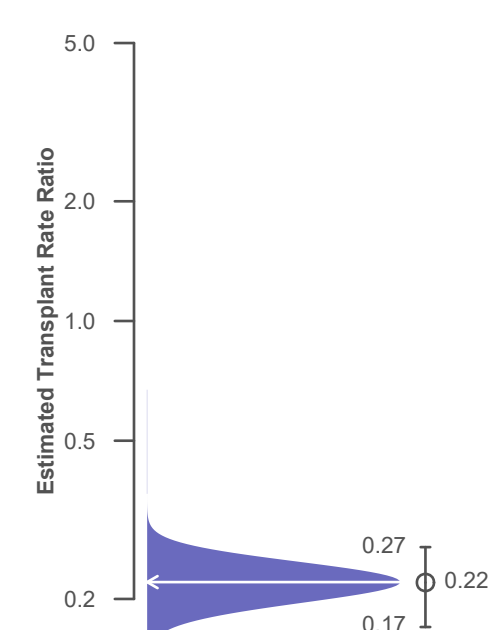
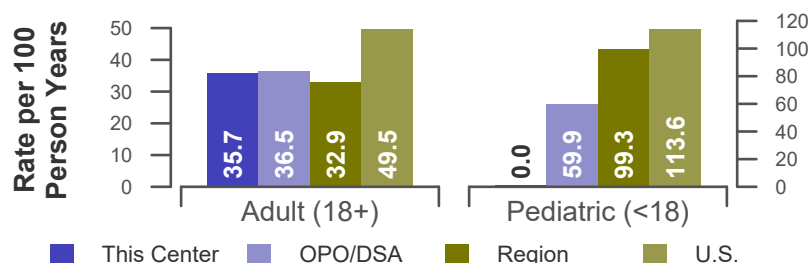


Figure B3. Observed adult (18+) and pediatric (<18) transplant rates: 07/01/2015 - 06/30/2017





## B. Waiting List Information

Table B4D. Deceased donor transplant rates: 07/01/2015 - 06/30/2017

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	80	168	3,323	15,566
Person Years**	193.9	378.4	6,458.1	29,986.8
Removals for Transplant	64	133	2,132	14,793
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	80	164	3,227	15,068
Person Years**	193.5	375.0	6,251.7	28,948.3
Removals for transplant	64	132	1,955	13,762
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	4	96	498
Person Years**	0.4	3.3	206.3	1,038.5
Removals for transplant	0	1	177	1,031

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

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

Figure B1D. Observed and expected deceased donor transplant rates: 07/01/2015 - 06/30/2017

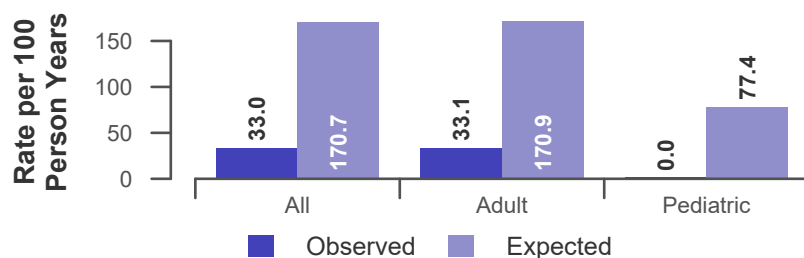


Figure B2D. Deceased donor transplant rate ratio estimate

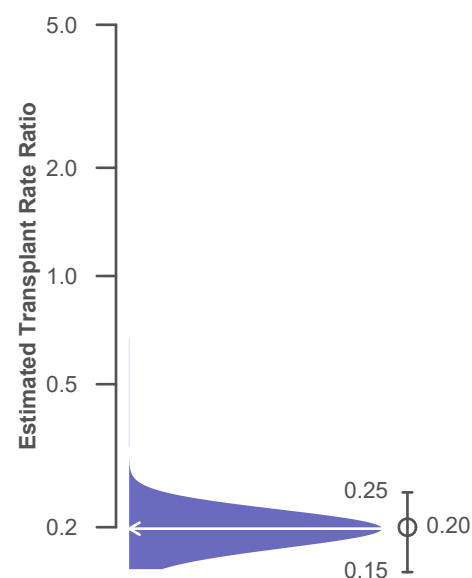
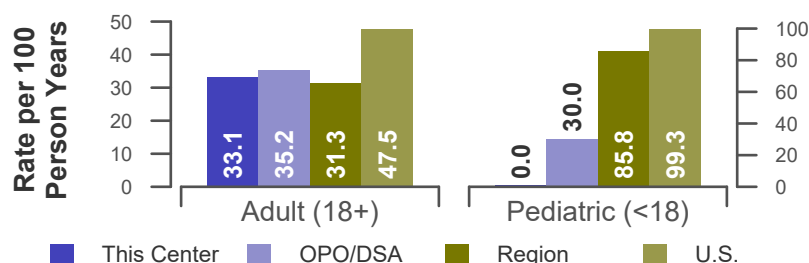


Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2015 - 06/30/2017





## B. Waiting List Information

Table B5. Waiting list mortality rates: 07/01/2015 - 06/30/2017

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	80	168	3,323	15,566
Person Years**	204.0	402.1	7,093.3	33,126.6
Number of deaths	36	58	934	4,789
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	80	164	3,227	15,068
Person Years**	203.5	398.6	6,877.3	32,028.0
Number of deaths	36	58	913	4,696
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	0	4	96	498
Person Years**	0.4	3.5	216.0	1,098.6
Number of deaths	0	0	21	93

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

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

Figure B4. Observed and expected waiting list mortality rates: 07/01/2015 - 06/30/2017

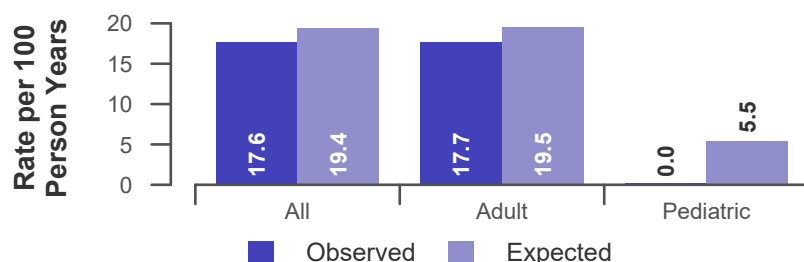


Figure B5. Waiting list mortality rate ratio estimate

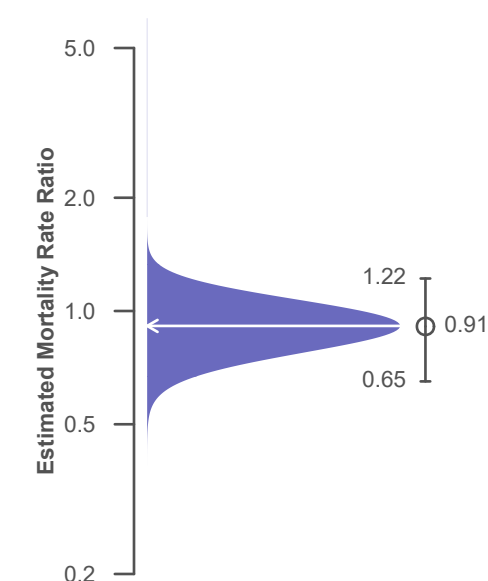
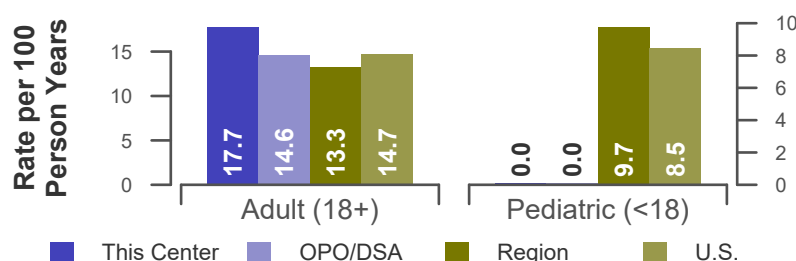


Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2015 - 06/30/2017





## B. Waiting List Information

**Table B6. Waiting list candidate status after listing****Candidates registered on waiting list between 01/01/2015 and 12/31/2015**

Waiting list status (survival status)	This Center (N=75)			U.S. (N=12,004)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	58.7	45.3	38.7	46.7	30.1	20.3
<b>Died on the waiting list without transplant (%)</b>	2.7	5.3	6.7	5.6	6.9	7.8
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	8.0	9.3	10.7	5.6	7.7	8.9
Condition improved (status unknown)	0.0	1.3	1.3	1.2	1.8	2.4
Refused transplant (status unknown)	0.0	0.0	0.0	0.3	0.4	0.6
Other	0.0	0.0	0.0	1.6	2.9	3.9
<b>Transplant (living donor from waiting list only) (%):</b>						
Functioning (alive)	4.0	5.3	4.0	1.8	2.1	1.5
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.1	0.1
Failed-alive not retransplanted	0.0	0.0	0.0	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.0	0.1	0.1
Status Yet Unknown**	0.0	0.0	1.3	0.0	0.1	0.8
<b>Transplant (deceased donor) (%):</b>						
Functioning (alive)	24.0	28.0	24.0	33.1	39.3	31.8
Failed-Retransplanted (alive)	0.0	1.3	4.0	0.4	0.6	0.8
Failed-alive not retransplanted	1.3	1.3	0.0	0.0	0.0	0.0
Died	1.3	1.3	1.3	1.8	2.9	4.0
Status Yet Unknown*	0.0	1.3	6.7	1.4	4.0	16.0
<b>Lost or Transferred (status unknown) (%)</b>	0.0	0.0	1.3	0.4	0.8	1.0
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	4.0	6.7	8.0	7.4	10.0	11.9
Total % known died or removed as unstable	12.0	16.0	18.7	13.0	17.7	20.8
Total % removed for transplant	30.7	38.7	41.3	38.6	49.3	55.2
Total % with known functioning transplant (alive)	28.0	33.3	28.0	34.9	41.5	33.3

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



## B. Waiting List Information

**Table B6S1. Medical urgency status 1 candidate status after listing**

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

Waiting list status (survival status)	This Center (N=1)			U.S. (N=428)		
	Months Since listing			Months Since listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	0.0	0.0	0.0	1.9	0.9	0.9
<b>Died on the waiting list without transplant (%)</b>	0.0	0.0	0.0	7.5	7.5	7.5
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	0.0	0.0	0.0	10.0	10.0	10.0
Condition improved (status unknown)	0.0	0.0	0.0	16.4	17.1	17.1
Refused transplant (status unknown)	0.0	0.0	0.0	0.2	0.2	0.2
Other	0.0	0.0	0.0	1.4	1.4	1.4
<b>Transplant (living donor from waiting list only) (%):</b>						
Functioning (alive)	0.0	0.0	0.0	1.9	1.6	1.4
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.0	0.0
Failed-alive not retransplanted	0.0	0.0	0.0	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.0	0.0	0.0
Status Yet Unknown**	0.0	0.0	0.0	0.0	0.2	0.5
<b>Transplant (deceased donor) (%):</b>						
Functioning (alive)	100.0	100.0	0.0	53.3	46.0	37.9
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.9	1.2	1.4
Failed-alive not retransplanted	0.0	0.0	0.0	0.2	0.2	0.0
Died	0.0	0.0	0.0	4.9	6.8	7.7
Status Yet Unknown*	0.0	0.0	100.0	1.2	6.5	13.8
<b>Lost or Transferred (status unknown) (%)</b>	0.0	0.0	0.0	0.2	0.2	0.2
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	0.0	0.0	0.0	12.4	14.3	15.2
Total % known died or removed as unstable	0.0	0.0	0.0	22.4	24.3	25.2
Total % removed for transplant	100.0	100.0	100.0	62.4	62.6	62.6
Total % with known functioning transplant (alive)	100.0	100.0	0.0	55.1	47.7	39.3

