

Guide to the Center-Specific Reports, v 5.5

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Introduction

There are 11 tables and a summary table that report statistics for individual transplant center programs. When the description below refers to the statistics for a "center", it actually indicates the statistics for a particular transplant program (specific organ) at that center. The statistics in these tables are based on data available from the Organ Procurement and Transplant Network (OPTN) as of April 30, 2004. These tables report organ procurement and transplantation activities. Generally, the same conventions that have been used previously by the OPTN to tabulate donors, organs, transplants, and transplant operations were used here. These tables are described individually below. A table is suppressed if there are no patients for that specific table for your center.

Center Summary

The center summary table presents selected statistics for your center that can be found in greater detail in Tables 1-11. These statistics provide summary data as a reference for frequently asked questions.

I. Waitlist Activity

Table 1 presents the movement of candidates on and off the waitlist between January 1, 2002 and December 31, 2003. Candidates are placed according to the center at which they were waitlisted. This information is given for the center and, for purposes of comparison, for the U.S. as a whole. The data are presented as counts of candidates for a given center (the leftmost pair of columns for the two time periods reported) and as percentages of the candidates on the waitlist at the start of the period (the last three columns give statistics for the center, the OPTN Region, and the U.S.). The three columns on the right of the table report values as percentages to allow comparison of patient counts at the center, OPTN region, and national levels of aggregation.

The data exclude candidates who received a living-donor transplant without ever having been waitlisted and candidates waitlisted for pancreatic islets.

On Waitlist at Start

The number of patients at the center at the start of a period is defined as the number of patients who were placed on the waitlist before midnight, of the previous day and who had not been removed as of that time.

Additions

The number of additions to the waitlist for transplantation at the center for a given period is the number of candidates whose listing date was during that period.

Removals

The removals of candidates from the waitlist are reported according to the reason for removal (e.g. "Deteriorated", meaning the condition of the patient had deteriorated to the point that they had been removed from the waitlist). The available removal codes are: transferred to another center, received living transplant, received cadaveric transplant,

died, medically unsuitable, deteriorated, recovered, and other reasons. The removals are counted only if they occur during the period.

Percentages are relative to the waitlist at the start of the period, dividing the number of candidates added/removed/still on the waitlist during the period specified by the number of candidates on the waitlist at the beginning of the period. The result is multiplied by 100 to produce the percentage.

On Waitlist at End of Period

The number of candidates on the waitlist at the end of a period is the number of patients on the waitlist at the end of the prior period, plus the additions during the period, minus the removals during the period. The number of candidates in a program at the end of the first period is the same as the number of candidates at the beginning of the second period.

The percentage of additions and removals are added to and subtracted from, respectively, the 100% on the waitlist at the start of the period to yield the percentage on the waitlist at the end of the period. Note that if more candidates join the waitlist than are removed during a period, the “percentage” of patients on the waitlist at the end of the period will be greater than 100%. For example, if the U.S. percentage for kidney candidates on the waitlist at the end of the period were 108.8%. The additional 8.8% would represent the growth of the kidney waitlist during the period. Note that it is possible for the number of additions and removals during a period to exceed the number on the waitlist at the start of the period, so that the percent of additions and removals can be greater than 100%.

Additional Observations and Caveats

The number of candidates removed from the waitlist for various reasons at a given program is dependent upon data submitted to the OPTN and provided to the SRTR. For example, it is possible that a candidate is reported as removed from the pancreas waitlist for a living donor transplant, even though no such transplants were performed at that center, according to information contained in the OPTN database. We have observed only a small number of such data anomalies, which are likely due to discrepancies in the data reported by programs on different data collection forms. Data used for transplant tables later in the report are derived from different elements in the database and, therefore, counts of waitlist removals for transplant and counts of reported transplants may not always correspond.

II. Characteristics of Waitlist Patients

Table 2 shows the distribution of various characteristics among waitlisted candidates for each organ in a particular center, in each OPTN region, and nationwide. Candidates are placed according to the center at which they were waitlisted. These data are presented both for new candidates whose listing date was between January 1, 2003 and December 31, 2003 inclusive and for all candidates who were on the waitlist on December 31, 2003. All data are obtained from files of current waitlistings or previous waitlist removals.

At the top of each column, the "(N =)" shows the number of candidates whose data were used to calculate the percentages in that column. The percentages are reported for each of the characteristics described below. The percentages within each characteristic add to 100%, except for rounding anomalies. Candidates with missing information are in the "Unknown" or "Other" categories.

Race

The percentage of recipients in each of five race categories: Asian/Pacific Islander, Black, White, a combined group for other race, and unknown is shown.

Ethnicity

The percentage of Hispanic and non-Hispanic recipients is reported.

Age

Age was determined as of the date of waitlist for each patient. The percentage of patients in each of several age ranges is reported.

Gender

The percentage of male and female recipients is reported.

Blood Type

The percentage of recipients by ABO type (O, A, B, AB) is reported. Recipients with ABO type A, A1, or A2 were classified as A. Recipients with ABO type AB, A1B, or A2B were classified as AB.

Previous Transplants

The percentage of candidates whose waitlist forms indicated that they had received any previous transplant is reported.

Peak Panel Reactive Antibody (Kidney, Pancreas, and Kidney/Pancreas Programs Only)

The recipients' highest panel reactive antibody (PRA) while on the waitlist is shown for candidates for kidney, pancreas, or kidney/pancreas transplant. The percentage of candidates in each of several PRA ranges (0-9, 10-79, 80+) is reported.

Primary Diagnosis Group (Not Shown for Pancreas and Kidney/Pancreas Programs)

The percentage of patients in each of the major categories of primary cause of organ failure is reported. The major categories for each organ are shown below. Primary diagnosis group is not shown for pancreas and kidney/pancreas programs because virtually all such patients receive a transplant for diabetes mellitus.

