

Program Summary

Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Center Activity (01/01/2009-12/31/2009)	Center	Region	United States	Tables for More Information
Deceased donor transplants (n=number)	34	830	6,101	07C,08C,09C
Living donor transplants (n)	8	36	219	07L,08L,09L
On waitlist at start (n)	153	3,980	16,372	01,02,03
On waitlist at end (n)	191	3,950	16,365	01,02
Number of new patient registrations (n)	120	2,018	11,262	01,02

Waiting List Outcomes (01/01/2009-12/31/2009)				Tables for More Information
	Observed	Expected	Statistical Significance of Difference	
Transplant rate among waitlist patients	0.26	0.34	Not Significantly Different (a)	03,04,05,06
Transplant rate (from deceased donors) among waitlist patients	0.21	0.33	Statistically Lower (b)	03,04,05,06
Mortality rate while on waitlist	0.09	0.13	Not Significantly Different (a)	03,04

Post-transplant Outcomes (01/01/2007-06/30/2009)	1 Year		Statistical Significance of Difference	Tables for More Information
	Observed	Expected		
Adult graft survival (based on 143 transplants) (%)	90.39	88.79	Not Significantly Different (a)	10
Adult patient survival (based on 139 transplants) (%)	92.27	91.22	Not Significantly Different (a)	11
Pediatric graft survival (%)	NA	NA	NA	10
Pediatric patient survival (%)	NA	NA	NA	11

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
 Note: Tables referring to small sample sizes should be treated with caution. Sample sizes can be found in the table referenced in the last column.
 NA=Not Applicable.

A Guide to Reading and Understanding the Center-Specific Reports (CSRs) Prepared by the Scientific Registry of Transplant Recipients (SRTR)

Center: Mayo Clinic Hospital (AZMC)

Organ: LI: Liver

Overview:

These Program-Specific Reports contain a wide range of useful information about transplant programs operating in the United States. The information includes many features of the transplant program, such as the number of transplants performed in recent years, waiting time and waiting list outcomes, and post-transplant experience of patients served by this program. The statistics are arranged to allow comparisons to national averages, as well as to the experience for similar patients at other programs in the country. This report is based largely on data submitted by this transplant program for patients on the waiting list and those transplanted within the last five years.

Table 1 provides a picture of the volume and type of waiting list and transplant activity at this program. Mayo Clinic Hospital (AZMC) had 165 patients on its waiting list on 01/01/2008 and 191 patients on 12/31/2009. During these two years, 197 patients were added to the list and 171 patients were removed. Of the removals, 18 were for transplant from a living donor and 88 were for transplant from a deceased donor. Mayo Clinic Hospital (AZMC) performed 42 liver transplants (Table 7) during the last year (01/01/2009-12/31/2009). Typical liver programs currently operating in the United States transplanted between 17 and 66 people in that same period. More about the activity at this program and the types of patients served is found in the Table Details section below and in Tables 1 and 2 (waiting list) and Tables 7, 8, and 9 (transplant).

The likelihood of receiving a liver transplant differs from facility to facility and also from person to person depending upon the medical condition of the candidate. Overall, at Mayo Clinic Hospital (AZMC), 37.4 percent of patients placed on the waiting list had received a transplant by 6 months after listing, compared with 42.3 in the nation (Table 4). At 6 months, 5.1 percent had died (compared to 6.3 nationally) and 55.6 were still on the waiting list (43.5 nationally). These numbers are strongly influenced by the proportion of patients who are listed at a high medical urgency status. At this program, . of 99 of these patients were listed at Status 1.

Other measures of waiting list outcomes are discussed below and shown in Tables 3 - 6.

At Mayo Clinic Hospital (AZMC), 92.27 percent of adult patients were alive one year after transplant, compared to the 91.22 percent that would be expected based on the characteristics of these patients. However, the p-value of 0.695 indicates that the difference between these rates is not statistically significant. Similar comparisons may be made for shorter- (1 month) and longer-term (3 year) survival, also in Table 11, as well as for graft survival (Table 10). Further discussion of actual, expected, and national survival rates may be found in the Table Details section below.

The above results reflect survival for both deceased and living donor transplants combined. Of these 139 adult transplants performed by Mayo Clinic Hospital (AZMC), 114 were deceased donor transplants, and 90.52 percent of these recipients remained alive one year later. This program also performed 25 adult living donor transplants in this period with 100.00 percent of these recipients alive one year later.

Specific circumstances at each program may affect many of the measures reported in these reports. Frequently, staff from transplant programs make public comments regarding these reports, made available in the comments page. We encourage all readers of these reports to consider these comments and to contact the program directly for further information.

Table Details:

The above overview provides most readers with a quick look at some of the statistics that help describe a transplant program. The following section, for the more interested reader, provides a more detailed accounting of each table and how figures are defined and calculated.

Tables 1 through 6 focus on characteristics of the waiting list process at this program. Table 1 provides an overview of the waiting list activity at this program: not just the size of the waiting list at a given point in time, but also how many people have moved on to and off of this waiting list, and for what reasons. Shown as a percentage of the total waiting list size on 01/01/2009, the percent of people removed for a transplant from a deceased donor was 22.2%, (vs. 37.3% nationwide) and the percentage of people removed because of death was 3.9% (vs. 9.2% nationwide). Table 2 shows the characteristics of patients on the waiting list at Mayo Clinic Hospital (AZMC).

The waiting time at a given transplant program is affected by many factors, including the medical condition and characteristics of the patients listed with this program (Table 2), the availability of organs in the Donation Service Area served by the OPO, and decisions by medical professionals and other patients about organ acceptance. Some of the variability in waiting time may be accounted for by local availability of organs, in which case other programs in the Donation Service Area served by Donor Network of Arizona may have similar waiting times.

Tables 3 through 6 provide different measures of looking at waiting list outcomes. Table 3 shows a 'risk-adjusted' comparison of two outcomes from the waiting list: transplant rate and death rate. While the national average transplant rate (from deceased donors) is 0.38 transplants per patient year, the rate expected for this program is 0.33. The difference, or 'adjustment', between the national average and expected rate is caused by the fact that this program may treat patients who typically have longer (or shorter) waiting times, based on the characteristics of these patients. The patients on the waiting list at this program experienced a transplant rate of 0.21 per year spent on the waiting list for any person(s) on the waiting list. Compared to the expected rate of 0.33, the difference is unlikely to have occurred by random chance ($p < .01$) and probably represents a real difference from the expected rate.

These waiting list rates are measured as the number of transplants (or deaths) per year that any patient spends on the waiting list. It is possible for these rates to be above 1, as would be the case if 2 patients each spent 3 months on the waiting list, and one received a transplant: 1 transplant divided by .5 year = transplant rate of 2.

While Table 3 provides a waiting list outcome rate that allows easy comparison of risk-adjusted outcomes, statistics from tables 4 through 6 may be more interpretable at a patient level. Table 4 answers the questions: 'What has been the outcome for patients at this program 6 months after being placed on the waiting list? What about at 12 or 18 months?' The table also examines post-transplant outcomes: at 12 months, for example, the table tells if the patient is still on the waiting list, was transplanted and is still alive, or died after transplant. Outcomes from this table are described above in the 'Overview' section.