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



## B. Waiting List Information

**Table B7. Percent of candidates with deceased donor transplants: demographic characteristics**  
Candidates registered on the waiting list between 07/01/2011 and 06/30/2014

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
All	224	19.2	37.1	46.9	48.7	34,850	16.3	42.2	49.4	51.3
Ethnicity/Race*										
White	110	20.9	39.1	46.4	49.1	24,018	15.8	42.4	49.3	51.2
African-American	14	21.4	42.9	42.9	42.9	3,407	21.9	49.5	56.2	58.1
Hispanic/Latino	82	18.3	36.6	47.6	48.8	5,337	15.4	37.4	45.4	47.3
Asian	18	11.1	22.2	50.0	50.0	1,661	14.0	38.8	49.7	51.8
Other	0	--	--	--	--	427	16.6	41.7	49.6	51.1
Unknown	0	--	--	--	--	0	--	--	--	--
Age										
<2 years	0	--	--	--	--	893	26.3	70.7	74.2	75.3
2-11 years	0	--	--	--	--	679	30.5	65.5	70.8	72.3
12-17 years	1	0.0	0.0	0.0	0.0	418	23.0	54.5	62.2	64.6
18-34 years	15	26.7	40.0	40.0	40.0	1,734	24.6	43.8	49.1	52.2
35-49 years	38	36.8	57.9	57.9	57.9	5,532	20.7	43.0	49.1	51.0
50-64 years	136	14.0	31.6	44.1	46.3	20,681	14.2	40.2	48.0	50.0
65+ years	34	17.6	35.3	50.0	52.9	4,913	12.5	39.6	47.3	48.5
Other (includes prenatal)	0	--	--	--	--	0	--	--	--	--
Gender										
Male	144	18.8	34.0	44.4	45.8	22,281	15.7	43.1	50.9	52.8
Female	80	20.0	42.5	51.2	53.8	12,569	17.2	40.5	46.8	48.7

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



## B. Waiting List Information

**Table B8. Percent of candidates with deceased donor transplants: medical characteristics**  
**Candidates registered on the waiting list between 07/01/2011 and 06/30/2014**

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
All	224	19.2	37.1	46.9	48.7	34,850	16.3	42.2	49.4	51.3
Blood Type										
O	109	14.7	26.6	39.4	42.2	16,215	15.8	39.7	47.2	49.3
A	69	20.3	44.9	52.2	53.6	13,066	14.9	40.8	48.3	50.2
B	33	27.3	45.5	54.5	54.5	4,231	19.2	49.5	55.7	57.4
AB	13	30.8	61.5	61.5	61.5	1,338	26.8	62.3	67.1	68.3
Previous Transplant										
Yes	7	14.3	28.6	28.6	28.6	2,038	27.9	49.1	52.6	53.9
No	217	19.4	37.3	47.5	49.3	32,812	15.5	41.7	49.2	51.2
Primary Disease										
Acute Hepatic Necrosis	25	48.0	56.0	56.0	56.0	1,472	45.2	54.2	56.0	56.7
Non-Cholestatic Cirrhosis	174	16.7	36.2	48.3	50.0	23,431	15.2	39.1	46.0	48.0
Cholestatic Liver Disease/Cirrhosis	11	9.1	18.2	18.2	18.2	2,370	14.1	41.4	48.4	51.9
Biliary Atresia	1	0.0	0.0	0.0	0.0	695	18.4	65.3	71.5	73.2
Metabolic Diseases	2	50.0	50.0	50.0	50.0	826	22.3	62.7	68.3	70.7
Malignant Neoplasms	4	0.0	25.0	50.0	50.0	4,003	9.4	46.2	58.4	59.4
Other	7	0.0	28.6	28.6	42.9	2,045	20.5	45.9	52.0	54.1
Missing	0	--	--	--	--	8	12.5	25.0	25.0	25.0
Medical Urgency Status/MELD/PELD at Listing*										
Status 1	0	--	--	--	--	0	--	--	--	--
Status 1A	19	47.4	47.4	47.4	47.4	1,270	60.2	60.6	60.6	60.6
Status 1B	0	--	--	--	--	119	58.8	81.5	81.5	81.5
Status 2A	0	--	--	--	--	0	--	--	--	--
Status 2B	0	--	--	--	--	0	--	--	--	--
Status 3	0	--	--	--	--	0	--	--	--	--
MELD 6-10	48	0.0	27.1	52.1	56.2	6,718	3.3	33.4	46.1	48.4
MELD 11-14	36	0.0	13.9	33.3	36.1	7,007	3.3	26.7	36.9	40.3
MELD 15-20	50	4.0	26.0	32.0	34.0	8,231	7.0	37.8	45.0	47.4
MELD 21-30	31	29.0	61.3	61.3	61.3	5,679	26.3	56.3	59.0	59.6
MELD 31-40	39	56.4	59.0	59.0	59.0	3,243	61.5	68.0	68.2	68.2
PELD less than or equal to 10	0	--	--	--	--	673	11.9	65.8	73.4	75.2
PELD 11-14	0	--	--	--	--	120	17.5	70.8	75.8	76.7
PELD 15-20	0	--	--	--	--	192	18.2	75.0	78.1	80.7
PELD 21-30	0	--	--	--	--	135	33.3	71.1	72.6	72.6
PELD 31 or greater	0	--	--	--	--	58	56.9	72.4	74.1	74.1
Temporarily Inactive	1	100.0	100.0	100.0	100.0	1,405	7.1	27.7	37.4	39.0

\* MELD/PELD score based on laboratory measures is shown for listings beginning 2/27/2002 unless patient is Status 1 or Temporarily Inactive. MELD/PELD scores based on exception rules are not used. Status 1 separated into 1A and 1B in August 2005.



## B. Waiting List Information

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

Candidates registered on the waiting list between 07/01/2011 and 12/31/2016

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	0.1	0.2	0.2	0.2
10th	0.3	0.4	0.4	0.3
25th	2.9	5.8	4.3	2.2
50th (median time to transplant)	23.3	21.8	30.5	13.5
75th	Not Observed	Not Observed	Not Observed	Not Observed

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

\*\* Censored on 06/30/2017. Calculated as the months after listing, during which the corresponding percent of all patients initially listed had received a transplant.





## B. Waiting List Information

**Table B10. Offer Acceptance Practices: 07/01/2016 - 06/30/2017**

Offers Acceptance Characteristics	This Center	OPO/DSA	Region	U.S.
<b>Overall</b>				
Number of Offers	1,781	3,213	46,394	174,573
Number of Acceptances	27	59	971	6,764
Expected Acceptances	45.4	89.6	1,035.5	6,758.7
Offer Acceptance Ratio*	0.61	0.67	0.94	1.00
95% Credible Interval**	[0.41, 0.85]	--	--	--
<b>PHS increased infectious risk</b>				
Number of Offers	556	811	12,623	47,761
Number of Acceptances	6	9	219	1,816
Expected Acceptances	13.5	21.3	260.6	1,813.0
Offer Acceptance Ratio*	0.52	0.47	0.84	1.00
95% Credible Interval**	[0.22, 0.93]	--	--	--
<b>DCD donor</b>				
Number of Offers	131	326	8,670	26,614
Number of Acceptances	1	2	85	432
Expected Acceptances	2.5	5.0	71.6	438.7
Offer Acceptance Ratio*	0.67	0.57	1.18	0.98
95% Credible Interval**	[0.14, 1.61]	--	--	--
<b>HCV+ donor</b>				
Number of Offers	180	208	4,069	7,998
Number of Acceptances	3	4	35	308
Expected Acceptances	2.0	2.5	50.0	308.4
Offer Acceptance Ratio*	1.24	1.33	0.71	1.00
95% Credible Interval**	[0.40, 2.55]	--	--	--
<b>Hard-to-Place Livers (Over 50 Offers)</b>				
Number of Offers	1,251	2,186	32,241	106,499
Number of Acceptances	0	1	138	590
Expected Acceptances	6.2	11.8	164.5	591.1
Offer Acceptance Ratio*	0.24	0.22	0.84	1.00
95% Credible Interval**	[0.03, 0.68]	--	--	--
<b>Donor more than 500 miles away</b>				
Number of Offers	829	1,229	20,876	58,630
Number of Acceptances	4	5	181	680
Expected Acceptances	5.1	7.4	177.0	639.1
Offer Acceptance Ratio*	0.85	0.74	1.02	1.06
95% Credible Interval**	[0.31, 1.65]	--	--	--

\* The offer acceptance ratio estimates the relative offer acceptance practice of University of California San Diego Medical Center (CASD) 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, [0.41, 0.85], indicates the location of CASD's true offer acceptance ratio with 95% probability. The best estimate is 39% less likely to accept an offer compared to national acceptance behavior, but CASD's performance could plausibly range from 59% reduced acceptance up to 15% reduced acceptance.