Kidney

Glomerular diseases

Tubular and interstitial disease

Polycystic kidney disease

Congenital, familial, and metabolic kidney diseases

Diabetes mellitus

Renovascular & vascular diseases

Neoplasms

Hypertensive nephrosclerosis
Retransplant/graft failure
Other kidney diseases
Missing

Liver

Acute hepatic necrosis
Non-cholestatic cirrhosis
Cholestatic liver disease/cirrhosis
Biliary atresia
Metabolic diseases
Malignant neoplasms
Other
Missing

Intestine

Short gut syndrome
Functional bowel problem
Retransplant/graft failure
Other
Missing

Heart

Cardiomyopathy
Coronary artery disease
Retransplant/graft failure
Valvular heart disease
Congenital heart disease
Other
Missing

Lung

Congenital disease
Retransplant/graft failure
Primary pulmonary hypertension
Cystic fibrosis
Idiopathic pulmonary fibrosis
Alpha-1-antitrypsin deficiency
Emphysema/Chronic obstructive pulmonary disease (COPD)
Other
Missing

Heart-Lung

Congenital disease
Retransplant/graft failure
Primary pulmonary hypertension

Cystic fibrosis
Idiopathic pulmonary fibrosis
Alpha-1-antitrypsin deficiency
Emphysema/Chronic obstructive pulmonary disease (COPD)
Other
Missing

Years Since Diabetes Onset (Pancreas Programs Only)

The number of years since the onset of diabetes is reported.

Recipient Medical Urgency Status at Waitlist (Liver and Heart Programs Only)

The recipients' medical urgency status when registered on the waitlist is shown for liver and heart programs. The percentage of recipients in each of status type (Livers: Status 1, 2A, 2B, 3, Temporarily Inactive; Hearts: Status 1, 1A, 1B, 2, Temporarily Inactive) is reported.

Beginning on February 27, 2002 candidates for liver transplants were classified by MELD or PELD score rather than medical urgency status. However, Status 1 and “temporarily inactive” candidates were still grouped by their respective statuses. MELD and PELD scores were computed based on the candidates’ laboratory measures at the time of the wait listing. If not all of the necessary laboratory values were measured, the candidate was assigned a MELD or PELD of 6, depending on the candidate’s age. The following groups appear for liver candidates after February 27, 2002: Status 1, MELD 6-10, MELD 11-20, MELD 21-30, MELD 31-40, PELD 10 or less, PELD 11-20, PELD 21-30, PELD greater than 30, and Temporarily Inactive.

III. Transplant and Mortality Rates among Waitlist Patients

Table 3 reports transplant and mortality rates for patients on the waiting list between January 1, 2002 and December 31, 2003, along with the expected rates and corresponding p-values. For liver and kidney programs, there are two sets of transplant statistics: one for all transplant and another for transplants from deceased donors. Only transplants from deceased donors are included for other programs. The mortality rate statistics were designed to provide ascertainment of mortality once waitlisted instead of while waitlisted. In addition to deaths reported on the waitlist removals data forms, we have also included deaths from the Social Security Death Master File (SSDMF) and Centers for Medicare & Medicaid Services (CMS) data sources to provide additional death ascertainment for waitlisted patients through the end of the study. Thus, time at risk and mortality after removal from the waiting list for removals other than transplant, transfer, and recovery are included. The information in Table 3 is for all patients on the waitlist at this center at any time during the reported interval. For the purpose of comparison, corresponding rates for the second interval in this center's OPTN region and the United States as a whole are also reported.

Count on Waitlist at Start

The total number of patients on the waitlist at 12:00 am the morning of the beginning of the period is reported. Please note that 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.

Person Years for the Transplant Rate

Since candidates may be waitlisted for all or only part of a full year, person years of the patients on the waitlist for the whole period is reported. Person years are calculated as days and converted to fractional years for each patient. The number of days is calculated from the latter of the start date of the period and the date of first wait listing, until the earliest of the date of death, transplant, removal from the waitlist, or the end of the period. The person years for each candidate in the program are summed to yield the total person years.

Removals for transplant

The number of waitlist patients removed from the waitlist whose reason for waitlist removal was listed as receipt of a transplant during the period is reported.

Transplant Rate (per year on waitlist)

The rate shown is calculated by dividing the number of waitlist patients removed from the waitlist whose reason for waitlist removal was listed as receipt of a transplant by the total number of person years.

Expected Transplant Rate

The expected transplant rate is calculated as the number of waitlist patients expected to have been removed for receipt of a transplant divided by the number of person years. The expected number was calculated using a Cox proportional hazards model. Data for all organs were adjusted by age, blood type, days on the waiting list prior to the start date, and previous transplantation. Data for heart and liver are also adjusted by medical urgency status. Kidney data were also adjusted by peak PRA and the interaction between previous transplantation and peak PRA.

Beginning on February 27, 2002 candidates for liver transplants were classified by MELD or PELD score rather than medical urgency status. However, Status 1 and “temporarily inactive” candidates were still grouped by their respective statuses. In the transplant rate models, the match MELD/PELD score was used. This means that exceptions, such as those for Hepatocellular Carcinoma (HCC), were taken into account when granted. Some candidates that were Status 2A on 2/27/02 were left in that status for up to thirty more days, so they were grouped as Status 2A for the transplant rate model.

Ratio of Observed to Expected Transplants

For statistical comparisons, it is appropriate to compare the number of transplants observed during follow-up period to the number of transplants that would be expected during follow-up period. A ratio greater than 1.00 indicates that there were more

transplants at the center than would have been expected based on the national experience, while a ratio less than 1.00 indicates that there were fewer transplants at the center than would have been expected based on the national experience. For example, a ratio of 1.20 indicates that the transplant rate at the center was, on average, 20% higher than the national rate. A ratio equal to 1.00 indicates that the transplant rates at the center are the same as the national transplant rates.

Random variation

The ratio reported is an estimate of the true ratio of transplant rates at the center relative to the national transplant rates. A ratio different from 1.00 indicates that the true transplant rates at the center differ from the national transplant rates.

However, the value of the ratio varies from year to year above and below the true ratio due to random variation. Thus, the ratio could differ from 1.00 due to random variation, rather than due to a true difference between the transplant rates at the center and in the nation. Both the p-value and the confidence interval, discussed below, are designed to help in the interpretation of the ratio in the face of such random fluctuations.