Table 5 provides another way to look at how quickly patients receive transplants at this program, this time looking at many different kinds of patients. At this program, 14.6 percent of patients placed on the liver waiting list had received transplants as of 30 days after being placed on the waiting list. Those not transplanted, the other 85.4 percent, were either still waiting or removed from the waiting list for reasons including death. At one year after placement on the waiting list, 43.8 percent of patients at this program had been transplanted; this figure was 47.7 for all the programs in the nation. The table also shows similar figures for subgroups of patients, such as by age, disease, or medical urgency, allowing the reader to see if specific groups of patients have experienced longer waiting times.

Table 6 shows the time it takes for a given percentage of patients at this facility to receive a transplant. This is the 'time-to-transplant' among all wait-listed patients, including those who never receive a transplant. Half of the patients placed on the waiting list at this program had received a transplant as of 12.5 months after listing; in the nation it took 10.9 months to reach the same fraction. The other half of the patients were either still waiting or removed from the waiting list, for reasons including death. (Another common statistic, 'median waiting time,' differs in that it is often calculated only among patients who actually received a transplant. The two are often correlated, but different in magnitude. While median waiting time reflects time waiting among successful candidates, time-to-transplant incorporates a measure of the probability of success in receiving an organ.)

The remainder of the tables, 7 through 11, focus on transplants performed at Mayo Clinic Hospital (AZMC) and their outcomes. Tables 7-9 describe the characteristics of transplant recipients, donors, and operations at this program. For example, of the 34 patients receiving deceased donor transplants at this program in the last year, 35.3 percent had organ failure caused by Malignant Neoplasms, compared to a national average of 17.2 percent.

Tables 10 and 11 show post-transplant outcomes. Table 10 shows the survival experience of grafts (transplants) in patients transplanted by this program. Table 11 shows the survival experience of these patients themselves. These may be different because a patient may continue survival after a graft fails through means such as a new transplant, or, for kidney patients, dialysis. For each outcome, these tables show an actual (observed) survival for the program, an actual (observed) survival for the nation, and an expected survival for the program. Each survival number measures the percentage of patients who have a functioning graft (Table 10) or who are alive (Table 11) at 1 month, 1 year, and 3 years after transplant.

The expected survival rate for a given program is the percentage of grafts functioning (or patients alive) that would be expected for the patients served by this program, given their characteristics (age, disease, blood type, etc.) and the experience of similar patients in the entire country. At this program, the expected one-year patient survival rate of 91.22 may be different from the national average of 88.79 if patients transplanted at this program have characteristics that would make us expect a different survival rate than the average.

At Mayo Clinic Hospital (AZMC), 92.27 percent of adult patients were alive one year after transplant, compared to the 91.22 percent that would be expected based on the characteristics of these patients. However, the p-value of 0.695 indicates that the difference between these rates is not statistically significant. Similar comparisons may be made for shorter- (1 month) and longer-term (3 year) survival, also in Table 11, as well as for graft survival (Table 10). Further discussion of actual, expected, and national survival rates may be found in the Table Details section below.

Table 1
Waitlist Activity Summary (see Tables 2-6 for details)
Date: 01/01/2008 - 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Waitlist Registrations	Counts for this center		Activity for 01/01/2009 to 12/31/2009 as percent of registrants on waitlist on 01/01/2009		
	01/01/2008-12/31/2008	01/01/2009-12/31/2009	This Center (%)	OPTN Region (%)	U.S. (%)
On waitlist at start	165	153	100.0	100.0	100.0
Additions					
New listings at this center	77	120	78.4	50.7	68.8
Removals					
Transferred to another center	2	4	2.6	1.6	1.3
Received living donor transplant*	10	8	5.2	0.9	1.3
Received deceased donor transplant*	54	34	22.2	20.9	37.3
Died	5	6	3.9	7.4	9.2
Transplanted at another center	0	3	2.0	0.7	1.6
Deteriorated	9	11	7.2	6.6	6.3
Recovered	0	6	3.9	3.0	4.3
Other Reasons	9	10	6.5	10.4	7.6
On waitlist at end of period	153	191	124.8	99.2	100.0

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

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

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 2
Characteristics of Waitlist Patients
Patients registered on the waitlist between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Characteristic of Waitlist Candidate	Percent of New Waitlist Registrations 01/01/2009 to 12/31/2009			Percent of All Waitlist Registrations on 12/31/2009		
	This Center (N=120)	OPTN Region (N=2,018)	U.S. (N=11,262)	This Center (N=191)	OPTN Region (N=3,950)	U.S. (N=16,365)
All (%)	100	100	100	100	100	100
Ethnicity/Race (%) *						
White	72.5	52.3	69.0	68.1	54.1	70.1
African-American	2.5	3.9	10.1	2.1	2.9	7.3
Hispanic/Latino	19.2	29.8	14.9	23.6	30.9	16.8
Asian	2.5	11.6	4.9	0.5	10.7	4.9
Other	3.3	2.4	1.2	5.2	1.3	1.0
Unknown	0.0	0.0	0.0	0.5	0.1	0.0
Age (%)						
<2 years	0.0	4.2	3.7	0.0	1.9	1.7
2-11 years	0.0	2.5	2.1	0.0	1.7	1.3
12-17 years	0.0	1.4	1.2	0.5	1.1	1.3
18-34 years	5.8	6.2	5.8	4.7	5.4	5.6
35-49 years	21.7	19.4	18.6	28.3	27.0	26.3
50-64 years	64.2	55.4	58.2	58.6	55.8	56.7
65+ years	8.3	11.0	10.4	7.9	7.1	7.1
Other (includes prenatal)	0.0	0.0	0.0	0.0	0.0	0.0
Gender (%)						
Male	66.7	61.1	63.4	58.1	60.0	60.4
Female	33.3	38.9	36.6	41.9	40.0	39.6
Blood Type (%)						
O	47.5	48.9	46.7	56.0	49.4	48.7
A	38.3	34.2	36.9	32.5	34.7	37.1
B	8.3	13.1	12.8	9.4	12.8	11.8
AB	5.8	3.8	3.6	2.1	3.2	2.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Previous Transplant (%)						
Yes	5.8	6.6	7.5	2.1	3.5	3.8
No	94.2	93.4	92.5	97.9	96.5	96.2
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Primary Disease (%)						
Acute Hepatic Necrosis	2.5	7.7	5.1	3.1	4.2	3.1
Non-Cholestatic Cirrhosis	68.3	66.4	63.1	74.3	74.5	71.5
Cholestatic Liver Disease/Cirrhosis	10.0	6.5	7.3	11.0	7.8	9.3
Biliary Atresia	0.0	2.9	2.4	0.5	1.8	1.6
Metabolic Diseases	0.8	2.1	2.4	1.0	1.2	1.6
Malignant Neoplasms	9.2	6.5	9.1	4.2	2.8	3.4
Other	9.2	7.8	10.7	5.8	7.0	9.2
Missing	0.0	0.0	0.0	0.0	0.7	0.2
Medical Urgency Status/MELD/PELD at Listing (%) *						
Status 1A	1.7	5.4	4.7	0.5	0.4	0.3
Status 1B	0.0	0.1	0.1	0.0	0.0	0.0
Status 2A	0.0	0.0	0.0	0.0	0.0	0.0
Status 2B	0.0	0.0	0.0	0.0	0.4	0.7
Status 3	0.0	0.0	0.0	2.6	8.8	7.8
MELD 6-10	31.7	22.0	19.1	40.3	30.9	30.8
MELD 11-14	28.3	20.3	22.1	28.8	28.2	31.3
MELD 15-20	20.8	17.6	23.5	19.9	15.9	18.4
MELD 21-30	8.3	12.5	15.0	3.1	4.3	4.4
MELD 31-40	5.8	9.7	7.8	0.5	0.5	0.5
PELD less than or equal 10	0.0	2.6	2.2	0.0	1.5	1.4
PELD 11-14	0.0	0.8	0.5	0.0	0.5	0.3
PELD 15-20	0.0	1.0	0.8	0.0	0.2	0.2
PELD 21-30	0.0	0.6	0.8	0.0	0.1	0.2
PELD 31 or greater	0.0	0.2	0.3	0.0	0.1	0.0
Temporarily Inactive	3.3	7.1	3.0	4.2	7.7	3.3