## B. Waiting List Information

Figure B7. Offer acceptance: Overall

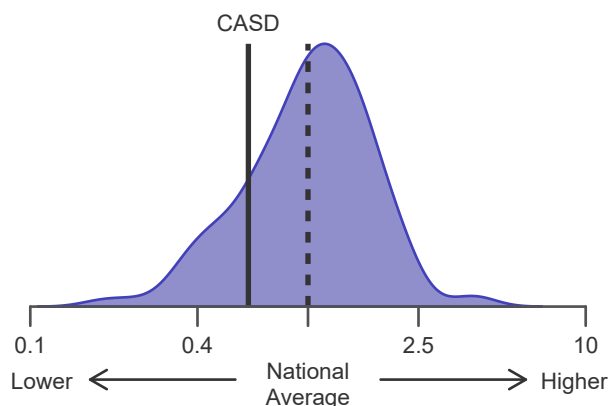


Figure B8. Offer acceptance:  
PHS increased infectious risk

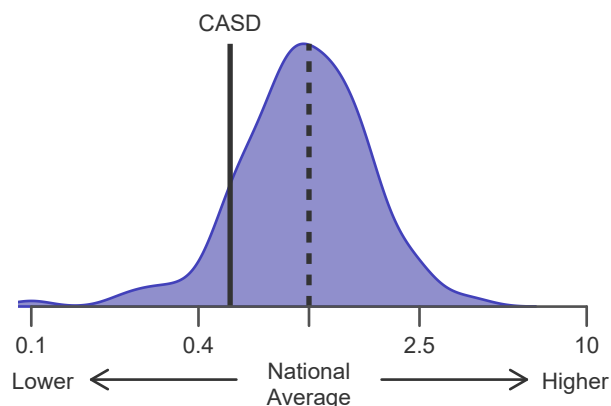


Figure B9. Offer acceptance: DCD Donor

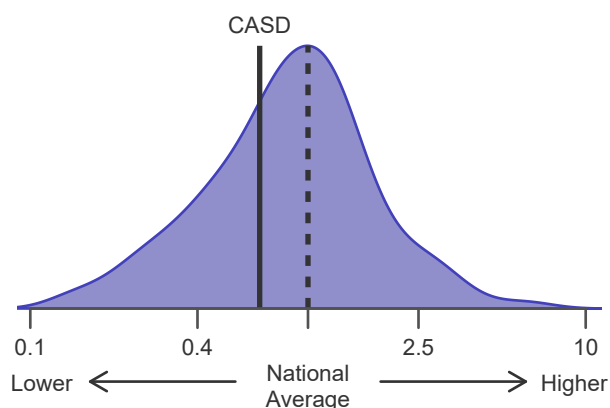


Figure B10. Offer acceptance: HCV+ Donor

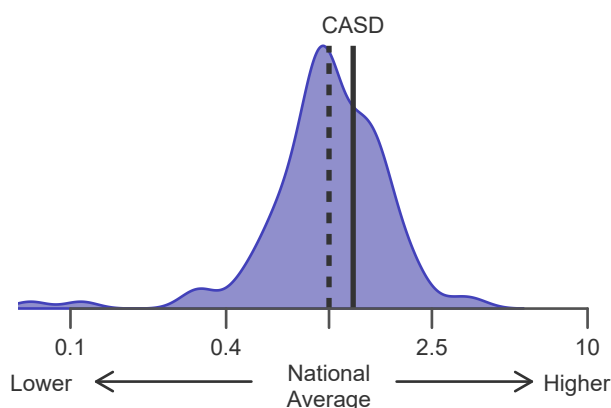


Figure B11. Offer acceptance: Offer number > 50

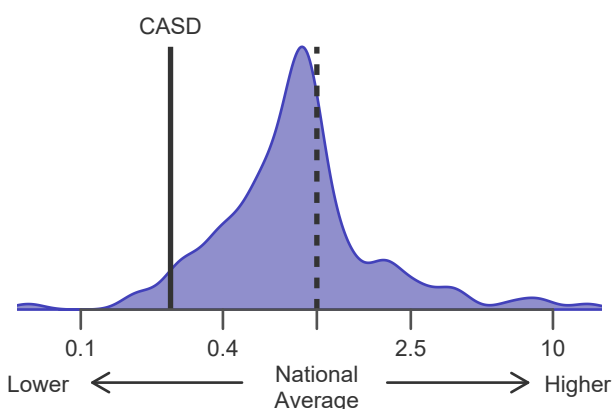
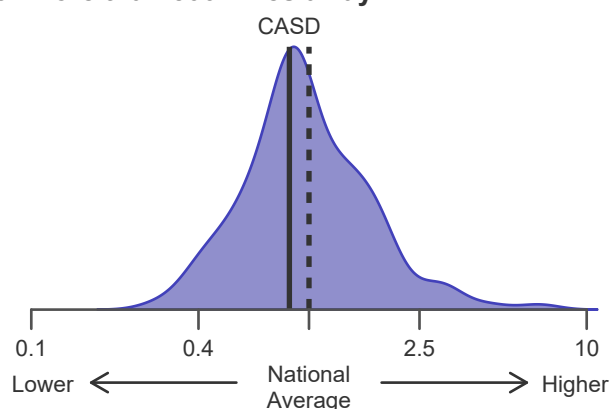


Figure B12. Offer acceptance:  
Donor more than 500 miles away





## C. Transplant Information

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

**Patients transplanted between 07/01/2016 and 06/30/2017**

Characteristic	Percentage in each category		
	Center (N=33)	Region (N=1,126)	U.S. (N=7,674)
<b>Ethnicity/Race (%)*</b>			
White	60.6	50.7	69.8
African-American	3.0	3.4	9.6
Hispanic/Latino	33.3	32.1	14.7
Asian	3.0	11.3	4.5
Other	0.0	2.6	1.4
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	3.7	2.6
2-11 years	0.0	2.8	2.5
12-17	0.0	1.1	1.2
18-34	0.0	5.6	5.4
35-49 years	21.2	16.1	16.1
50-64 years	57.6	50.7	51.8
65+ years	21.2	20.1	20.4
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	54.5	59.0	64.0
Female	45.5	41.0	36.0

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



## C. Transplant Information

Table C1L. Living donor transplant recipient demographic characteristics

Patients transplanted between 07/01/2016 and 06/30/2017

Characteristic	Percentage in each category		
	Center (N=1)	Region (N=61)	U.S. (N=364)
<b>Ethnicity/Race (%)*</b>			
White	0.0	37.7	76.6
African-American	0.0	0.0	4.9
Hispanic/Latino	100.0	41.0	12.1
Asian	0.0	19.7	5.2
Other	0.0	1.6	1.1
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	21.3	14.6
2-11 years	0.0	1.6	5.5
12-17	0.0	3.3	1.9
18-34	100.0	9.8	11.0
35-49 years	0.0	14.8	13.2
50-64 years	0.0	39.3	36.0
65+ years	0.0	9.8	17.9
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	0.0	45.9	51.1
Female	100.0	54.1	48.9

\* 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%.



## C. Transplant Information

**Table C2D. Deceased donor transplant recipient medical characteristics**  
Patients transplanted between 07/01/2016 and 06/30/2017

Characteristic	Percentage in each category		
	Center (N=33)	Region (N=1,126)	U.S. (N=7,674)
<b>Blood Type (%)</b>			
O	51.5	46.2	45.5
A	36.4	34.5	36.2
B	6.1	14.4	13.4
AB	6.1	4.9	5.0
<b>Previous Transplant (%)</b>			
Yes	6.1	5.1	5.1
No	93.9	94.9	94.9
<b>Body Mass Index (%)</b>			
0-20	21.2	15.8	11.4
21-25	27.3	28.1	26.7
26-30	36.4	30.2	30.1
31+	15.2	25.6	30.9
Unknown	0.0	0.4	0.9
<b>Primary Disease (%)</b>			
Acute Hepatic Necrosis	3.0	5.0	4.2
Non-Cholestatic Cirrhosis	84.8	58.0	62.3
Cholestatic Liver Disease/Cirrhosis	6.1	8.5	8.2
Biliary Atresia	0.0	2.7	2.3
Metabolic Diseases	0.0	2.3	3.2
Malignant Neoplasms	6.1	19.8	16.3
Other	0.0	3.7	3.4
Missing	0.0	0.0	0.0
<b>Medical Urgency Statust/MELD/PELD at Transplant (%)*</b>			
Status 1A	3.0	5.2	3.4
Status 1B	0.0	2.3	1.6
MELD 6-10	21.2	15.9	14.8
MELD 11-14	6.1	10.8	12.1
MELD 15-20	3.0	11.7	20.5
MELD 21-30	21.2	15.0	23.4
MELD 31-40	45.5	35.8	21.4
PELD less than or equal to 10	0.0	1.2	1.2
PELD 11-14	0.0	0.2	0.3
PELD 15-20	0.0	0.5	0.5
PELD 21-30	0.0	0.9	0.7
PELD 31 or greater	0.0	0.4	0.3
Temporarily Inactive	0.0	0.0	0.0
<b>Recipient Medical Condition at Transplant (%)</b>			
Not Hospitalized	33.3	47.8	65.8
Hospitalized	21.2	20.7	19.4
ICU	45.5	31.5	14.6
Unknown	0.0	0.0	0.2

\* MELD/PELD score based on laboratory measures at the time of transplant is shown unless recipient is Status 1 or Temporarily Inactive. MELD/PELD scores based on exception rules are not used. Status 1 separated into 1A and 1B in August 2005



## C. Transplant Information

**Table C2L. Living donor transplant recipient medical characteristics**  
**Patients transplanted between 07/01/2016 and 06/30/2017**

Characteristic	Percentage in each category		
	Center (N=1)	Region (N=61)	U.S. (N=364)
<b>Blood Type (%)</b>			
O	0.0	54.1	44.2
A	100.0	29.5	42.3
B	0.0	13.1	11.3
AB	0.0	3.3	2.2
<b>Previous Transplant (%)</b>			
Yes	0.0	0.0	0.8
No	100.0	100.0	99.2
<b>Body Mass Index (%)</b>			
0-20	0.0	31.1	26.6
21-25	0.0	34.4	29.9
26-30	0.0	18.0	24.2
31+	100.0	14.8	15.9
Unknown	0.0	1.6	3.3
<b>Primary Disease (%)</b>			
Acute Hepatic Necrosis	100.0	1.6	1.6
Non-Cholestatic Cirrhosis	0.0	44.3	44.8
Cholestatic Liver Disease/Cirrhosis	0.0	26.2	22.3
Biliary Atresia	0.0	19.7	14.0
Metabolic Diseases	0.0	1.6	3.6
Malignant Neoplasms	0.0	4.9	9.1
Other	0.0	1.6	4.7
Missing	0.0	0.0	0.0
<b>Medical Urgency Statust/MELD/PELD at Transplant (%)*</b>			
Status 1A	0.0	0.0	1.6
Status 1B	0.0	3.3	2.5
MELD 6-10	0.0	18.0	17.0
MELD 11-14	0.0	19.7	24.7
MELD 15-20	100.0	26.2	29.1
MELD 21-30	0.0	13.1	8.2
MELD 31-40	0.0	0.0	0.3
PELD less than or equal to 10	0.0	3.3	4.7
PELD 11-14	0.0	1.6	2.2
PELD 15-20	0.0	1.6	2.2
PELD 21-30	0.0	9.8	5.2
PELD 31 or greater	0.0	3.3	1.4
Temporarily Inactive	0.0	0.0	0.8
<b>Recipient Medical Condition at Transplant (%)</b>			
Not Hospitalized	100.0	73.8	85.4
Hospitalized	0.0	19.7	9.6
ICU	0.0	6.6	4.9
Unknown	0.0	0.0	0.0

\* MELD/PELD score based on laboratory measures at the time of transplant is shown unless recipient is Status 1 or Temporarily Inactive. MELD/PELD scores based on exception rules are not used. Status 1 separated into 1A and 1B in August 2005



## C. Transplant Information

**Table C3D. Deceased donor characteristics****Transplants performed between 07/01/2016 and 06/30/2017**

Donor Characteristic	Percentage in each category		
	Center (N=33)	Region (N=1,126)	U.S. (N=7,674)
<b>Cause of Death (%)</b>			
Deceased: Stroke	30.3	29.2	29.0
Deceased: MVA	15.2	15.9	13.3
Deceased: Other	54.5	54.9	57.7
<b>Ethnicity/Race (%)*</b>			
White	66.7	51.7	64.9
African-American	6.1	10.6	18.6
Hispanic/Latino	24.2	28.2	13.0
Asian	3.0	7.0	2.6
Other	0.0	2.5	0.8
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	2.5	1.6
2-11 years	0.0	2.5	2.5
12-17	0.0	5.2	5.1
18-34	42.4	32.5	34.5
35-49 years	24.2	25.1	25.4
50-64 years	30.3	25.0	23.9
65+ years	3.0	7.2	6.9
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	75.8	60.5	59.7
Female	24.2	39.5	40.3
<b>Blood Type (%)</b>			
O	57.6	51.3	48.8
A	36.4	36.0	37.2
B	6.1	10.0	11.0
AB	0.0	2.7	3.1
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 C3L. Living donor characteristics****Transplants performed between 07/01/2016 and 06/30/2017**