95% Confidence Interval

The 95% confidence interval for the ratio of observed to expected transplants gives a range of plausible values for the true ratio of center to national transplant rates, in light of the observed ratio. The true ratio lies within this range 95% of the time. The confidence interval is a measure of how precisely we are able to estimate the ratio. If the 95% confidence interval includes 1.00, then the ratio is not significantly different than 1.00, which means that the transplant rates at the center are not significantly different than the national rates ($p < 0.05$).

P-value

The p-value measures the statistical significance (or evidence) for testing the (two-sided) hypothesis that the difference between the actual and expected transplant rate is 0. A p-value less than or equal to 0.05 indicates that the difference between the actual and expected transplant rate is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could plausibly be due to random chance. The p-value was calculated by testing whether the observed number of transplants was greater or less than the expected number of transplants at a center, based on the Poisson distribution for the observed number of failures. These values are not shown if there is no expected transplant rate calculated.

How do rates at this center compare to those in the nation?

This line indicates whether the actual transplant rate is statistically different than the expected transplant rate based on the p-value on the previous line. If the p-value is less than or equal 0.05 then this line reads "Statistically Higher" or "Statistically Lower" depending on whether the actual transplant rate is higher or lower than the expected transplant rate. If the p-value is greater than 0.05 then this line reads "Not Significantly Different". These values are not shown if there is no expected transplant rate calculated.

Person Years for Mortality Rate after Being Placed on the Waitlist

Since candidates may be waitlisted for all or only part of a full year, person years of the patients on the waitlist for the whole period is reported. Person years are calculated as days and converted to fractional years for each patient. The number of days is calculated from the latter of the start date of the period and the date of first wait listing, until the earliest of the date of death, transplant, 60 days after transplant, transfer, or the end of the period. The person years for each candidate in the program are summed to yield the total person years.

Number of deaths

The number of deaths that occurred among patients on the waitlist during the period is reported. Deaths reported on the waitlist removals data forms, the Social Security Death Master File (SSDMF) and Centers for Medicaid and Medicare Service (CMS) are included in this calculation.

Death Rate (per year on waitlist)

The rate shown is calculated by dividing the number of deaths by the number of person years.

Expected Death Rate

The expected death rate is calculated as the number of deaths expected to have occurred divided by the number of person years. The expected number was calculated using a Cox proportional hazards model. The expected death rates for all organs are adjusted by age, race, ethnicity, gender, blood type, days on the waiting list prior to the start date, and primary disease (except for pancreas and kidney/pancreas). The rates for heart and liver are also adjusted by medical urgency status.

Beginning on February 27, 2002 candidates for liver transplants were classified by MELD or PELD score rather than medical urgency status. However, Status 1 and “temporarily inactive” candidates were still grouped by their respective statuses. In the models for waitlist mortality, the MELD and PELD scores were computed based on the candidates’ laboratory measures for each point in time. If not all of the necessary laboratory values were measured, the candidate was assigned a MELD or PELD of 6, depending on the candidate’s age. Additionally, whether or not the MELD/PELD score was missing was adjusted for in the model.

Ratio of Observed to Expected Deaths

For statistical comparisons, it is appropriate to compare the number of deaths observed during follow-up period to the number of deaths or transplants that would be expected during follow-up period. A ratio greater than 1.00 indicates that there were more deaths at the center than would have been expected based on the national experience, while a ratio less than 1.00 indicates that there were fewer deaths at the center than would have been expected based on the national experience. For example, a ratio of 1.20 indicates that the death rate at the center was, on average, 20% higher than the national rate. A ratio equal to 1.00 indicates that the death rate at the center is the same as the national death rate.

Random variation

The ratio reported is an estimate of the true ratio of death rate at the center relative to the national death rate. A ratio different from 1.00 indicates that the true death rate at the center differ from the national death rate. *However, the value of the ratio varies from year to year above and below the true ratio due to random variation.* Thus, the ratio could differ from 1.00 due to random variation, rather than due to a true difference between the death rate at the center and in the nation. Both the p-value and the confidence interval, discussed below, are designed to help in the interpretation of the ratio in the face of such random fluctuations.

95% Confidence Interval

The 95% confidence interval for the ratio of observed to expected transplants gives a range of plausible values for the true ratio of center to national death rate, in light of the observed ratio. The true ratio lies within this range 95% of the time. The confidence interval is a measure of how precisely we are able to estimate the ratio. If the 95% confidence interval includes 1.00, then the ratio is not significantly different than 1.00, which means that the death rate at the center are not significantly different than the national rates ($p < 0.05$).

P-value

The p-value measures the statistical significance (or evidence) for testing the (two-sided) hypothesis that the difference between the actual and expected death rate is 0. A p-value less than or equal to 0.05 indicates that the difference between the actual and expected death rate is probably real and is not due to random chance, while a p-value greater than 0.05 indicates that the difference could plausibly be due to random chance. The p-value was calculated by testing whether the observed number of deaths was greater or less than the expected number of deaths at a center, based on the Poisson distribution for the observed number of failures. These values are not shown if there is no expected death rate calculated.

How do rates at this center compare to those in the nation?

This line indicates whether the actual death rate is statistically different than the expected death rate based on the p-value on the previous line. If the p-value is less than or equal 0.05 then this line reads "Statistically Higher" or " Statistically Lower" depending on whether the actual death rate is higher or lower than the expected death rate. If the p-value is greater than 0.05 then this line reads "Not Significantly Different". These values are not shown if there is no expected death rate calculated.

IV. Waitlist Activity and Patient Vital Status at 6, 12, and 18 Months Since Waitlisting

Table 4 shows the status of waitlisted patients at three time points after waitlisting: 6, 12, and 18 months. Patients included are those who were put on the waitlist at this center between July 1, 2001 and June 30, 2002. For purposes of comparison, corresponding data for the U.S. are also reported at the same time points.

Patient waitlist status was determined by using waitlist removal codes. If a patient had not been removed from the waitlist at each time point they were considered to be alive on the waitlist. For patients whose removal codes corresponded to receiving a transplant, status was determined from follow-up records collected after the transplant. If a patient had a removal code for transplantation, but did not have any transplant or follow-up records associated with that candidacy, they were placed under their appropriate transplant heading, subheading "status unknown."