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA). Percents add to 100% for each Categorization. N=number.

* 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 percent.

* 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.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 3
Transplant and Mortality Rates For Patients After Being Placed on the Waitlist
Patients on the waitlist between 01/01/2008 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Waitlist Registrations	This Center		Geographic Summaries, 01/01/2009-12/31/2009		
	01/01/2008- 12/31/2008	01/01/2009- 12/31/2009	OPO/DSA	Region	U.S.
Sample					
Count on waitlist at start *	165	153	372	3,977	16,338
Transplant Rate					
Person Years **	152.2	160.1	385.9	3,887.6	15,880.8
Living and Deceased Donors					
Removals for transplant	64	42	115	865	6,319
Transplant rate (per year on waitlist)	0.42	0.26	0.30	0.22	0.40
Expected Transplant Rate ***	0.26	0.34	0.46	0.38	0.40
Ratio of Observed to Expected Transplants	1.60	0.77	0.65	0.58	1.00
95% Confidence Interval: Lower Bound [†]	1.23	0.56	NA	NA	NA
Upper Bound [†]	2.04	1.04	NA	NA	NA
p-value (2-sided) ^{††}	<0.01	0.095	NA	NA	NA
How do the rates at this center compare to those in the nation?	Statistically Higher (b)	Not Significantly Different (a)	NA	NA	NA
Deceased Donors Only					
Removals for transplant	54	34	102	830	6,101
Transplant rate (per year on waitlist)	0.35	0.21	0.26	0.21	0.38
Expected Transplant Rate ***	0.25	0.33	0.44	0.37	0.38
Ratio of Observed to Expected Transplants	1.39	0.65	0.60	0.58	1.00
95% Confidence Interval: Lower Bound [†]	1.05	0.45	NA	NA	NA
Upper Bound [†]	1.82	0.90	NA	NA	NA
p-value (2-sided) ^{††}	0.023	<0.01	NA	NA	NA
How do the rates at this center compare to those in the nation?	Statistically Higher (b)	Statistically Lower (b)	NA	NA	NA
Mortality rate after being placed on waitlist					
Person Years ****	159.1	168.9	407.6	4,104.2	16,673.2
Number of deaths	12	15	47	517	2,372
Death rate (per year on waitlist)	0.08	0.09	0.12	0.13	0.14
Expected Death Rate *****	0.12	0.13	0.14	0.15	0.14
Ratio of Observed to Expected Deaths	0.64	0.68	0.81	0.87	1.00
95% Confidence Interval: Lower Bound [†]	0.33	0.38	NA	NA	NA
Upper Bound [†]	1.12	1.13	NA	NA	NA
p-value (2-sided) ^{††}	0.141	0.158	NA	NA	NA
How do the rates at this center compare to those in the nation?	Not Significantly Different (a)	Not Significantly Different (a)	NA	NA	NA

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA). NA=Not Applicable.

[†] The 95% confidence interval gives a range of values for the true ratio of events (transplants or deaths) at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

^{††} A p-value gives the probability that a difference between observed and expected is due to random chance. A p-value of <.05 is usually considered statistically significant.

(a) This difference could plausibly be just a chance occurrence.

(b) This difference is unlikely due to random chance and probably represents a real difference from the expected rate.

* Counts in this table may be lower than similar counts in other waiting list tables, such as Table 1. 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 calculations for this table.

** Person years are calculated as days (converted to fractional years). The number of days from January 1 or from the date of first wait listing until death, transplant, removal from the waiting list or December 31.

*** The expected transplant rate is adjusted for age, blood type, medical urgency status, time on the waiting list, and previous transplantation.

**** Person years are calculated as days (converted to fractional years). The number of days from January 1 or from the date of first wait listing until death, transplant, 60 days after recovery, transfer or December 31.

***** The expected mortality rate is adjusted for age, race, ethnicity, gender, primary diagnosis, blood type, time on the waiting list, and medical urgency status.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 3A

Organ Acceptance Rates Among Organs Actually Accepted and Transplanted

Within The First 50 Candidates or 3 Centers

Organs offered between 01/01/2009 and 12/31/2009

Center: Mayo Clinic Hospital (AZMC)

Organ: LI: Liver

The implementation of DonorNet2007 has changed the nature of the underlying data and is likely to result in marked changes in the calculation of these statistics moving forward. Both the OPTN and the SRTR are working to analyze this new stream of data to determine which statistics are most appropriate and how to best derive them. Until the OPTN and SRTR are able to complete further examination of these new data, the SRTR will not be publishing organ acceptance rate statistics in the Program-Specific Reports. Once we are confident that we have addressed the impact of the changes in data collection, we will move forward with making these statistics available once again.

Table 4
Waitlist Activity and Patient Vital Status at 6, 12, and 18 Months Since Waitlisting
Patients placed on waitlist between 07/01/2007 and 06/30/2008
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Waitlist status (survival status)	This Center (N=99)			United States (N=11,204)		
	Months Since Waitlisting [†]			Months Since Waitlisting [†]		
	6	12	18	6	12	18
Alive on waitlist (%)	55.6	44.4	42.4	43.5	32.1	25.5
Died on the waitlist without transplant (%)	5.1	6.1	6.1	6.3	7.9	9.0
Removed without transplant: (%)						
Condition worsened (status unknown)	2.0	3.0	4.0	4.3	5.5	6.2
Condition improved (status unknown)	0.0	0.0	0.0	1.4	1.7	2.2
Refused transplant (status unknown)	0.0	0.0	0.0	0.2	0.2	0.3
Other	0.0	2.0	2.0	1.7	2.5	3.2
Transplant (living donor from waitlist only): (%)						
Functioning (alive)	4.0	4.0	2.0	1.4	1.6	1.0
Failed-Retransplanted (alive)	0.0	1.0	1.0	0.1	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	0.1	0.1	0.2
Status Yet Unknown *	0.0	0.0	2.0	0.0	0.1	0.7
Transplant (deceased donor): (%)						
Functioning (alive)	33.3	37.4	28.3	35.3	37.1	27.2
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.7	1.0	1.2
Failed-alive not retransplanted	0.0	0.0	0.0	0.1	0.0	0.0
Died	0.0	2.0	3.0	2.9	4.8	6.2
Status Yet Unknown *	0.0	0.0	9.1	1.7	4.4	16.0
Lost or Transferred (status unknown) (%)	0.0	0.0	0.0	0.4	0.7	0.9
TOTAL (%)	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waitlist or after transplant	5.1	8.1	9.1	9.3	12.8	15.4
Total % known died or removed as unstable	7.1	11.1	13.1	13.6	18.4	21.6
Total % removed for transplant	37.4	44.4	45.5	42.3	49.2	52.7
Total % with known functioning transplant (alive)	37.4	41.4	30.3	36.7	38.7	28.2

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

†Percents for top section add to 100% for each column. N=number.