Donor Characteristic	Percentage in each category		
	Center (N=1)	Region (N=61)	U.S. (N=364)
<b>Ethnicity/Race (%)*</b>			
White	0.0	41.0	78.6
African-American	0.0	1.6	5.2
Hispanic/Latino	100.0	41.0	11.5
Asian	0.0	14.8	3.8
Other	0.0	1.6	0.8
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
0-11 years	0.0	0.0	0.3
12-17	0.0	0.0	0.3
18-34	100.0	52.5	48.9
35-49 years	0.0	32.8	36.0
50-64 years	0.0	14.8	14.6
65+ years	0.0	0.0	0.0
Unknown	0.0	0.0	0.0
<b>Gender (%)</b>			
Male	0.0	34.4	41.5
Female	100.0	65.6	58.5
<b>Blood Type (%)</b>			
O	0.0	72.1	65.4
A	100.0	18.0	27.5
B	0.0	9.8	6.3
AB	0.0	0.0	0.8
Unknown	0.0	0.0	0.0

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





## C. Transplant Information

**Table C4D. Deceased donor transplant characteristics**  
Transplants performed between 07/01/2016 and 06/30/2017

Transplant Characteristic	Percentage in each category		
	Center (N=33)	Region (N=1,126)	U.S. (N=7,674)
<b>Cold Ischemic Time (Hours): Local (%)</b>			
Deceased: 0-5 hr	71.4	41.6	61.0
Deceased: 6-10 hr	28.6	54.5	36.2
Deceased: 11-15 hr	0.0	3.7	1.7
Deceased: 16-20 hr	0.0	0.0	0.1
Deceased: 21+ hr	0.0	0.0	0.1
Not Reported	0.0	0.2	0.9
<b>Cold Ischemic Time (Hours): Shared (%)</b>			
Deceased: 0-5 hr	21.1	20.3	39.0
Deceased: 6-10 hr	73.7	70.7	56.1
Deceased: 11-15 hr	5.3	8.5	3.7
Deceased: 16-20 hr	0.0	0.2	0.2
Deceased: 21+ hr	0.0	0.2	0.1
Not Reported	0.0	0.2	0.9
<b>Procedure Type (%)</b>			
Liver alone	84.8	87.0	88.7
Liver and another organ	15.2	13.0	11.3
<b>Sharing (%)</b>			
Local	42.4	47.6	62.9
Shared	57.6	52.4	37.1
<b>Median Time in Hospital After Transplant*</b>	20.5 Days	11.0 Days	9.0 Days

\* Multiple organ transplants are excluded from this statistic.



## C. Transplant Information

**Table C4L. Living donor transplant characteristics**  
**Transplants performed between 07/01/2016 and 06/30/2017**

Transplant Characteristic	Percentage in each category		
	Center (N=1)	Region (N=61)	U.S. (N=364)
<b>Relation with Donor (%)</b>			
Related	100.0	78.7	63.5
Unrelated	0.0	21.3	36.5
Not Reported	0.0	0.0	0.0
<b>Procedure Type (%)</b>			
Liver alone	100.0	100.0	100.0
Liver and another organ	0.0	0.0	0.0
<b>Median Time in Hospital After Transplant*</b>	18.0 Days	11.0 Days	12.0 Days

\* Multiple organ transplants are excluded from this statistic.



## C. Transplant Information

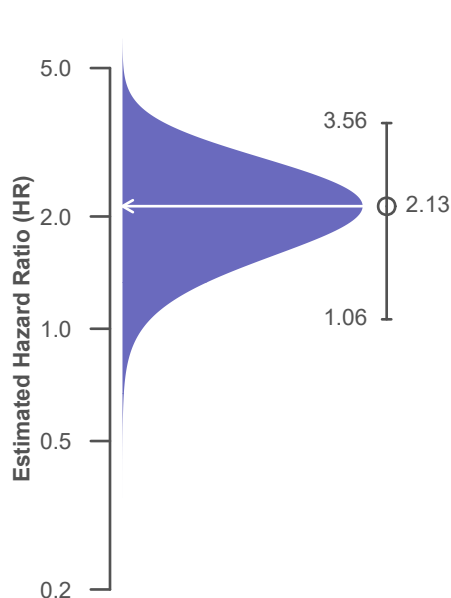
**Table C5. Adult (18+) 1-month survival with a functioning graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	77	15,226
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	88.31%	95.95%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	95.76%	--
Number of observed graft failures (including deaths) during the first month after transplant	9	616
Number of expected graft failures (including deaths) during the first month after transplant	3.16	--
Estimated hazard ratio*	2.13	--
95% credible interval for the hazard ratio**	[1.06, 3.56]	--

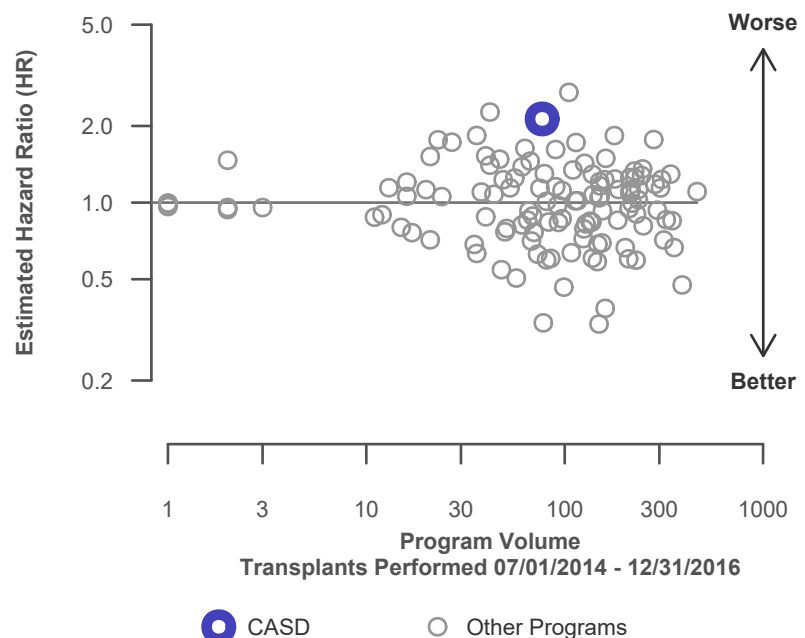
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [1.06, 3.56], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 113% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 6% increased risk up to 256% increased risk.

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



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





## C. Transplant Information

**Table C5D. Adult (18+) 1-month survival with a functioning deceased donor graft**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

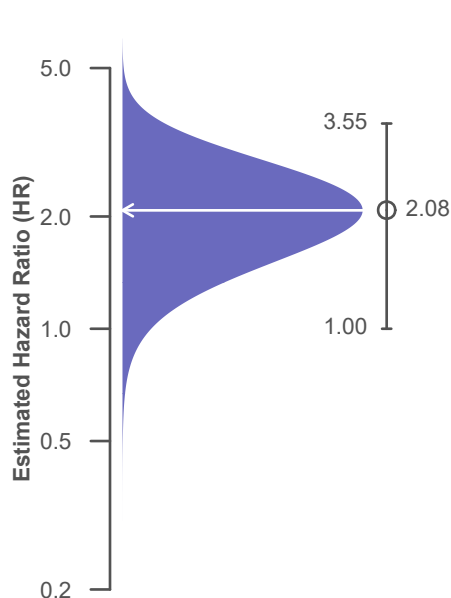
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	70	14,539
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	88.57%	96.00%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	95.83%	--
Number of observed graft failures (including deaths) during the first month after transplant	8	582
Number of expected graft failures (including deaths) during the first month after transplant	2.81	--
Estimated hazard ratio*	2.08	--
95% credible interval for the hazard ratio**	[1.00, 3.55]	--

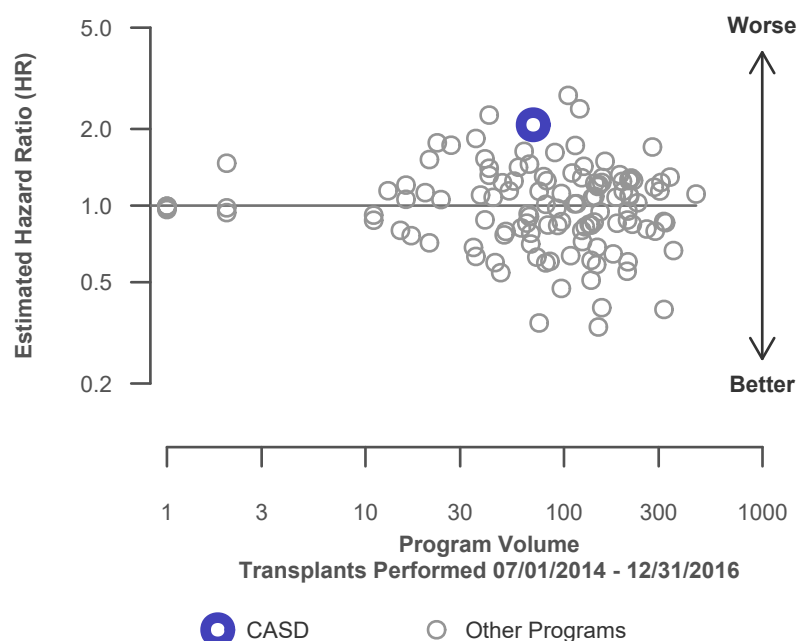
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [1.00, 3.55], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 108% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 0% reduced risk up to 255% increased risk.

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



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





## C. Transplant Information

**Table C5L. Adult (18+) 1-month survival with a functioning living donor graft**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

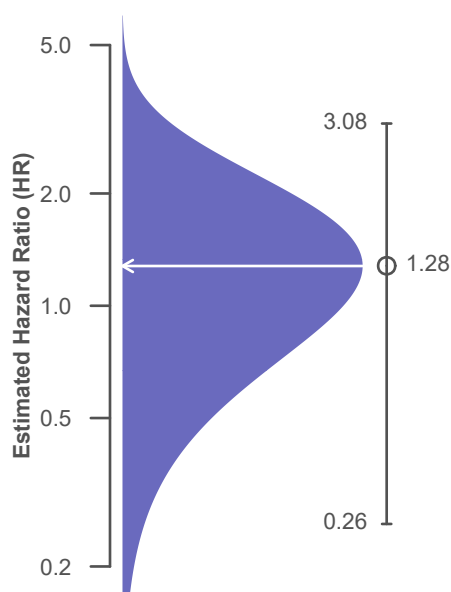
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	7	687
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	85.71%	95.05%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	95.06%	--
Number of observed graft failures (including deaths) during the first month after transplant	1	34
Number of expected graft failures (including deaths) during the first month after transplant	0.35	--
Estimated hazard ratio*	1.28	--
95% credible interval for the hazard ratio**	[0.26, 3.08]	--

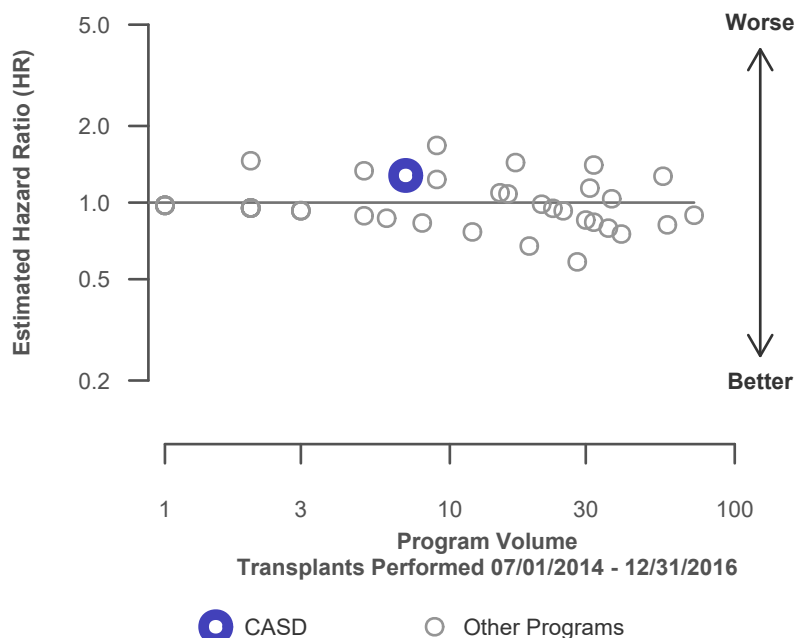
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.26, 3.08], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 28% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 74% reduced risk up to 208% increased risk.