Percentages indicated on the lines of the table above "TOTAL" (patients on the waitlist who are alive, have died, have been removed without transplant, have received living and cadaveric transplants, and are lost or transferred) add to 100% and reflect data from all patients waitlisted in during the period. It is important to note that these percentages reflect the full range of possible outcomes since placement on the waitlist. For example, if 3.5% died following cadaveric transplant at 18 months after waitlisting indicates that this percentage of all waitlisted candidates had received a cadaveric transplant and subsequently died by 18 months after waitlisting. A patient who falls into this category may have fallen into the category of living with a cadaveric transplant at an earlier time period.

The last four lines of the table contain summary death and transplant percentages. The total percent dead includes all patients reported to have died by that follow-up point, including those who die both before or after a transplant. The following line adds to this total those who were removed from the waitlist due to deteriorating medical condition, but were not reported as having died.

The total removed for transplant shows those patients listed as removed from the waiting list for transplant on or before this time, regardless of current status of the transplant. The last line shows the subset of these with whose transplant is still functioning at the point in time.

The death counts reported here include only those deaths reported as waitlist removals due to death or as deaths on transplant follow-up forms. These data sources are not designed to count all deaths, so the deaths reported here represent an under-ascertainment of mortality. Similarly, the graft failures reported here are based on transplant follow-up forms and do not include failures that occur after patients are reported as lost to follow-up.

For liver programs, additional tables provide the same data stratified by medical urgency status at listing.

V. Percent Transplanted (Excludes Living Donor Recipients) for Waitlist Patients at this Center

Table 5 gives the percentages of patients who received a transplant at the specified times (1 month, 1 year, 2 years, and 3 years after waitlisting) among those who were placed on the waitlist from Jan 1, 1998 - Dec 31, 2000. This information is given for the center and, for purposes of comparison, for the U.S. as a whole. The data exclude patients who

were removed from the waitlist with a removal code indicating transplant from a living donor. Patients waitlisted for pancreatic islets are also excluded.

This analysis includes patients whose waitlist status was temporarily inactive and patients who spent periods of time in temporarily inactive status. The statistics are calculated as simple fractions and the analysis does not censor patients if they were removed for reasons other than receiving a transplant. Thus, patients who die before receiving a transplant are counted at all times as not having received a transplant. Each percentage is calculated among all patients and separately for different classifications of: race, ethnicity, age, gender, blood type, previous transplant, primary disease, peak PRA (kidney, pancreas, and kidney/pancreas programs only), years since diabetes onset (pancreas and kidney/pancreas programs only) and medical urgency status (heart and liver programs only).

The percentage shown is calculated as: $100 \times (\text{number of patients placed on the waitlist between 1/1/1998 12:00:00 AM and 12/31/2000 12:00:00 AM who received a transplant prior to a specified number of months after waitlisting}) / (\text{total number of patients placed on the waitlist between 1/1/1998 12:00:00 AM and 12/31/2000 12:00:00 AM})$.

The national statistics double count patients with multiple listings in order to be comparable to the center statistic, which counts each waitlist at the center, but only the transplant at this center.

VI. Time to Transplant for Waitlist Candidates

Table 6 gives the median (50th percentile) waiting time until transplant (both cadaveric and living related transplants) for patients who were placed on the waitlist between January 1, 1998 and June 30, 2003, as well as the 5th, 10th, 25th and 75th percentile waiting times. All percentiles are shown only when applicable. The information in this table is for all patients placed on the waitlist at this center during the applicable time period. For purposes of comparison, corresponding times to transplant at each percentile in this center's OPTN region and the U.S. as a whole are also reported. Patients with multiple waitlistings are counted multiple times in this analysis.

Waiting time until transplant is calculated as the time (in months) after a candidate is placed on the waitlist, by which the corresponding percent of all patients initially waitlisted had been removed from the waitlist for receiving a transplant. A Kaplan-Meier model was used with censoring on a) December 31, 2003 for those registrations still waiting on that date; and b) the date of removal from the waiting list for recovery, or c) the date of removal from the waiting list for a transfer. If a cell is blank then less than that percentage of patients placed had received a transplant by the end of follow-up.

VII. Transplant Recipient Characteristics

Table 7 summarizes the characteristics of transplant recipients who received a transplant between January 1, 2003 and December 31, 2003 at this center, with corresponding average values among recipients in this center's OPTN region and the U.S. as a whole.

Table 7 is divided into cadaveric and living donor transplants for kidney, liver and lung programs. For all other programs, only data for cadaveric transplants are shown. The percentages are reported for each characteristic. The percentages within each characteristic add to 100% except for rounding anomalies. Candidates with missing information are in the “Unknown” or “Missing” categories.

Patient Count

The total numbers of patients who received transplants during this period at this center, in this center's OPTN region, and in the U.S. as a whole are reported. The summaries of the patient characteristics in Table 7 are based on the patient population counts.

Race

The percentage of recipients in each of five race categories: Asian/Pacific Islander, Black, White, a combined group for other race, and unknown is shown.

Ethnicity

The percentage of Hispanic and non-Hispanic recipients is reported.

Age

Age was determined as of the date of transplant for each patient. The percentage of recipients in each of several age ranges is reported.

Gender

The percentage of male and female recipients is reported.

Blood Type

The percentage of recipients by ABO type (O, A, B, AB) is reported. Recipients with ABO type A, A1, or A2 were classified as A. Recipients with ABO type AB, A1B, or A2B were classified as AB.

Previous Transplants

The percentage of recipients who previously received any organ transplant is shown.

Peak Panel Reactive Antibody (Kidney, Pancreas and Kidney/Pancreas Programs Only)

The recipients' highest panel reactive antibody (PRA) on the waitlist is shown for recipients who received a kidney, pancreas, or kidney/pancreas. The percentage of recipients in each of several PRA ranges (0-9, 10-79, 80+) is reported.

Body Mass Index

Body mass index is calculated at transplant as the recipient's weight divided by the height squared ($BMI = \text{Weight (kg)} / \text{Height}^2 (\text{m}^2)$). The percentage of recipients in each of several BMI ranges (0-20, 21-25, 26-30, 31+) is reported.