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

NOTE: All patients (100%) are alive on the waitlist at month 0 since waitlisting and move to other categories as time progresses.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 5
Percent Transplanted for Waitlist Patients (excludes recipients of transplants from living donors *)
Patients placed on waitlist at this center between 01/01/2004 and 12/31/2006
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Characteristic	Percent transplanted at time periods since waitlisting									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
All	281	14.6	43.8	45.9	50.2	32,127	21.7	47.7	52.1	53.9
Ethnicity/Race *										
White	199	16.6	43.2	45.2	48.7	22,764	21.5	47.6	52.1	54.1
African-American	7	14.3	42.9	42.9	42.9	2,978	27.3	54.8	58.7	60.1
Hispanic/Latino	61	11.5	42.6	44.3	50.8	4,635	19.0	42.9	47.2	49.1
Asian	6	0.0	50.0	66.7	83.3	1,448	21.5	49.3	53.0	54.6
Other	8	0.0	62.5	62.5	62.5	302	24.2	49.0	54.0	55.3
Unknown	0	-	-	-	-	0	-	-	-	-
Age										
<2 years	0	-	-	-	-	1,229	21.3	56.3	60.2	60.5
2-11 years	0	-	-	-	-	678	30.4	65.3	68.7	69.5
12-17 years	0	-	-	-	-	500	26.2	53.8	58.2	60.0
18-34 years	6	33.3	50.0	50.0	50.0	1,907	30.1	50.7	53.6	54.6
35-49 years	77	11.7	36.4	41.6	45.5	8,087	22.5	46.2	50.8	52.8
50-64 years	166	15.7	48.8	50.0	53.6	16,857	19.8	46.1	51.0	53.2
65+ years	32	12.5	34.4	34.4	43.8	2,869	22.7	49.7	52.6	53.5
Other (includes prenatal)	0	-	-	-	-	0	-	-	-	-
Gender										
Male	180	15.6	48.3	50.6	54.4	20,583	22.5	49.6	54.2	56.1
Female	101	12.9	35.6	37.6	42.6	11,544	20.4	44.2	48.3	50.1
Blood Type										
O	135	17.0	44.4	45.2	48.1	14,896	20.3	44.8	49.3	51.1
A	111	13.5	40.5	44.1	46.8	12,049	21.3	47.9	52.4	54.2
B	21	9.5	47.6	52.4	66.7	3,908	23.5	51.9	56.3	58.1
AB	14	7.1	57.1	57.1	71.4	1,274	36.9	65.3	69.5	70.9
Previous Transplant										
Yes	21	38.1	52.4	52.4	52.4	2,857	34.4	54.4	56.8	57.6
No	260	12.7	43.1	45.4	50.0	29,270	20.5	47.0	51.6	53.6
Medical Urgency Status at Listing										
Status 1	4	75.0	75.0	75.0	75.0	2,143	55.7	57.7	57.8	57.8
Status 1A	0	-	-	-	-	0	-	-	-	-
Status 1B	0	-	-	-	-	0	-	-	-	-
Status 2A	0	-	-	-	-	0	-	-	-	-
Status 2B	0	-	-	-	-	0	-	-	-	-
Status 3	0	-	-	-	-	1	0.0	0.0	0.0	0.0
MELD 6-10	55	5.5	29.1	30.9	38.2	5,955	9.7	33.0	37.3	40.0
MELD 11-14	70	2.9	30.0	32.9	42.9	7,464	7.7	32.9	40.2	43.9
MELD 15-20	73	11.0	52.1	54.8	56.2	7,533	15.0	52.3	58.2	59.9
MELD 21-30	45	31.1	57.8	57.8	57.8	4,520	41.0	68.7	70.2	70.5
MELD 31-40	15	66.7	86.7	86.7	86.7	2,151	59.3	65.7	65.8	65.8
PELD less than or equal 10	0	-	-	-	-	698	13.9	59.9	67.3	68.6
PELD 11-14	0	-	-	-	-	176	12.5	61.9	66.5	67.0
PELD 15-20	0	-	-	-	-	298	12.1	65.1	67.8	67.8
PELD 21-30	0	-	-	-	-	255	24.3	60.8	63.1	63.1
PELD 31 or greater	0	-	-	-	-	93	45.2	58.1	60.2	60.2
Temporarily Inactive	19	5.3	31.6	36.8	36.8	840	13.1	31.4	35.2	36.4
Primary Disease										
Acute Hepatic Necrosis	2	0.0	50.0	50.0	50.0	2,070	38.9	50.1	51.7	52.7
Non-Cholestatic Cirrhosis	212	12.7	42.0	44.3	50.0	20,336	18.8	44.2	49.1	51.2
Cholestatic Liver Disease/Cirrhosis	24	8.3	20.8	20.8	20.8	2,509	16.2	46.0	52.0	55.3
Biliary Atresia	0	-	-	-	-	672	16.5	61.9	66.4	67.3
Metabolic Diseases	6	16.7	50.0	66.7	66.7	766	29.6	61.2	66.3	67.8
Malignant Neoplasms	22	27.3	72.7	72.7	72.7	1,575	31.0	73.7	76.5	77.1
Other	15	33.3	60.0	60.0	60.0	4,197	26.4	49.8	52.8	53.8
Missing	0	-	-	-	-	2	0.0	0.0	0.0	0.0

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

* Patients removed from waitlist with removal code indicating transplant from a living donor were excluded from this analysis.

Note: Population totals equal for each characteristic.

* 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 percent.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 6
Time to Transplant for Waitlist Patients**
Patients registered on the waitlist between 01/01/2004 and 06/30/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Percentile	Months to Transplant*			
	Center	OPO/DSA	Region	U.S.
5th	0.2	0.2	0.2	0.1
10th	0.5	0.5	0.4	0.3
25th	2.8	3.7	4.1	1.3
50th (median time to transplant)	12.5	39.4	>72	10.9
75th	>72	>72	>72	>72

* Censored on 12/31/2009; Calculated as the months after waitlisting, during which the corresponding percent of all patients initially waitlisted had received a transplant.

** If cells contain ">72" fewer than that percentile of patients had received a transplant.

Note: Includes deceased and living donor transplants at any center.