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



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





## C. Transplant Information

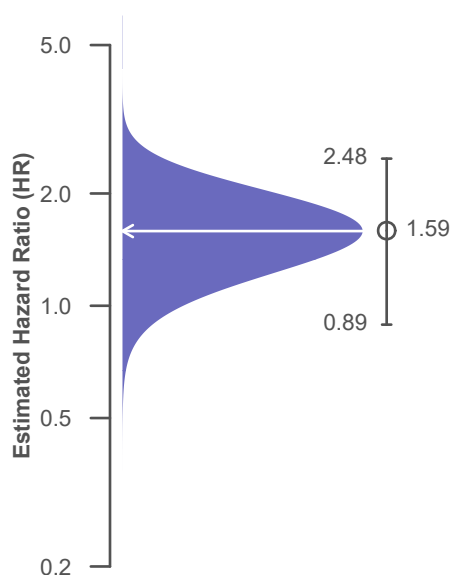
**Table C6. Adult (18+) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	77	15,226
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	82.88%	90.17%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	89.46%	--
Number of observed graft failures (including deaths) during the first year after transplant	13	1,420
Number of expected graft failures (including deaths) during the first year after transplant	7.46	--
Estimated hazard ratio*	1.59	--
95% credible interval for the hazard ratio**	[0.89, 2.48]	--

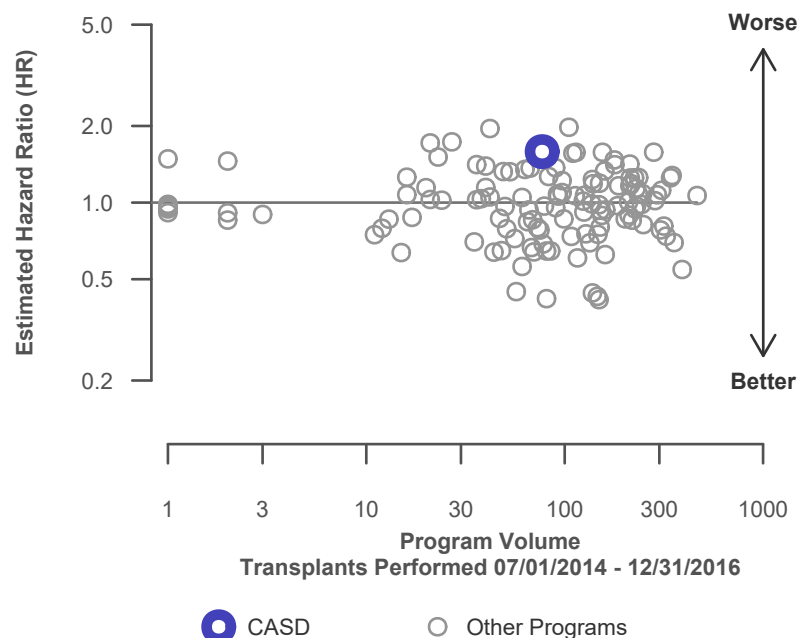
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.89, 2.48], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 59% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 11% reduced risk up to 148% increased risk.

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



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





## C. Transplant Information

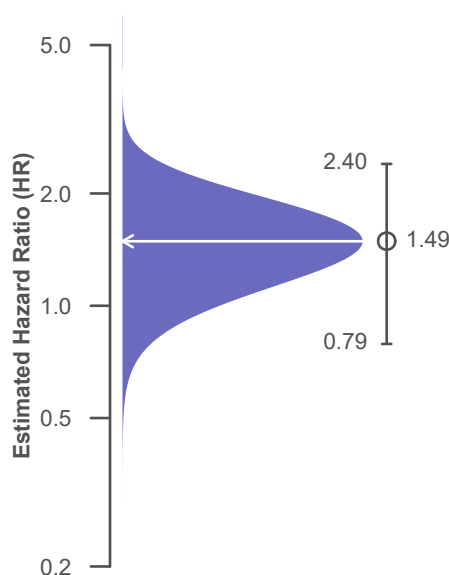
**Table C6D. Adult (18+) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	70	14,539
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	84.29%	90.23%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	89.52%	--
Number of observed graft failures (including deaths) during the first year after transplant	11	1,347
Number of expected graft failures (including deaths) during the first year after transplant	6.73	--
Estimated hazard ratio*	1.49	--
95% credible interval for the hazard ratio**	[0.79, 2.40]	--

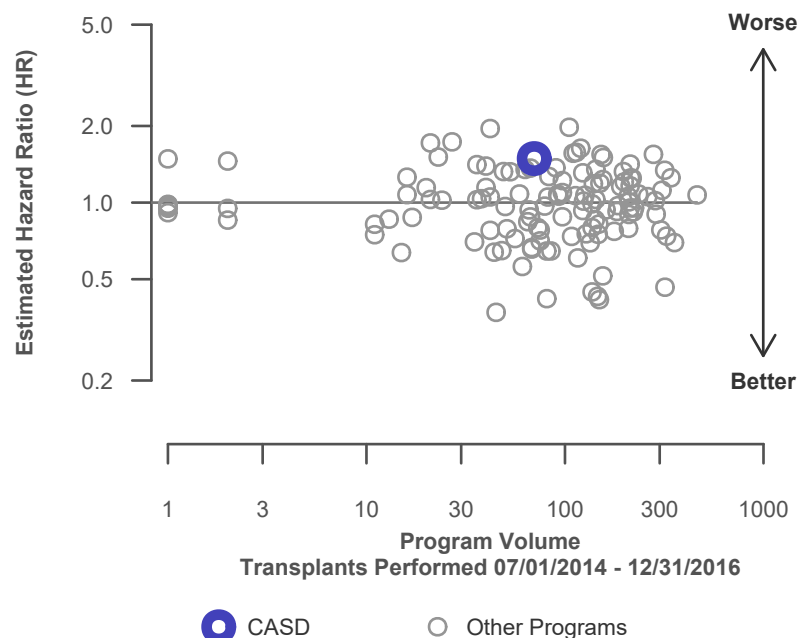
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.79, 2.40], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 49% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 21% reduced risk up to 140% increased risk.

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



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





## C. Transplant Information

**Table C6L. Adult (18+) 1-year survival with a functioning living donor graft**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

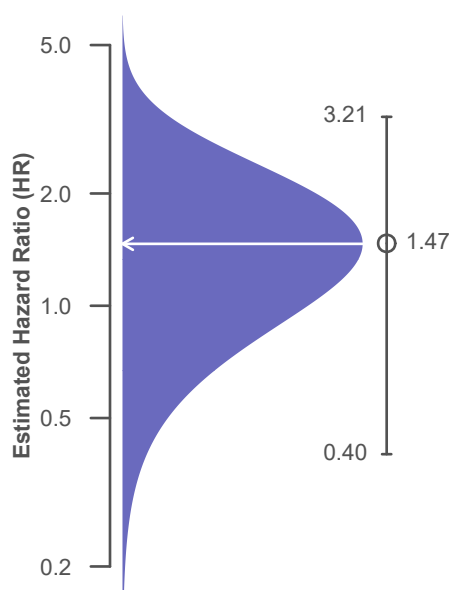
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	7	687
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	71.43%	88.81%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	88.82%	--
Number of observed graft failures (including deaths) during the first year after transplant	2	73
Number of expected graft failures (including deaths) during the first year after transplant	0.73	--
Estimated hazard ratio*	1.47	--
95% credible interval for the hazard ratio**	[0.40, 3.21]	--

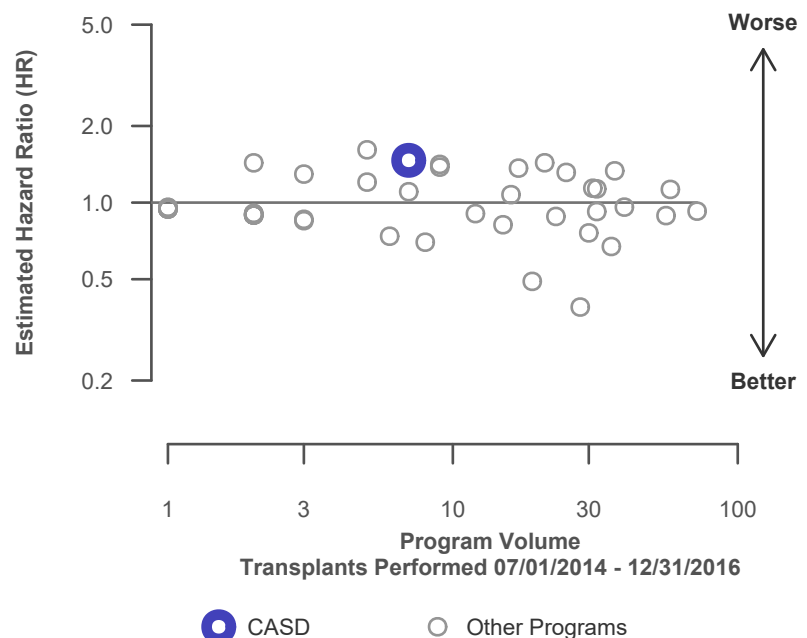
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.40, 3.21], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 47% higher risk of graft failure compared to an average program, but CASD's performance could plausibly range from 60% reduced risk up to 221% increased risk.