Primary Diagnosis Group (Not Shown for Pancreas and Kidney/Pancreas Programs)

The percentage of patients in each of the major categories of primary cause of organ failure is reported. The major categories for each organ are shown below. Primary diagnosis group is not shown for pancreas and kidney/pancreas programs because virtually all such patients received a transplant for diabetes mellitus.

Kidney

Glomerular diseases
Tubular and interstitial disease
Polycystic kidney disease
Congenital, familial, metabolic renal diseases
Diabetes mellitus
Renovascular & vascular diseases
Neoplasms
Hypertensive nephrosclerosis
Retransplant/graft failure
Other kidney diseases
Missing

Liver

Acute hepatic necrosis
Non-cholestatic cirrhosis
Cholestatic liver disease/cirrhosis
Biliary atresia
Metabolic diseases
Malignant neoplasms
Other
Missing

Intestine

Short gut syndrome
Functional bowel problem
Retransplant/graft failure
Other
Missing

Heart

Cardiomyopathy
Coronary artery disease
Retransplant/graft failure
Valvular heart disease
Congenital heart disease
Other
Missing

Lung

Congenital disease
Retransplant/graft failure
Primary pulmonary hypertension
Cystic fibrosis
Idiopathic pulmonary fibrosis

Alpha-1-antitrypsin deficiency
Emphysema/Chronic obstructive pulmonary disease (COPD)
Other
Missing

Heart-Lung

Congenital disease
Retransplant/graft failure
Primary pulmonary hypertension
Cystic fibrosis
Idiopathic pulmonary fibrosis
Alpha-1-antitrypsin deficiency
Emphysema/Chronic obstructive pulmonary disease (COPD)
Other
Missing

Recipient Medical Urgency Status at Waitlist (Liver and Heart Programs for Patients with Deceased Donors Only)

The recipients' medical urgency status when registered on the waitlist is shown for liver and heart programs. The percentage of recipients in each of status type (Livers: Status 1, 2A, 2B, 3, Temporarily Inactive; Hearts: Status 1, 1A, 1B, 2, Temporarily Inactive) is reported.

Recipient Medical Urgency Status at Transplant (Liver and Heart Programs for Patients with Deceased Donors Only)

The recipients' medical urgency status at the time of transplant is shown for liver and heart programs. The percentage of recipients in each of status type (Livers: Status 1, 2A, 2B, 3, Temporarily Inactive; Hearts: Status 1, 1A, 1B, 2, Temporarily Inactive) is reported.

Beginning on February 27, 2002 candidates for liver transplants were classified by MELD or PELD score rather than medical urgency status. However, Status 1 and "temporarily inactive" candidates were still grouped by their respective statuses. MELD and PELD scores were computed based on the candidates' laboratory measures at the time of transplant. The following groups appear for liver recipients after February 27, 2002: Status 1, MELD 6-10, MELD 11-20, MELD 21-30, MELD 31-40, PELD 10 or less, PELD 11-20, PELD 21-30, PELD greater than 30, and Temporarily Inactive.

Recipient Medical Condition at Transplant

The medical condition of the recipient at transplant is shown. The percentage of recipients in each of 3 conditions (In ICU, Hospitalized, Not Hospitalized) is reported. The percentage without a condition reported is also shown.

Recipient Life Support Status at Transplant

The type of life support at transplant is shown for heart transplant recipients. Life support status is divided into three groups: no life support, devices (including ventricular assist devices (VAD), extracorporeal membrane oxygenation (ECMO), intraaortic balloon pump (IABP), and total artificial heart (TAH)), and other life support. The percentage without a status reported is also displayed.

VIII. Summary for Characteristics of Transplant Donors

Table 8 summarizes the characteristics of living (kidney, liver and lung only) and deceased transplant donors who donated an organ between January 1, 2003 and December 31, 2003 in this center, with corresponding average values among donors in this center's OPTN region and the U.S. as a whole. Only donors whose organs were transplanted to recipients at this center, in this center's OPTN region, and the U.S. as a whole are counted.

Patient Count

The total number of organ donors whose donated organs were of the type corresponding to this center's program and that were transplanted during this period at this center is reported. The summaries of the donor characteristics in Table 8 are based on the patient population count.

Cause of Death

For deceased donors, the percentage of organs recovered and transplanted from donors in each of the major cause of death categories is reported. The categories for cause of death are Stroke, Motor Vehicle Accident (MVA), and Other.

Age

Donor age was determined as of the date of organ procurement for each donor. The percentage of donors in each of several age ranges is reported.

Race

The percentage of donors in each of five race categories: Asian/Pacific Islander, Black, White, a combined group for other race, and unknown, are shown.

Ethnicity

The percentage of Hispanic and non-Hispanic donors is reported.

Gender

The percentage of male and female donors is reported.

Blood Type

The percentage of donors by ABO type (O, A, B, AB) is reported. Donors with ABO type A, A1, or A2 were classified as A. Donors with ABO type AB, A1B, or A2B were classified as AB.

Expanded Criteria Donors

The percentage of donors (for kidney programs only) by whether or not they met the expanded donor criteria is reported. Donors that meet the expanded criteria are those over 60 years of age and those between 50 and 59 years of age meeting two of the following three conditions: died of a stroke, had a history of hypertension, or had a serum creatinine of greater than 1.5.

IX. Summary for Characteristics of Transplant Operations

Table 9 summarizes the characteristics of cadaveric transplants performed between January 1, 2003 and December 31, 2003 at this center, with corresponding average values for transplants performed in this center's OPTN region and the U.S. as a whole. For kidney, liver and lung programs, a comparable table summarizing characteristics of living donor transplant operations is also provided.

Patient Count

The total numbers of cadaveric transplants during this period at this center, in this center's OPTN region, and the U.S. as a whole are reported. For kidney and liver programs, the total number of living donor transplants during this period at this center, in this center's OPTN region, and the U.S. as a whole are reported. The summaries of the transplant characteristics in Table 9 are based on the patient population count.

Cold Ischemic Time (Deceased Donor Transplants Only)

The percent of transplants that fall into each category of cold ischemic time are reported by whether the donated organ was procured locally or from outside the OPO (see Sharing below). This time is divided into 90-minute increments for thoracic transplants, and by ranges of hours for the other organs.