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 7
Transplant Recipient Characteristics, Deceased Donor Transplants
Patients transplanted between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Characteristic	Percentage in each category		
	Center (N=34)	Region (N=830)	U.S. (N=6,101)
Ethnicity/Race (%) *			
White	55.9	50.1	69.2
African-American	2.9	5.1	10.9
Hispanic/Latino	29.4	28.3	13.6
Asian	8.8	14.1	5.2
Other	2.9	2.4	1.0
Unknown	0.0	0.0	0.0
Age (%)			
<2 years	0.0	5.1	4.1
2-11 years	0.0	3.9	3.2
12-17 years	0.0	1.6	1.2
18-34 years	0.0	5.8	5.3
35-49 years	23.5	17.8	17.5
50-64 years	67.6	53.3	57.5
65+ years	8.8	12.7	11.1
Unknown	0.0	0.0	0.0
Gender (%)			
Male	73.5	66.6	66.2
Female	26.5	33.4	33.8
Blood Type (%)			
O	50.0	47.7	45.5
A	41.2	34.1	36.3
B	5.9	12.9	13.5
AB	2.9	5.3	4.6
Previous Transplant (%)			
Yes	8.8	8.6	8.2
No	91.2	91.4	91.8
Body Mass Index (%)			
0-20	8.8	18.2	14.9
21-25	29.4	28.9	26.4
26-30	32.4	28.9	29.8
31+	29.4	20.5	25.2
Unknown	0.0	3.5	3.7
Primary Disease (%)			
Acute Hepatic Necrosis	0.0	9.2	4.8
Non-Cholestatic Cirrhosis	52.9	52.0	58.1
Cholestatic Liver Disease/Cirrhosis	5.9	6.0	7.2
Biliary Atresia	0.0	4.3	3.3
Metabolic Diseases	0.0	3.0	3.4
Malignant Neoplasms	35.3	20.4	17.2
Other	5.9	5.1	6.0
Missing	0.0	0.0	0.0
Medical Urgency Status/MELD/PELD at Transplant (%) *			
Status 1A	0.0	7.2	5.4
Status 1B	0.0	1.0	0.9
MELD 6-10	8.8	11.9	12.5
MELD 11-14	14.7	10.6	12.1
MELD 15-20	20.6	11.7	21.0
MELD 21-30	29.4	19.0	25.1
MELD 31-40	26.5	31.2	17.2
PELD less than or equal 10	0.0	2.8	2.6
PELD 11-14	0.0	1.3	0.8
PELD 15-20	0.0	1.2	0.8
PELD 21-30	0.0	1.4	1.0
PELD 31 or greater	0.0	0.6	0.4
Temporarily Inactive	0.0	0.0	0.0
Recipient Medical Condition at Transplant (%)			
Not Hospitalized	82.4	50.0	68.4
Hospitalized	14.7	28.3	18.6
ICU	2.9	21.7	12.7
Unknown	0.0	0.0	0.3

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

* 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 percent.

* 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.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 7
Transplant Recipient Characteristics, Living Donor Transplants
Patients transplanted between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Characteristic	Percentage in each category		
	Center (N=8)	Region (N=36)	U.S. (N=219)
Ethnicity/Race (%) *			
White	87.5	69.4	84.9
African-American	0.0	0.0	5.5
Hispanic/Latino	12.5	19.4	7.3
Asian	0.0	5.6	1.4
Other	0.0	5.6	0.9
Unknown	0.0	0.0	0.0
Age (%)			
<2 years	0.0	22.2	15.5
2-11 years	0.0	11.1	6.4
12-17 years	0.0	2.8	1.4
18-34 years	25.0	25.0	11.9
35-49 years	0.0	2.8	11.4
50-64 years	75.0	36.1	43.8
65+ years	0.0	0.0	9.6
Unknown	0.0	0.0	0.0
Gender (%)			
Male	62.5	55.6	55.3
Female	37.5	44.4	44.7
Blood Type (%)			
O	25.0	36.1	44.7
A	75.0	50.0	42.5
B	0.0	13.9	12.3
AB	0.0	0.0	0.5
Previous Transplant (%)			
Yes	0.0	2.8	3.7
No	100.0	97.2	96.3
Body Mass Index (%)			
0-20	12.5	38.9	30.1
21-25	37.5	30.6	30.1
26-30	25.0	22.2	25.1
31+	25.0	5.6	12.8
Unknown	0.0	2.8	1.8
Primary Disease (%)			
Acute Hepatic Necrosis	0.0	8.3	3.7
Non-Cholestatic Cirrhosis	75.0	33.3	45.7
Cholestatic Liver Disease/Cirrhosis	12.5	13.9	18.3
Biliary Atresia	0.0	19.4	13.2
Metabolic Diseases	0.0	5.6	3.7
Malignant Neoplasms	12.5	13.9	8.7
Other	0.0	5.6	6.8
Missing	0.0	0.0	0.0
Medical Urgency Status/MELD/PELD at Transplant (%) *			
Status 1A	0.0	8.3	5.0
Status 1B	0.0	2.8	1.4
MELD 6-10	0.0	13.9	14.6
MELD 11-14	37.5	19.4	18.3
MELD 15-20	12.5	16.7	28.8
MELD 21-30	50.0	16.7	15.1
MELD 31-40	0.0	0.0	0.0
PELD less than or equal 10	0.0	8.3	5.5
PELD 11-14	0.0	0.0	0.5
PELD 15-20	0.0	5.6	2.3
PELD 21-30	0.0	5.6	5.0
PELD 31 or greater	0.0	0.0	3.2
Temporarily Inactive	0.0	2.8	0.5
Recipient Medical Condition at Transplant (%)			
Not Hospitalized	87.5	75.0	80.8
Hospitalized	12.5	13.9	10.5
ICU	0.0	11.1	8.7
Unknown	0.0	0.0	0.0

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

* 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 percent.

* 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.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 8
Donor Characteristics, Deceased Donor Transplants
Transplants performed between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Donor Characteristic	Percentage in each category		
	Center 100% (N=34)	Region 100% (N=830)	U.S. 100% (N=6,101)
Cause of Death (%)			
Deceased: Stroke	26.5	36.3	42.5
Deceased: MVA	8.8	16.0	15.3
Deceased: Other	64.7	47.7	42.2
Ethnicity/Race (%) *			
White	58.8	53.3	65.0
African-American	17.6	8.9	18.1
Hispanic/Latino	23.5	31.0	13.7
Asian	0.0	6.3	2.6
Other	0.0	0.6	0.5
Not Reported	0.0	0.0	0.0
Age (%)			
<2 years	0.0	3.4	2.6
2-11 years	0.0	4.9	3.9
12-17 years	2.9	6.5	6.7
18-34 years	47.1	32.0	28.3
35-49 years	29.4	27.0	25.5
50-64 years	17.6	22.0	24.9
65+ years	2.9	4.1	8.2
Unknown	0.0	0.0	0.0
Gender (%)			
Male	55.9	62.3	59.8
Female	44.1	37.7	40.2
Blood Type (%)			
O	50.0	52.4	48.9
A	41.2	34.5	36.8
B	5.9	10.4	11.7
AB	2.9	2.8	2.6
Unknown	0.0	0.0	0.0

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

* 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 percent.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 8
Donor Characteristics, Living Donor Transplants
Transplants performed between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