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



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







## C. Transplant Information

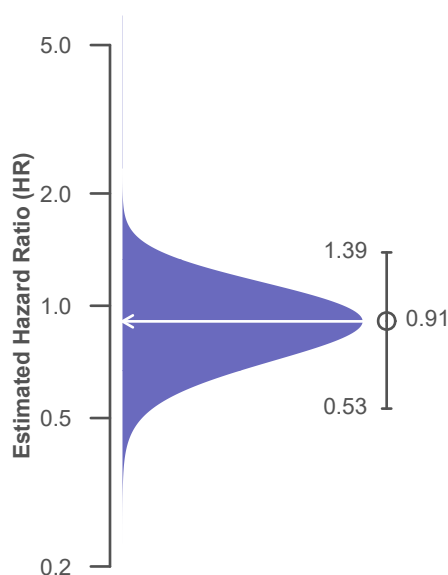
**Table C7. Adult (18+) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	88	13,367
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	82.95%	81.33%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	81.08%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	15	2,495
Number of expected graft failures (including deaths) during the first 3 years after transplant	16.72	--
Estimated hazard ratio*	0.91	--
95% credible interval for the hazard ratio**	[0.53, 1.39]	--

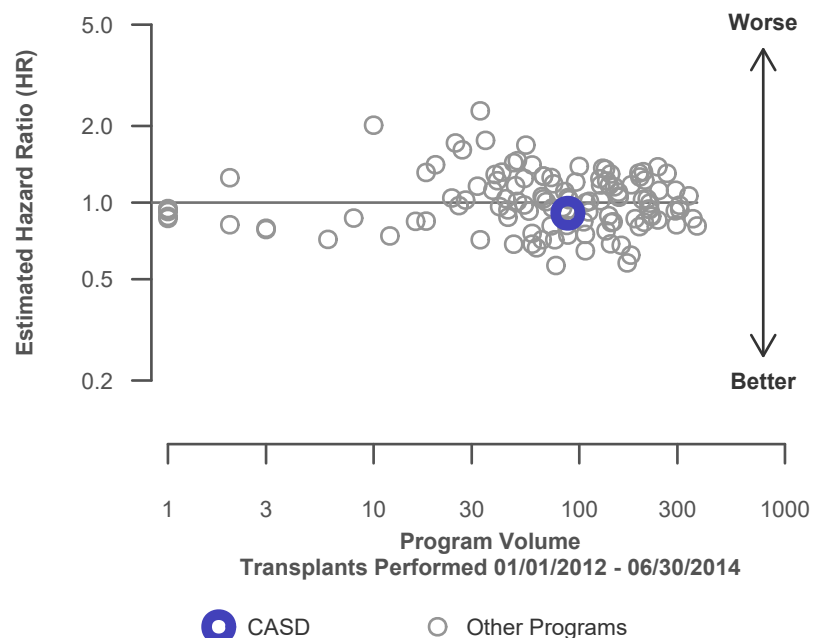
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.53, 1.39], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 9% lower risk of graft failure compared to an average program, but CASD's performance could plausibly range from 47% reduced risk up to 39% increased risk.

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



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





## C. Transplant Information

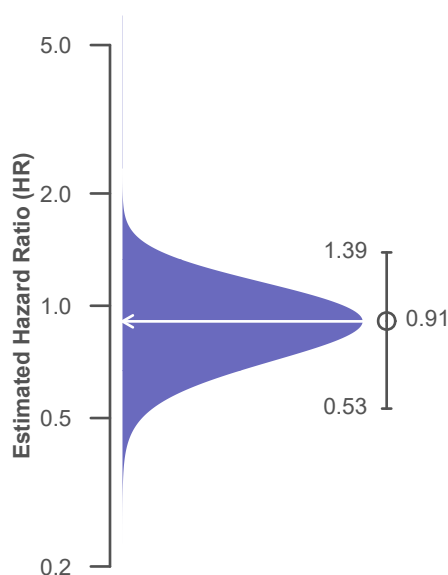
**Table C7D. Adult (18+) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Deaths and retransplants are considered graft failures**

	CASD	U.S.
Number of transplants evaluated	88	12,861
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	82.95%	81.35%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	81.08%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	15	2,399
Number of expected graft failures (including deaths) during the first 3 years after transplant	16.72	--
Estimated hazard ratio*	0.91	--
95% credible interval for the hazard ratio**	[0.53, 1.39]	--

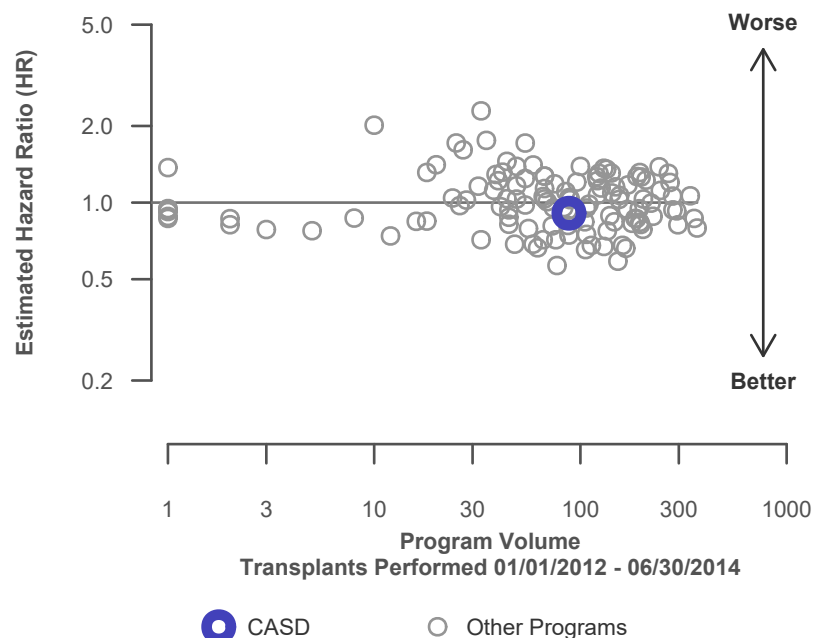
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.53, 1.39], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 9% lower risk of graft failure compared to an average program, but CASD's performance could plausibly range from 47% reduced risk up to 39% increased risk.

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



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





## C. Transplant Information

**Table C7L. Adult (18+) 3-year survival with a functioning living donor graft**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

**Table C8. Pediatric (<18) 1-month survival with a functioning graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C8D. Pediatric (<18) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C8L. Pediatric (<18) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C9. Pediatric (<18) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C9D. Pediatric (<18) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016





## C. Transplant Information

**Table C9L. Pediatric (<18) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C10. Pediatric (<18) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

**Table C10D. Pediatric (<18) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Deaths and retransplants are considered graft failures**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

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

Single organ transplants performed between 01/01/2012 and 06/30/2014

Deaths and retransplants are considered graft failures

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

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

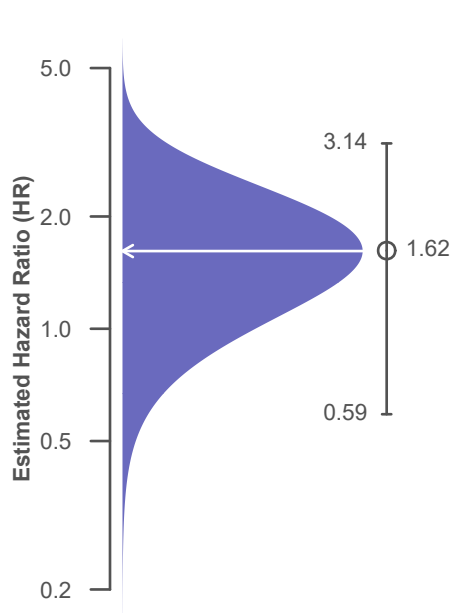
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	70	14,595
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	94.29%	97.42%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	97.48%	--
Number of observed deaths during the first month after transplant	4	377
Number of expected deaths during the first month after transplant	1.71	--
Estimated hazard ratio*	1.62	--
95% credible interval for the hazard ratio**	[0.59, 3.14]	--

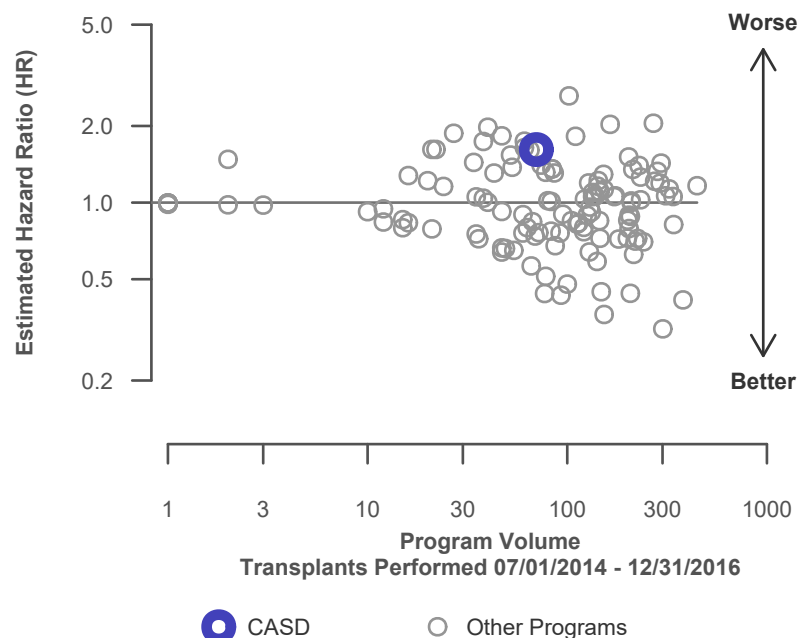
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.59, 3.14], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 62% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 41% reduced risk up to 214% increased risk.

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



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





## C. Transplant Information

**Table C11D. Adult (18+) 1-month patient survival (deceased donor graft recipients)**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

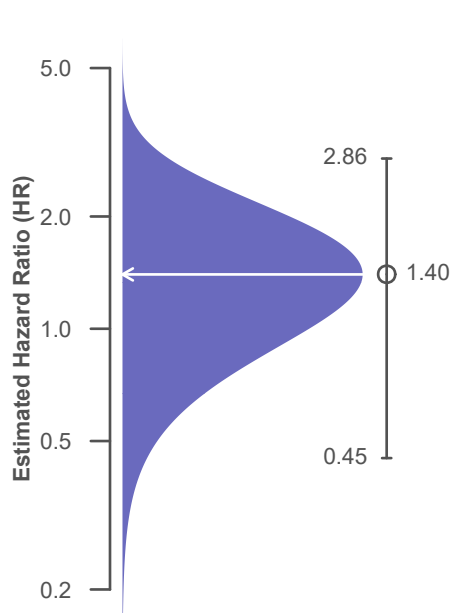
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	63	13,913
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	95.24%	97.39%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	97.43%	--
Number of observed deaths during the first month after transplant	3	363
Number of expected deaths during the first month after transplant	1.58	--
Estimated hazard ratio*	1.40	--
95% credible interval for the hazard ratio**	[0.45, 2.86]	--

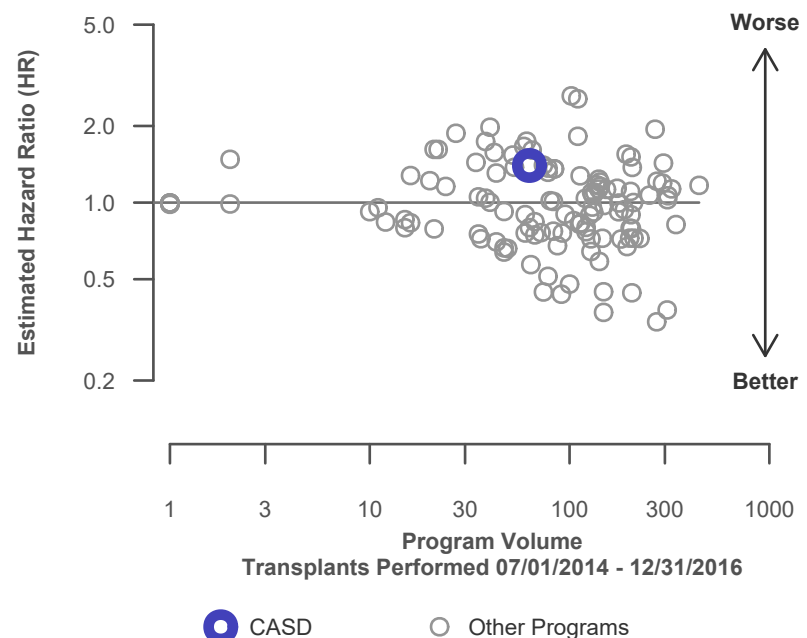
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.45, 2.86], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 40% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 55% reduced risk up to 186% increased risk.