Relation with Donor (Living Donor Transplants Only)

The percent of transplants whose living donor was biologically related (Related), such as sibling, parent or other family member, and biologically unrelated (Unrelated), such as spouse, anonymous donor or organ exchange, are reported. The percent of transplants where the relation is unknown (Not Reported) is also given.

Level of Mismatch

Level of HLA mismatch (0-6) is calculated by comparing antigen values for the A, B and DR loci between donors and their respective recipients, accounting for known antigen splits. The number of mismatches is derived by subtracting the number of matches and missing donor values from the number of potential matches (six).

Procedure Type

The procedure type, meaning whether the organ was transplanted alone or with other organs, is shown. For kidney/pancreas programs, organs in addition to a kidney and pancreas are included in the 'Multi-Organ' column.

Dialysis in First Week After Transplant

The percentage of patients who received dialysis treatment within one week following transplant is shown. This is only shown for kidney recipients.

Sharing (Deceased Donor Transplants Only)

Shown are the percent of transplants for which the organ was procured outside the center's OPO (shared) and the percent of transplants where the organs were procured from within the center's OPO (local).

Median Length of Stay

Shown is the actual number of days the patient remained in the hospital following receipt of a transplant. If a patient receives multiple transplant of the same organ during the same hospital stay, the number of days is from the first transplant until the final discharge date. Multiple organ transplants are excluded from this statistic in most cases. The kidney-pancreas and heart-lung tables include only kidney-pancreas or heart-lung transplants, but not other multi-organ transplants.

X. Graft Survival

Table 10 reports graft survival (the fraction of grafts that are still functioning) at several time points after transplantation. Graft survival is reported at the 1-month, 1-year, and 3-year reporting time points for each center, with corresponding rates for the U.S. Only those transplants that accrued between July 1, 1998 and June 30, 2003 were eligible for inclusion in the analyses. For the 1-month and 1-year statistics for non-thoracic organs, transplants accrued between January 1, 2001 and June 30, 2003 were included.

Transplants that occur during the last 6 months of this cohort have only 6 months of follow-up available but can be included using censored data methods (described below) in the 1-year statistics. For the 1-month and 1-year statistics for thoracic organs, only transplants accrued between July 1, 2000 and December 31, 2002 were included. The first follow-up time point for these organs is at 1 year so transplants occurring after December 31, 2002 would not contribute any information to either the 1-month or the 1-year statistics and were therefore not included in the statistics. For the 3-year survival statistics, transplants accrued between July 1, 1998 and December 31, 2000 were included.

Statistics are generally reported separately for adult (age 18 and older) and pediatric (age less than 18) patients. For lungs, statistics are reported instead for patients 12 and older and for children less than 12. In addition, statistics are reported separately by donor type (cadaveric and living) for kidney and liver programs. There are some organs or subgroups of patients for which there are too few transplants or too few events to calculate meaningful statistics. The table below indicates which statistics are calculated for each organ.

Not all transplant recipients had complete graft survival through the end of the time interval since transplant. However, all available follow-up data for each graft were used in the calculation of the statistics reported here using standard censored data methods of survival analysis (Cox 1972, Kaplan-Meier 1958). Additional data from the Social

Security Death Master File (SSDMF) and Centers for Medicare & Medicaid Services (CMS) have been incorporated into the graft survival rates.

Statistics reported in Graft Survival Table (Table 10) by Organ

Organ	Counts of Transplants and Actual¹ Graft Survival		Expected² Graft Survival	
	Adult	Pediatric	Adult	Pediatric
Heart	Yes	Yes	Yes	Yes
Heart-Lung	Yes	No	No	No
Lung	Yes	Yes	Yes	No
Liver	Yes	Yes	Yes	Yes
Kidney	Yes	Yes	Yes	Yes
Intestine	Yes	Yes	No	No
Pancreas	Yes	No	No	No
Kidney from a Kidney-Pancreas	Yes	No	Yes	No
Pancreas from a Kidney-Pancreas	Yes	No	Yes	No

¹ Graft survival is the actual graft survival for those programs with complete data and was estimated using the Kaplan-Meier methodology at those center with incomplete follow-up reporting.

² Expected graft survival is based on data from the entire nation to evaluate the survival expected for the patients at each center, based upon their characteristics.

Number of Transplants

The total number of transplants reported during the accrual periods for the 1-month, 1-year and 3-year graft survival analyses are shown for each patient age cohort. The 1-month and 1-year counts are the same since the accrued periods are the same.

Living donor transplants are included only for kidneys and livers. The heart, lung, liver, kidney, and pancreas tables include only single-organ transplants. The kidney-pancreas and heart-lung tables include only kidney-pancreas or heart-lung transplants, but not other multi-organ transplants. The intestine tables include single-organ intestine, liver-intestine, pancreas-intestine, and pancreas-liver-intestine transplants. Heterotopic heart and liver transplants are not included.

Graft Survival

Graft failure is defined differently for different organs. For all organs, deaths are considered to be graft failures. The SSDMF and CMS data are used in conjunction with OPTN data to identify deaths. In the case of conflicting deaths dates from various sources, the OPTN death date takes precedence. If there is no OPTN death date but conflicting dates from SSDMF and CMS, the SSDMF date takes precedence.

A graft is counted as failed when follow-up information indicates that one of the following has occurred prior to the reporting time point: graft failure (except for heart and liver), retransplant (all but heart-lung and lung), death, or dialysis treatment has been resumed (for kidney Medicare patients only). CMS data are used to identify patients who have returned to dialysis. OPTN follow-up forms are used to identify graft failure and retransplant.

For non-thoracic organs, transplants that occurred in the last six months of the accrual period for the 1-year reporting time point are only followed for six months after transplant because the 1-year follow-up information is not yet available in the current OPTN data. The reporting time point for this subset of transplants is six months after transplantation. Since there is no 6 month follow-up for thoracic organs, the accrual period for these organs does not include the final 6 months.

The “Graft Survival” at 1 month, 1 year and 3 years was calculated from the follow-up data using the Kaplan-Meier (KM) method and is an estimate of the fraction of all grafts that would still be functioning at the reporting time point had they been followed to that time. The KM method uses all data, including the incomplete data for patients who were lost before the end of the period. The KM method assumes that the failure rate would be the same for those patients lost to follow-up as was observed for those with complete data.