Donor Characteristic	Percentage in each category		
	Center 100% (N=8)	Region 100% (N=36)	U.S. 100% (N=219)
Ethnicity/Race (%)⁺			
White	87.5	69.4	87.7
African-American	0.0	5.6	5.0
Hispanic/Latino	12.5	13.9	5.0
Asian	0.0	8.3	1.4
Other	0.0	2.8	0.9
Not Reported	0.0	0.0	0.0
Age (%)			
0-11 years	0.0	0.0	0.0
12-17 years	0.0	0.0	0.0
18-34 years	75.0	50.0	40.6
35-49 years	25.0	41.7	41.6
50-64 years	0.0	8.3	17.4
65+ years	0.0	0.0	0.0
Unknown	0.0	0.0	0.5
Gender (%)			
Male	25.0	27.8	45.7
Female	75.0	72.2	54.3
Blood Type (%)			
O	25.0	50.0	63.5
A	75.0	44.4	28.3
B	0.0	5.6	8.2
AB	0.0	0.0	0.0
Unknown	0.0	0.0	0.0

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

⁺ 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 percent.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 9
Transplant Operation Characteristics, Deceased Donor Transplants
Transplants performed between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

	Percentage in each category (except where noted)		
	Center 100% (N=34)	Region 100% (N=830)	U.S. 100% (N=6,101)
Cold Ischemic Time (Hours): Local (%)			
Deceased: 0-5 hr	54.2	37.2	39.8
Deceased: 6-10 hr	45.8	48.6	48.5
Deceased: 11-15 hr	0.0	5.9	4.4
Deceased: 16-20 hr	0.0	1.3	0.4
Deceased: 21+ hr	0.0	0.2	0.7
Not Reported	0.0	6.8	6.3
Cold Ischemic Time (Hours): Shared (%)			
Deceased: 0-5 hr	20.0	16.1	18.0
Deceased: 6-10 hr	70.0	63.7	64.1
Deceased: 11-15 hr	10.0	10.8	9.1
Deceased: 16-20 hr	0.0	1.8	0.8
Deceased: 21+ hr	0.0	1.3	1.0
Not Reported	0.0	6.3	7.0
Procedure Type (%)			
ORGAN Alone	100.0	90.8	92.2
ORGAN and OTHER ORGAN	0.0	9.2	7.8
Sharing (%)			
Local	70.6	73.1	70.3
Shared	29.4	26.9	29.7
Median Time in Hospital After Transplant *	7.0 Days	11.0 Days	10.0 Days

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

* Multiple organ transplants are excluded from this statistic.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 9
Transplant Operation Characteristics, Living Donor Transplants
Transplants performed between 01/01/2009 and 12/31/2009
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver

	Percentage in each category (except where noted)		
	Center 100% (N=8)	Region 100% (N=36)	U.S. 100% (N=219)
Relation with Donor (%)			
Related	75.0	72.2	65.3
Unrelated	25.0	19.4	28.8
Not Reported	0.0	8.3	5.9
Procedure Type (%)			
ORGAN Alone	100.0	100.0	100.0
ORGAN and OTHER ORGAN	0.0	0.0	0.0
Median Time in Hospital After Transplant *	6.5 Days	10.0 Days	10.0 Days

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

Note: Percentages add to 100% for each characteristic. N=Number.

* Multiple organ transplants are excluded from this statistic.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 10
Graft Survival by Age at Transplant and by Time since Transplant
For Patients Transplanted between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between 07/01/2004 and 12/31/2006 for the 3 Year Model
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver (Single-Organ Transplants Only)
Note: Deaths and retransplants are counted as graft failures

	Graft Survival by Time since Transplant					
	This Center			United States		
	1 Month	1 Year	3 Years	1 Month	1 Year	3 Years
Adult (Age ≥ 18)						
Transplants (n=number) ¹	143	143	131	13,325	13,325	13,798
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	97.90	90.39	79.39	94.88	85.31	73.31
Expected, based on national experience ³	96.31	88.79	77.13			
Graft Failures During Follow-up Period						
Observed at this center	3	13	27	682	1,855	3,682
Expected, based on national experience ⁴	5.31	15.99	30.02	682	1,855	3,682
Ratio: Observed to Expected (O/E)	0.57	0.81	0.90	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.12-1.65)	(0.43-1.39)	(0.59-1.31)			
P-value (2-sided), observed v. expected ⁶	0.449	0.551	0.664			
How does this center's survival compare to what is expected for similar patients?	Not Significantly Different (a)	Not Significantly Different (a)	Not Significantly Different (a)			
Follow-up days reported by center (%) ⁷	100.0	98.8	96.5	99.7	97.1	96.0
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	1	1,251	1,251	1,231
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	-	-	100.00	92.41	87.83	80.18
Expected, based on national experience ³	-	-	84.91			
Graft Failures During Follow-up Period						
Observed at this center	-	-	0	95	149	244
Expected, based on national experience ⁴	-	-	0.16	95	149	244
Ratio: Observed to Expected (O/E)	-	-	0.00	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(--)	(--)	(0.00-22.54)			
P-value (2-sided), observed v. expected ⁶	-	-	0.999			
How does this center's survival compare to what is expected for similar patients?	-	-	Not Significantly Different (a)			
Follow-up days reported by center (%) ⁷	-	-	100.0	100.0	97.3	96.8
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Transplant Time Period	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
 NA=Not Applicable.

¹ Transplants of this organ during the time period indicated in the last row of the table.

² Observed graft survival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. This statistic represents graft failure rates among patients still being followed by the facility. If the followup percent is low, this statistic may not be representative of outcomes for all patients at this facility. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

³ The graft survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

⁴ The number of graft failures that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of graft failures reflects the expected number of graft failures only during the time the patient is alive with a functioning graft and actually followed; therefore, it accounts for differences in the time that elapses from transplant until graft failure.

⁵ The 95% confidence interval gives a range of values for the true ratio of failures at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

⁶ A p-value less than or equal to 0.05 indicates that the difference between the actual and expected graft survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

⁷ Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting by this center for these transplants. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.

Table 10
Graft Survival by Donor Type by Age at Transplant and by Time since Transplant
For Patients Transplanted between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between 07/01/2004 and 12/31/2006 for the 3 Year Model
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver (Single-Organ Transplants Only)
Note: Deaths and retransplants are counted as graft failures