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



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





## C. Transplant Information

**Table C11L. Adult (18+) 1-month patient survival (living donor graft recipients)**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

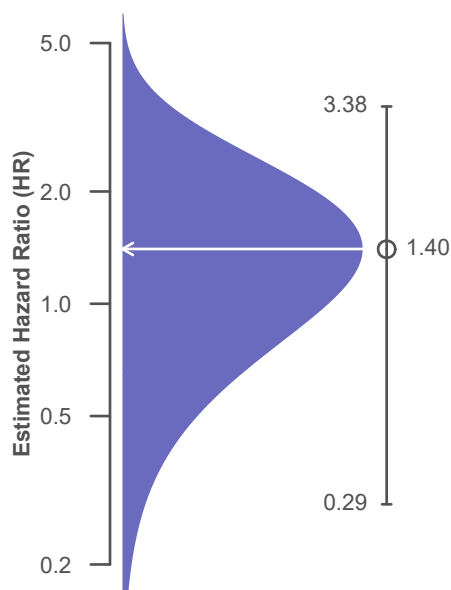
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	7	682
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	85.71%	97.95%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	97.95%	--
Number of observed deaths during the first month after transplant	1	14
Number of expected deaths during the first month after transplant	0.14	--
Estimated hazard ratio*	1.40	--
95% credible interval for the hazard ratio**	[0.29, 3.38]	--

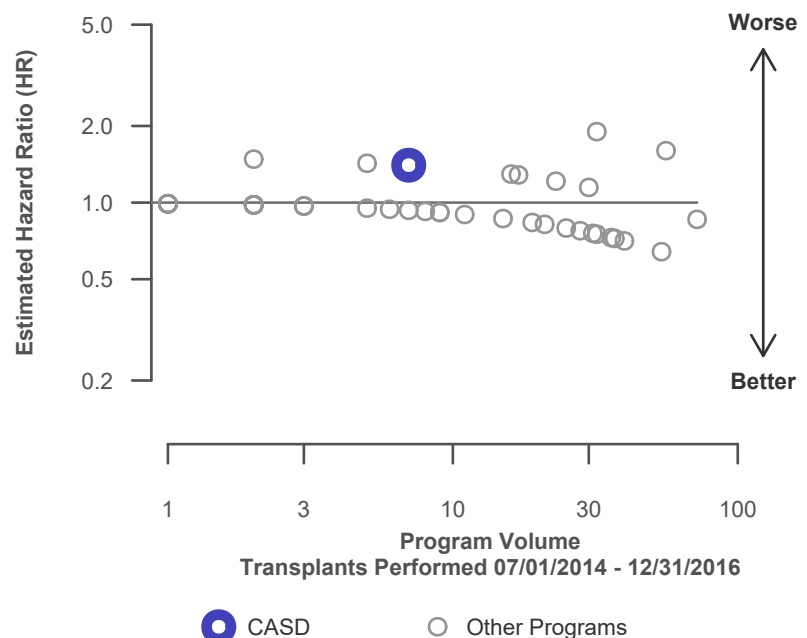
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.29, 3.38], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 40% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 71% reduced risk up to 238% increased risk.

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



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





## C. Transplant Information

**Table C12. Adult (18+) 1-year patient survival**

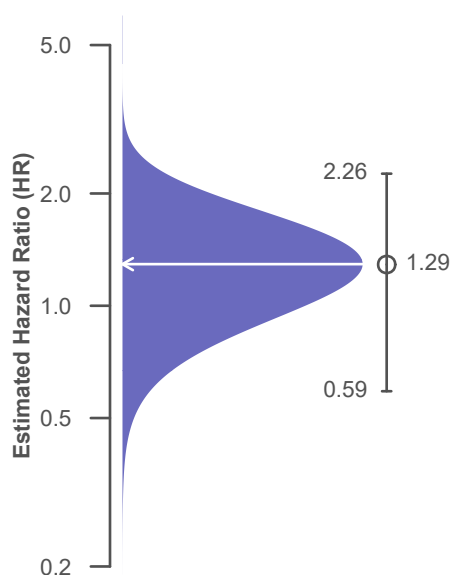
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	70	14,595
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	89.77%	92.33%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	92.25%	--
Number of observed deaths during the first year after transplant	7	1,051
Number of expected deaths during the first year after transplant	4.96	--
Estimated hazard ratio*	1.29	--
95% credible interval for the hazard ratio**	[0.59, 2.26]	--

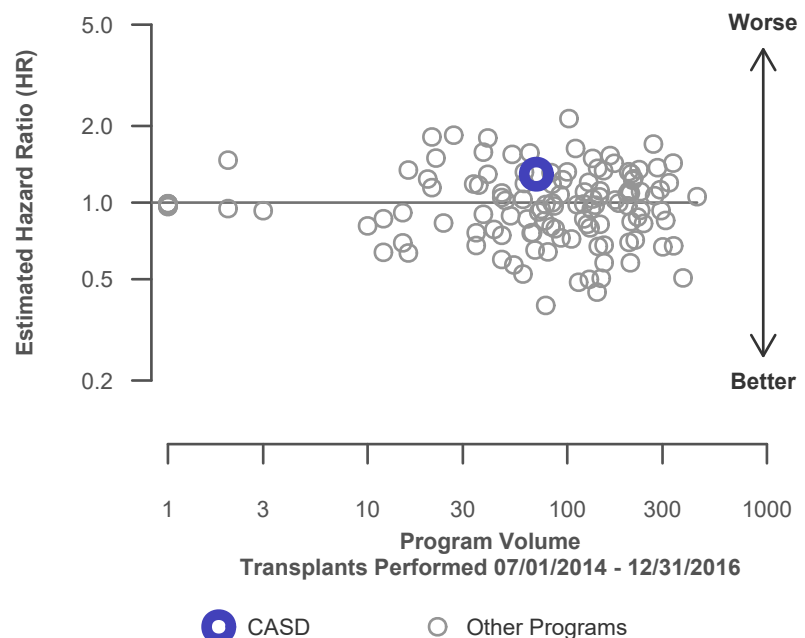
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.59, 2.26], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 29% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 41% reduced risk up to 126% increased risk.

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



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







## C. Transplant Information

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

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

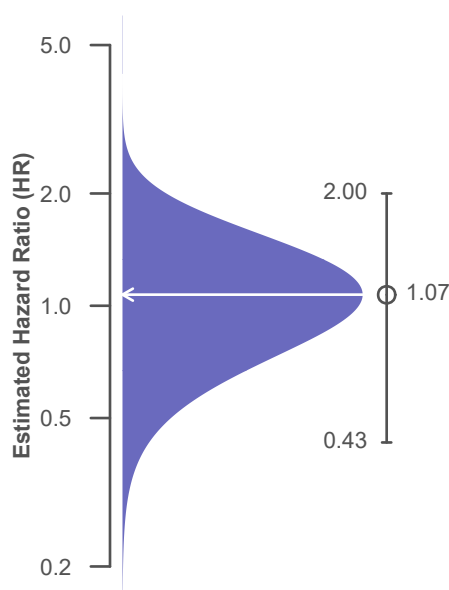
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	63	13,913
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	92.06%	92.29%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	92.16%	--
Number of observed deaths during the first year after transplant	5	1,007
Number of expected deaths during the first year after transplant	4.54	--
Estimated hazard ratio*	1.07	--
95% credible interval for the hazard ratio**	[0.43, 2.00]	--

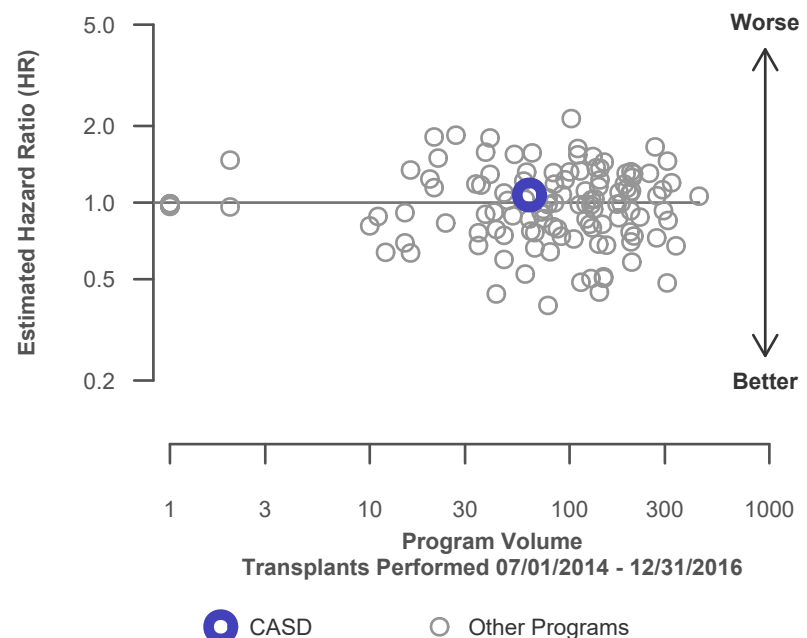
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.43, 2.00], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 7% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 57% reduced risk up to 100% increased risk.

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



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





## C. Transplant Information

**Table C12L. Adult (18+) 1-year patient survival (living donor graft recipients)**

**Single organ transplants performed between 07/01/2014 and 12/31/2016**

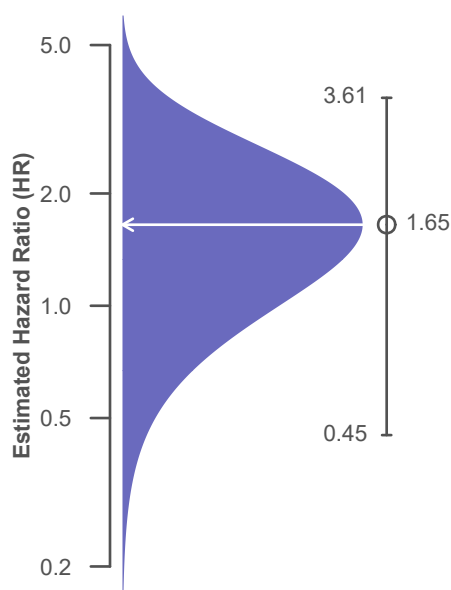
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	7	682
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	71.43%	93.07%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	93.08%	--
Number of observed deaths during the first year after transplant	2	44
Number of expected deaths during the first year after transplant	0.43	--
Estimated hazard ratio*	1.65	--
95% credible interval for the hazard ratio**	[0.45, 3.61]	--

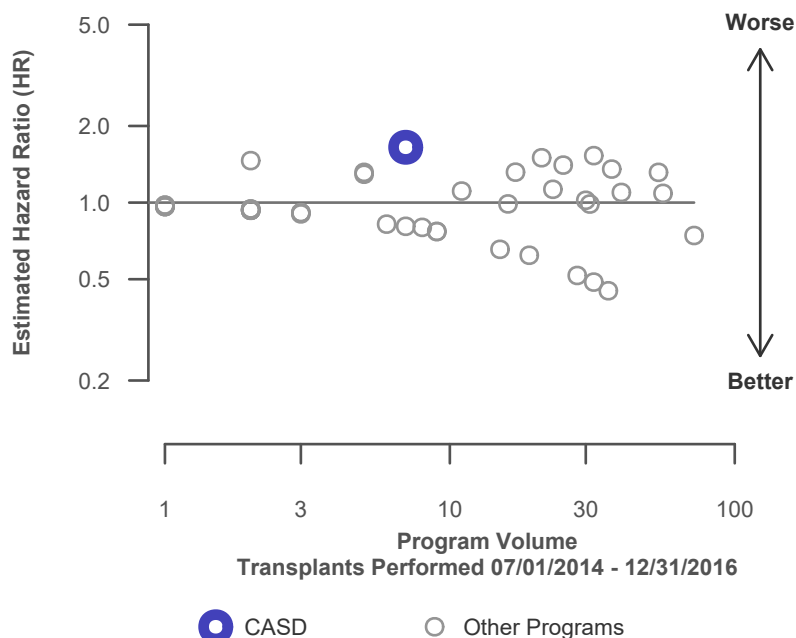
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.45, 3.61], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 65% higher risk of patient death compared to an average program, but CASD's performance could plausibly range from 55% reduced risk up to 261% increased risk.