Lung, Heart-Lung, Kidney-Pancreas, Pancreas, Intestine

For these organs, after a patient was recorded as lost to follow-up on one follow-up record, any subsequent follow-up records were disregarded. These calculations do not include any deaths that occur after loss to follow-up in the OPTN database, because the date of graft failure is unknown in these cases and may have occurred before the death.

For **lung** and **heart-lung** transplants, follow-up for graft survival is censored at the last OPTN follow-up date. If the patient dies before the last OPTN follow-up, the death date is used as the graft failure date. Deaths after this date are not included in the analyses.

For **kidney-pancreas**, **pancreas**, and **intestine** transplants, follow-up for graft survival is also censored at the last OPTN follow-up date. If the patient dies or is retransplanted before the last OPTN follow-up, the death or retransplant date is used as the graft failure date. Deaths or retransplants after this date are not included in the analyses.

Transplants with a graft failure date recorded as having occurred prior to the transplant and transplants with no follow-up forms, missing last follow-up date or last follow-up date before the transplant were analyzed as censored (lost to follow-up) on the day of transplant. This means they do not affect the reported results and they are included only to retain consistency with the reported number of transplants. Transplants with no follow-up forms will influence the statistics related to follow-up days reported (described elsewhere).

Kidney

For the **kidney** analyses, follow-up is censored at the last OPTN follow-up date for some patients and not for others. For kidney transplant recipients whose transplant was covered by Medicare, CMS data on return to dialysis is used to supplement the OPTN graft failure data. Kidney transplant recipients for whom Medicare paid for the transplant are assumed to have a functioning graft if there is not a death, graft failure, return to dialysis, or retransplant before the reporting time point. For kidney transplant recipients

whose transplant was not paid for by Medicare, CMS follow-up is censored at the last OPTN follow-up date. These patients are much less likely to have dialysis paid for by Medicare and therefore may not appear in the CMS data on return to dialysis. For these patients, deaths and retransplants before the last OPTN follow-up are used as the graft failure date. Deaths or retransplants after this date are not included in the analyses.

Heart and Liver

For the **heart** and **liver** analyses, there is no need for extra ascertainment of graft failure after the last OPTN follow-up date because there is no alternative therapy. A patient whose graft fails will be retransplanted or die. The calculations of graft failure therefore can continue until the reporting time-point even if the recipient is lost to follow-up in the OPTN data. Accordingly, for **heart** and **liver** transplants, follow-up for graft survival is not censored at the last OPTN follow-up date and the OPTN graft failure date is not used. Instead, only deaths and retransplants are used as graft failure dates.

Expected Graft Survival

The “Expected Graft Survival” is the fraction of grafts that would be expected to be functioning at each reported time point, based on the national experience for patients similar to those at this center. The “Graft Survival” can be compared to the “Expected Graft Survival” as the percent of grafts functioning at the reporting time points. If the “Graft Survival” is greater than the “Expected Graft Survival”, then the graft survival is better at this center than would be expected based on the national transplant experience for similar grafts and patients.

The national experience was analyzed using data for all grafts at all facilities in the United States. A Cox proportional hazards regression model for time to graft failure (Cox 1972) was fitted to the national data, which yielded the probability of graft failure for each patient, based upon the characteristics of each patient and the reporting time point. The characteristics accounted for in these calculations are reported below and are similar to those that have been used in previous reports. The “Expected Graft Survival” for each organ was adjusted for the patient characteristics as listed in the Model Description Tables. See Section XII for details on the calculation of the expected graft survival.

Ratio of Observed to Expected Graft Failures

For statistical comparisons, it is appropriate to compare the number of graft failures observed during follow-up (which is shorter than the reporting time point for censored patients) to the number of graft failures that would be expected during follow-up, rather than by comparison of observed and expected survival rates at the reporting time points. The ratio of observed to expected graft failures compares the entire survival curve up to the reporting time point to the curve expected for patients with the same characteristics based on the national experience rather than just the survival at the reporting time point. A ratio greater than 1.00 indicates that there were more graft failures at the center than would have been expected based on the national experience, while a ratio less than 1.00 indicates that there were fewer graft failures at the center than would have been expected based on the national experience. For example, a ratio of 1.20 indicates that the graft

failure rate at the center was, on average, 20% higher than the national rate. A ratio equal to 1.00 indicates that the graft failure rates at the center are the same as the national graft failure rates

Random variation

The ratio reported is an estimate of the true ratio of graft failure rates at the center relative to the national graft failure rates. A ratio different from 1.00 indicates that the true graft failure rates at the center differ from the national graft failure rates. *However, the value of the ratio varies from year to year above and below the true ratio due to random variation.* Thus, the ratio could differ from 1.00 due to random variation, rather than due to a true difference between the graft failure rates at the center and in the nation. Both the p-value and the confidence interval, discussed below, are designed to help in the interpretation of the ratio in the face of such random fluctuations.

95% Confidence Interval

The 95% confidence interval for the ratio of observed to expected graft failures gives a range of plausible values for the true ratio of center to national graft failure rates, in light of the observed ratio. The true ratio lies within this range 95% of the time. The confidence interval is a measure of how precisely we are able to estimate the ratio. If the 95% confidence interval includes 1.00, then the ratio is not significantly different than 1.00, which means that the graft failure rates at the center are not significantly different than the national rates ($p < 0.05$).

P-value

The p-value measures the statistical significance (or evidence) for testing the (two-sided) hypothesis that the true ratio of graft failure rates for the center versus the nation equals 1.00. A smaller p-value tends to occur when the ratio differs more greatly from 1.00 and when more patient data are used to calculate the ratio. A p-value less than 0.05 is often taken as evidence that the ratio of graft failure rates truly differs from 1.00. Thus, a p-value less than 0.05 indicates that the difference between the graft failure rates at the center and the nation is unlikely to have arisen from random fluctuations alone. The smaller the p-value, the more *statistically significant* is the difference between the national and the center graft failure rates. A small p-value helps to rule out the possibility that the difference of the ratio from 1.00 could have arisen by chance. However, a small p-value does not indicate whether or not the magnitude of the difference between the death rates at the center and the nation is important. The actual quantitative value of the ratio reflects the clinical importance of the difference between the center and national graft failure rates. A ratio that differs greatly from 1.00 is more important while a ratio in the range 0.95 to 1.05 is not as important.