	Graft Survival by Time since Transplant					
	This Center			United States		
	1 Month	1 Year	3 Years	1 Month	1 Year	3 Years
Deceased Donor						
Adult (Age ≥ 18)						
Transplants (n=number) ¹	118	118	102	12,912	12,912	13,187
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	97.46	89.16	79.41	94.83	85.25	73.09
Expected, based on national experience ³	96.06	88.45	76.66			
Graft Failures During Follow-up Period						
Observed at this center	3	12	21	668	1,804	3,548
Expected, based on national experience ⁴	4.68	13.49	24.28	668	1,804	3,548
Ratio: Observed to Expected (O/E)	0.64	0.89	0.87	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.13-1.87)	(0.46-1.55)	(0.54-1.32)			
P-value (2-sided), observed v. expected ⁶	0.628	0.821	0.591			
How does this center's survival compare to what is expected for similar patients? ⁷	Not Significantly Different (a)	Not Significantly Different (a)	Not Significantly Different (a)			
Follow-up days reported by center (%) ⁷	100.0	99.0	96.0	99.7	97.1	95.9
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	-	1,094	1,094	1,099
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	-	-	-	92.05	87.55	79.62
Expected, based on national experience ³	-	-	-			
Graft Failures During Follow-up Period						
Observed at this center	-	-	-	87	133	224
Expected, based on national experience ⁴	-	-	-	87	133	224
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(--)	(--)	(--)			
P-value (2-sided), observed v. expected ⁶	-	-	-			
How does this center's survival compare to what is expected for similar patients? ⁷	-	-	-			
Follow-up days reported by center (%) ⁷	-	-	-	100.0	97.2	96.8
Maximum Days of Follow-up (n)	-	-	-	30	365	1,095
Living Donor						
Adult (Age ≥ 18)						
Transplants (n) ¹	25	25	29	413	413	611
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	100.00	96.00	79.31	96.61	87.27	78.07
Expected, based on national experience ³	97.52	90.38	78.78			
Graft Failures During Follow-up Period						
Observed at this center	0	1	6	14	51	134
Expected, based on national experience ⁴	0.63	2.50	5.75	14	51	134
Ratio: Observed to Expected (O/E)	0.00	0.40	1.04	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.00-5.86)	(0.01-2.23)	(0.38-2.27)			
P-value (2-sided), observed v. expected ⁶	0.999	0.576	0.999			
How does this center's survival compare to what is expected for similar patients? ⁷	Not Significantly Different (a)	Not Significantly Different (a)	Not Significantly Different (a)			
Follow-up days reported by center (%) ⁷	100.0	97.6	98.6	99.8	98.0	97.8
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	1	157	157	132
Percent (%) of Grafts Surviving at End of Period						
Observed at this Center ²	-	-	100.00	94.90	89.70	84.85
Expected, based on national experience ³	-	-				
Graft Failures During Follow-up Period						
Observed at this center	-	-	0	8	16	20
Expected, based on national experience ⁴	-	-	-	-	-	-
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(--)	(--)	(--)			
P-value (2-sided), observed v. expected ⁶	-	-	-			
How does this center's survival compare to what is expected for similar patients? ⁷	-	-	-			
Follow-up days reported by center (%) ⁷	-	-	100.0	100.0	97.8	96.9
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Transplant Time Period	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
 NA=Not Applicable.

¹ Transplants during the time period indicated in the last row of the table.

² Observed graft survival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. This statistic represents graft failure rates among patients still being followed by the facility. If the follow-up percent is low, this statistic may not be representative of outcomes for all patients at this facility. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

³ The graft survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

⁴ The number of graft failures that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of graft failures reflects the expected number of graft failures only during the time the patient is alive with a functioning graft and actually followed; therefore, it accounts for differences in the time that elapses from transplant until graft failure.

⁵ The 95% confidence interval gives a range of values for the true ratio of failures at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

⁶ A p-value less than or equal to 0.05 indicates that the difference between the actual and expected graft survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

⁷ Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting by this center for these transplants. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Table 11
Patient Survival by Age and by Time since First Transplant of This Organ Type
For Patients Receiving their First Transplant of this type between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between
07/01/2004 and 12/31/2006 for the 3 Year Model
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver (Single-Organ Transplants Only; Re-transplants excluded)

	Patient Survival by Time since First Transplant					
	This Center			United States		
	1 Month	1 Year	3 Years	1 Month	1 Year	3 Years
Adult (Age 18+)						
Transplants (n=number) ¹	139	139	123	12,421	12,421	12,709
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	98.56	92.27	82.11	96.96	88.79	78.55
Expected, based on national experience ³	97.81	91.22	81.07			
Deaths During Follow-up Period						
Observed at this center	2	10	22	377	1,305	2,726
Expected, based on national experience ⁴	3.03	12.00	23.13	377	1,305	2,726
Ratio: Observed to Expected (O/E)	0.66	0.83	0.95	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.08-2.38)	(0.40-1.53)	(0.60-1.44)			
P-value (2-sided), observed v. expected ⁶	0.832	0.695	0.924			
How does this center's survival compare to what is expected for similar patients?	Not Significantly Different (a)	Not Significantly Different (a)	Not Significantly Different (a)			
Percent retransplanted	0.7	1.4	4.1	1.8	3.5	6.1
Follow-up days reported by center (%) ⁷	99.8	97.9	93.1	99.0	95.3	92.6
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	1	1,125	1,125	1,092
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	-	-	100.00	96.62	93.28	87.91
Expected, based on national experience ³	-	-	91.09			
Deaths During Follow-up Period						
Observed at this center	-	-	0	38	73	132
Expected, based on national experience ⁴	-	-	0.09	38	73	132
Ratio: Observed to Expected (O/E)	-	-	0.00	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(---)	(---)	(0.00-39.54)			
P-value (2-sided), observed v. expected ⁶	-	-	0.999			
How does this center's survival compare to what is expected for similar patients?	-	-	Not Significantly Different (a)			
Percent retransplanted	-	-	0.0	3.7	5.1	8.1
Follow-up days reported by center (%) ⁷	-	-	100.0	98.1	93.5	92.1
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Transplant Time Period	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006	01/01/2007-06/30/2009	01/01/2007-06/30/2009	07/01/2004-12/31/2006

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).
 NA=Not Applicable.

¹ Transplants during the time period indicated in the last row of the table.

² Observed survival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

³ The survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

⁴ The number of deaths that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of deaths reflects the expected number of deaths only during the time the patient is alive and actually followed; therefore, it accounts for differences in the time that elapses from transplant until death.

⁵ The 95% confidence interval gives a range of values for the true ratio of deaths at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

⁶ A p-value less than or equal to 0.05 indicates that the difference between the actual and expected patient survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

⁷ Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting at this center for these transplants. Additional follow-up days included in survival may be covered by SSDMF data. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.

Table 11
Patient Survival by Donor Type by Age and by Time since First Transplant of This Organ Type
For Patients Receiving their First Transplant of this type between 01/01/2007 and 06/30/2009 for the 1 Month and 1 Year Models; between 07/01/2004 and 12/31/2006 for the 3 Year Model
Center: Mayo Clinic Hospital (AZMC)
Organ: LI: Liver (Single-Organ Transplants Only; Re-transplants excluded)