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



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





## C. Transplant Information

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

**Single organ transplants performed between 01/01/2012 and 06/30/2014**

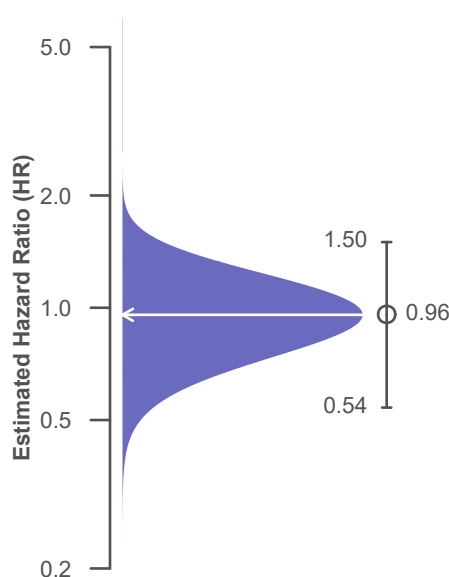
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	86	12,750
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	84.88%	84.05%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	84.11%	--
Number of observed deaths during the first 3 years after transplant	13	2,034
Number of expected deaths during the first 3 years after transplant	13.67	--
Estimated hazard ratio*	0.96	--
95% credible interval for the hazard ratio**	[0.54, 1.50]	--

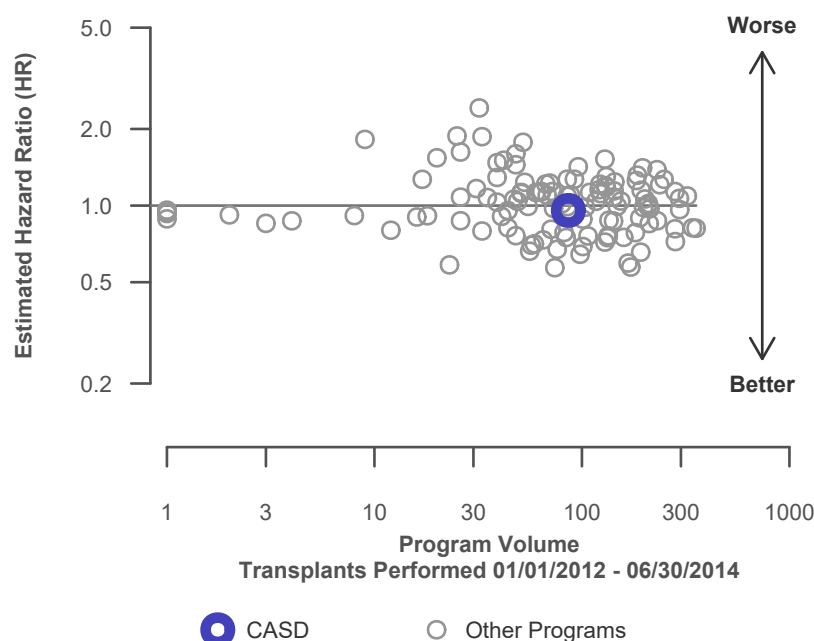
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.54, 1.50], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 4% lower risk of patient death compared to an average program, but CASD's performance could plausibly range from 46% reduced risk up to 50% increased risk.

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



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





## C. Transplant Information

**Table C13D. Adult (18+) 3-year patient survival (deceased donor graft recipients)**

**Single organ transplants performed between 01/01/2012 and 06/30/2014**

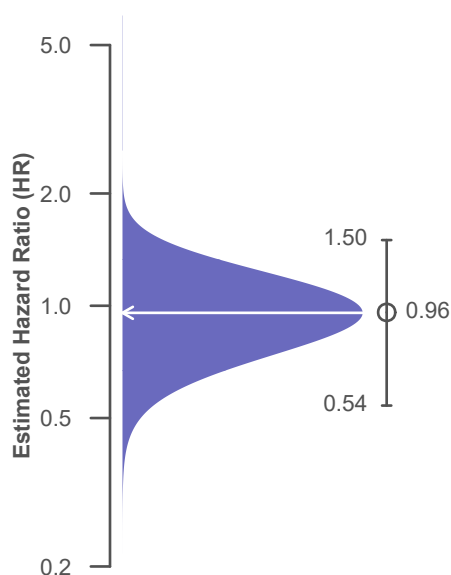
**Retransplants excluded**

	CASD	U.S.
Number of transplants evaluated	86	12,251
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	84.88%	83.96%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	84.11%	--
Number of observed deaths during the first 3 years after transplant	13	1,965
Number of expected deaths during the first 3 years after transplant	13.67	--
Estimated hazard ratio*	0.96	--
95% credible interval for the hazard ratio**	[0.54, 1.50]	--

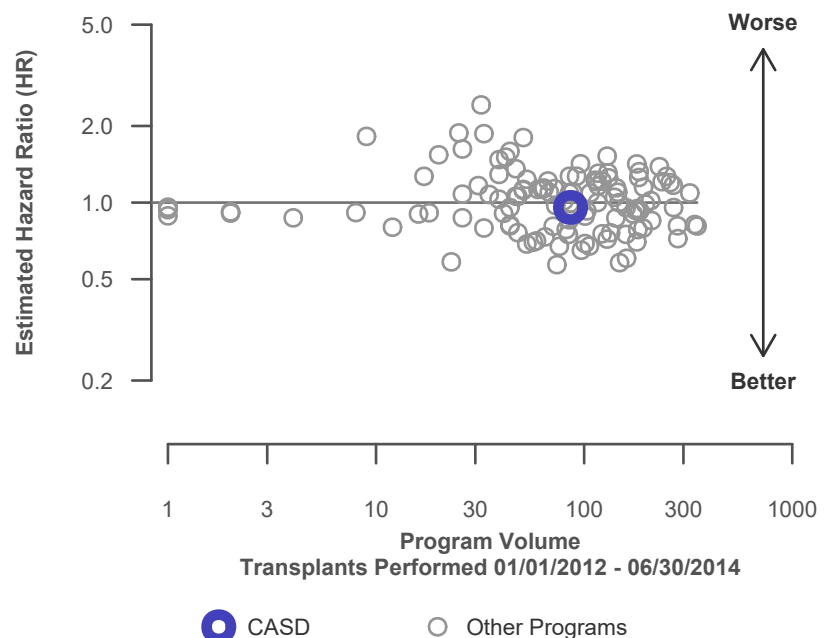
\* The hazard ratio provides an estimate of how University of California San Diego Medical Center (CASD)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio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

\*\* The 95% credible interval, [0.54, 1.50], indicates the location of CASD's true hazard ratio with 95% probability. The best estimate is 4% lower risk of patient death compared to an average program, but CASD's performance could plausibly range from 46% reduced risk up to 50% increased risk.

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



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





## C. Transplant Information

### Table C13L. Adult (18+) 3-year patient survival (living donor graft recipients)

Single organ transplants performed between 01/01/2012 and 06/30/2014

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

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

Single organ transplants performed between 07/01/2014 and 12/31/2016

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C14D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C14L. Pediatric (<18) 1-month patient survival (living donor graft recipients)**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016





## C. Transplant Information

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

Single organ transplants performed between 07/01/2014 and 12/31/2016

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

**Table C15D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2014 and 12/31/2016**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

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

Single organ transplants performed between 07/01/2014 and 12/31/2016

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016

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

This center did not perform any  
transplants relevant to  
this figure during  
07/01/2014-12/31/2016



## C. Transplant Information

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

Single organ transplants performed between 01/01/2012 and 06/30/2014

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

**Table C16D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 01/01/2012 and 06/30/2014**  
**Retransplants excluded**

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

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

Single organ transplants performed between 01/01/2012 and 06/30/2014

Retransplants excluded

This center did not perform any  
transplants relevant to  
this table during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014

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

This center did not perform any  
transplants relevant to  
this figure during  
01/01/2012-06/30/2014



## C. Transplant Information

Table C17. Multi-organ transplant graft survival: 07/01/2014 - 12/31/2016

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Liver Graft Failures		Estimated Liver Graft Survival	
	CASD-TX1	USA	CASD-TX1	USA	CASD-TX1	USA
Kidney-Liver	10	1,601	2	137	80.0%	90.9%
Liver-Heart	1	53	0	6	100.0%	88.4%
Pancreas-Liver-Lung	1	1	1	1	0.0%	0.0%

### Pediatric (<18) Transplants

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

Table C18. Multi-organ transplant patient survival: 07/01/2014 - 12/31/2016

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Patient Deaths		Estimated Patient Survival	
	CASD-TX1	USA	CASD-TX1	USA	CASD-TX1	USA
Kidney-Liver	10	1,601	1	127	90.0%	91.5%
Liver-Heart	1	53	0	6	100.0%	88.4%
Pancreas-Liver-Lung	1	1	1	1	0.0%	0.0%

### Pediatric (<18) Transplants

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



## D. Living Donor Information

Table D1. Living donor summary: 07/01/2014 - 06/30/2017

Living Donor Follow-Up	This Center			United States		
	07/2014- 06/2015	07/2015- 06/2016	07/2016- 12/2016	07/2014- 06/2015	07/2015- 06/2016	07/2016- 12/2016
<b>Number of Living Donors</b>	3	5	0	311	336	175
<b>6-Month Follow-Up</b>						
Donors due for follow-up	3	5	0	311	336	174
Timely clinical data	2 66.7%	4 80.0%	0 --%	247 79.4%	293 87.2%	150 86.2%
Timely lab data	3 100.0%	4 80.0%	0 --%	256 82.3%	286 85.1%	152 87.4%
<b>12-Month Follow-Up</b>						
Donors due for follow-up	3	5		311	336	
Timely clinical data	1 33.3%	5 100.0%		225 72.3%	284 84.5%	
Timely lab data	1 33.3%	3 60.0%		203 65.3%	272 81.0%	
<b>24-Month Follow-Up</b>						
Donors due for follow-up	3			310		
Timely clinical data	3 100.0%			215 69.4%		
Timely lab data	2 66.7%			179 57.7%		

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