	Patient Survival by Time since First Transplant			United States		
	1 Month	This Center 1 Year	3 Years	1 Month	1 Year	3 Years
Deceased Donor						
Adult (Age ≥ 18)						
Transplants (number) ¹	114	114	94	12,016	12,016	12,105
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	98.25	90.52	80.85	96.91	88.73	78.31
Expected, based on national experience ³	97.57	90.88	80.12			
Deaths During Follow-up Period						
Observed at this center	2	10	18	371	1,289	2,625
Expected, based on national experience ⁴	2.76	10.11	18.70	371	1,289	2,625
Ratio: Observed to Expected (O/E)	0.72	0.99	0.96	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.59-2.62)	(0.47-1.82)	(0.57-1.52)			
P-value (2-sided), observed v. expected ⁶	0.957	0.999	0.993			
How does this center's survival compare to what is expected for similar patients?						
	Different (a)	Different (a)	Different (a)			
Percent retransplanted	0.9	0.9	3.2	1.8	3.5	6.0
Follow-up days reported by center (%) ⁷	99.6	98.6	93.7	99.1	95.3	92.6
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	-	975	975	969
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	-	-	-	96.62	93.19	87.51
Expected, based on national experience ³	-	-	-			
Deaths During Follow-up Period						
Observed at this center	-	-	-	33	64	121
Expected, based on national experience ⁴	-	-	-	33	64	121
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(-)	(-)	(-)			
P-value (2-sided), observed v. expected ⁶	-	-	-			
How does this center's survival compare to what is expected for similar patients?						
	Different (a)	Different (a)	Different (a)			
Percent retransplanted	-	-	-	4.0	5.1	8.5
Follow-up days reported by center (%) ⁷	-	-	-	97.9	93.4	91.8
Maximum Days of Follow-up (n)	-	-	-	30	365	1,095
Living Donor						
Adult (Age ≥ 18)						
Transplants (n) ¹	25	25	29	405	405	604
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	100.00	100.00	86.21	98.52	90.70	83.28
Expected, based on national experience ³	98.92	92.76	84.16			
Deaths During Follow-up Period						
Observed at this center	0	0	4	6	36	101
Expected, based on national experience ⁴	0.27	1.89	4.42	6	36	101
Ratio: Observed to Expected (O/E)	0.00	0.00	0.90	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(0.00-13.63)	(0.00-1.96)	(0.25-2.32)			
P-value (2-sided), observed v. expected ⁶	0.999	0.303	0.999			
How does this center's survival compare to what is expected for similar patients?						
	Different (a)	Different (a)	Different (a)			
Percent retransplanted	0.0	4.0	6.9	2.2	4.4	8.4
Follow-up days reported by center (%) ⁷	100.0	94.9	90.8	98.6	94.7	93.1
Maximum Days of Follow-up (n)	30	365	1,095	30	365	1,095
Pediatric (Age < 18)						
Transplants (n) ¹	-	-	1	150	150	123
Percent (%) of Patients Surviving at End of Period						
Observed at this Center ²	-	-	100.00	96.67	93.89	91.06
Expected, based on national experience ³	-	-	-			
Deaths During Follow-up Period						
Observed at this center	-	-	0	5	9	11
Expected, based on national experience ⁴	-	-	-	-	-	-
Ratio: Observed to Expected (O/E)	-	-	-	1.00	1.00	1.00
(95% Confidence Interval) ⁵	(-)	(-)	(-)			
P-value (2-sided), observed v. expected ⁶	-	-	-			
How does this center's survival compare to what is expected for similar patients?						
	Different (a)	Different (a)	Different (a)			
Percent retransplanted	-	-	0.0	2.0	4.7	4.9
Follow-up days reported by center (%) ⁷	-	-	100.0	99.0	94.0	94.0
Maximum Days of Follow-up (n)	-	-	1,095	30	365	1,095
Transplant Time Period						
	01/01/2007- 06/30/2009	01/01/2007- 06/30/2009	07/01/2004- 12/31/2006	01/01/2007- 06/30/2009	01/01/2007- 06/30/2009	07/01/2004- 12/31/2006

The data reported here were prepared by the Scientific Registry of Transplant Recipients (SRTR) under contract with the Health Resources and Services Administration (HRSA).

N/A=Not Applicable.

¹ Transplants during the time period indicated in the last row of the table.

² Observed survival rates use the Kaplan-Meier method to estimate outcomes for patients for whom complete follow-up is not expected; see Analytic Methods for more details. Because different cohorts are followed for each time period, it is possible for reported 3-year survival to exceed 1-year survival.

³ The survival rate that would be expected for the patients served by this center, given the characteristic mix of the recipient and donor (age, disease, blood type, etc.) and the experience of similar patients in the entire country. See the Analytic Methods for a description of adjustment and complete list of adjustment factors.

⁴ The number of deaths that would be expected during the follow-up time, as described in footnote 3. Unlike the expected survival percent, the expected count of deaths reflects the expected number of deaths only during the time the patient is alive and actually followed; therefore, it accounts for differences in the time that elapses from transplant until death.

⁵ The 95% confidence interval gives a range of values for the true ratio of deaths at the facility to those expected based on the national experience. The true ratio will be between this lower and upper bound 95% of the time.

⁶ A p-value less than or equal to 0.05 indicates that the difference between the actual and expected patient survival is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could possibly be due to random chance.

(a) This difference could plausibly be just a chance occurrence.

⁷ Of days expected to be included in the follow-up period, the percentage of days covered by follow-up reporting at this center for these transplants. Additional follow-up days included in survival may be covered by SDDMF data. This measures the possibility that events such as failure have occurred without being reported, and it is not a measure of compliance.

Based on data available as of 04/30/2010. Release at www.ustransplant.org on 07/13/2010.

Center: AZMCTX1LI

General Comments

Mayo Clinic is the largest transplant center in the United States, providing care for patients in need of lifesaving liver, kidney, pancreas, heart, lung or bone marrow transplantation. Mayo Clinic differentiates itself from other healthcare centers by delivering outstanding care as an integrated team of specialists, treating the complex medical needs of each patient rather than a disease in isolation.

Mayo Clinic Hospital in Phoenix, Arizona, has received numerous accolades for both excellent care and service. It is the only Arizona hospital to receive the 2009 Top Hospital award by Leapfrog for “its commitment to extraordinary quality and safety efforts.” Mayo Clinic Hospital also has the highest patient satisfaction of all transplant centers in Arizona, according to the HCAHPS survey from the Center for Medicare and Medicaid Services (CMS).

Mayo Clinic in Arizona is one of only 15 transplant centers in the US to be recognized by HRSA (Health Resources and Services Administration arm of the US Department of Health and Human Services) as most successful as defined by high transplant volumes and successful patient outcomes.

At the time of this submission (June 2010), Mayo Clinic has performed over 550 liver transplants in Arizona with excellent outcomes. Our mortality rate (the chance of dying while on the waitlist), was lower than expected and also lower than the average of other programs in Arizona, the region and the nation. As the following tables show, our overall graft and patient survival at one and three years exceeds expectations and remains higher than the national average. Our median hospital length of stay remains quite low at 7 days for deceased donor recipients and 6.5 days for living donor recipients. Our living donor liver program remains an important part of our overall program with over 19% of our liver transplants coming from living donors. To date, we have performed over 105 living donor liver transplants, and our program is the largest living donor liver transplant program in the Western United States. This robust living donor program enables some of our patients to be transplanted earlier and provides an opportunity to other patients who might not otherwise receive a liver transplant at all.

The Village at Mayo Clinic Arizona opened in 2009 to provide a refuge for transplant patients and their caregivers on the campus on the hospital, providing easy access to outpatient services. The Village replaced the Arizona Transplant House at Brusally Ranch which was a generous gift to Mayo. The Arizona Transplant House at the Village at Mayo Clinic is operated by a separate 501(C) (3).

Mayo Clinic’s dedication to patient safety and clinical excellence delivered in a compassionate environment while serving as a local, regional and national provider of transplantation continues today. You may contact us at (800) 344-6296 or email at Gillette.pamela@mayo.clinic.edu.

Please visit our website at <http://www.mayoclinic.org/transplant-sct> to learn more about Mayo Clinic’s transplant program in Arizona.