The p-value was calculated by testing whether the observed number of graft failures was statistically greater or less than the expected number of graft failures at a center, based on the Poisson distribution for the observed number of graft failures. The p-value is not shown if the expected graft survival was not calculated.

How do the rates at this center compare to those in the nation?

This line indicates whether the actual graft survival is statistically different than the expected graft survival based on the p-value on the previous line. If the p-value is less than or equal 0.05 then this line reads "Statistically Higher" or "Statistically Lower" depending on whether the actual graft survival is higher or lower than the expected graft survival. "Statistically Higher" survival corresponds to better outcomes (ratios less than 1.00), while "Statistically Lower" survival corresponds to worse outcomes (ratios greater than 1.00). If the p-value is greater than 0.05 then this line reads "Not Significantly Different". This value is not shown if the expected graft survival is not calculated.

Follow-up Days Reported

This line reports the percentage of days that are targeted for inclusion during the follow-up period relative to the number of days that were actually reported with OPTN transplant follow-up forms. Days which were covered only by data from other OPTN data (such as subsequent transplants or waitlist information), the SSDMF, or CMS are not included in this percentage even though these days are included in the analyses. The percentage of follow-up days reported gives a measure of the amount of time for which we have follow-up from both the center and outside sources.

For grafts that did not fail before the end of the period, the targeted number of days of follow-up is the entire period (30, 365 or 1096 days; see next section for details on maximum follow-up). For non-thoracic grafts transplanted during the last 6 months of the period, the targeted follow-up for 1 year survival is 6 months. For grafts that failed before the end of the period, the number of targeted days of follow-up is the number of days until graft failure. The number of days of reported follow-up is less than the targeted number of days for censored patients. Examples are shown in the table below. The total number of days of follow-up reported for all patients are summed and divided by the total number of days of follow-up targeted to obtain the percent reported in this line. Examples of incomplete follow-up and the calculation of the percent of follow-up reported are shown in the table below.

For **lung**, **heart-lung**, **kidney-pancreas**, **pancreas**, and **intestine** statistics, patients with incomplete follow-up are included in the analyses until the date of the last reported follow-up. For these organs, the percent of follow-up days reported is a measure of the presence of incomplete, or censored, data. Censored data reduces the precision and interpretability of the statistics reported here. A low percent of follow-up days reported may indicate a non-random sample from the center for follow-up and the graft survival reported may not be a reliable estimate of the true graft survival for the time period.

For **kidney** statistics, follow-up for graft survival is censored at last OPTN follow-up date only for patients whose transplant was not paid for by Medicare. For **liver** and **heart** statistics, follow-up for graft survival is not censored at the last OPTN follow-up date for any patients. The calculation of the number of follow-up days reported in this row for these kidney, liver, and heart is still calculated in the same way as for the other organs however. The difference is that for the kidney, liver, and heart statistics, the follow-up percent does not measure the amount of censoring in the data, but instead is a measure of how dependent the results are on outside sources of information. A low percent of

follow-up days reported indicates that there may be under-ascertainment of graft failure for the facility since the completeness of follow-up data is still partially determined by center reporting.

Examples of incomplete follow-up and calculation of follow-up days reported

Transplant Date	Last Report	Reporting Time Point	Follow-up Time	Graft Status	Follow-up Reported (%)
7/1/98	3/1/99	30 day	30 days	Functioning	100%
7/1/98	3/1/99	1 year (365 days)	244 days	Functioning (Pt Censored)	67%
7/1/96	7/1/97	3 years (1096 days)	367 days	Failed Dead	100%
7/1/96	7/1/97	3 years (1096 days)	367 days	Functioning (Pt Censored)	35%

Maximum Days of Follow-up

Patients were followed for up to 30 days for the 1-month statistics, up to 365 days for the 1-year statistics and up to 1096 days for the 3-year statistics starting at the day of transplant (day 1). The maximum follow-up time for patients in the center is reported on this line. If this maximum is less than 30 days for the 1-month, 365 for the 1-year or 1096 for the 3-year statistics, then the graft survival reported is not a reliable estimate of the true graft survival for the time period.

XI. Patient Survival

Table 11 reports patient survival (the fraction of patients that are still alive) at several time points after first transplantation for this organ. Patient survival is reported at the 1-month, 1-year, and 3-year reporting time points for each center, with corresponding rates for the U.S. Only those transplants that accrued between July 1, 1998 and June 30, 2003 were eligible for inclusion in the analyses. For the 1-month and 1-year statistics for non-thoracic organs, transplants accrued between January 1, 2001 and June 30, 2003 were included. Transplants which occur during the last 6 months of this cohort have only 6 months of follow-up available but can be included using censored data methods (described below) in the 1-year statistics. For the 1-month and 1-year statistics for thoracic organs, only transplants accrued between July 1, 2000 and December 31, 2002 were included. The first follow-up time point for these organs is at 1 year so they would not contribute any information to either the 1-month or the 1-year statistics. For the 3-year survival statistics, transplants accrued between July 1, 1998 and December 31, 2000 were included. Table 11 includes all patients who received their first transplant of this organ type during the accrual period. Patients who had previously received a transplant of this type, whether this previous transplant occurred during the accrual period or not, were not included. For this reason, the patient count in Table 11 may be smaller than the transplant count in Table 10.

Statistics are generally reported separately for adult (age 18 and older) and pediatric (age less than 18) patients. For lungs, statistics are reported instead for patients 12 and older and for children less than 12. In addition, statistics are reported separately by donor type

(cadaveric and living) for kidney and liver programs. There are some organs or subgroups of patients for which there were too few transplants or too few events to calculate meaningful statistics. The table below indicates which statistics are calculated for each organ.

Additional data from the Social Security Death Master File (SSDMF) and Centers for Medicare & Medicaid Services (CMS) have been incorporated into the patient survival rates. The SSDMF and CMS data are used in conjunction with OPTN data to determine whether each patient is alive at the end of the follow-up period.

Statistics Reported in Patient Survival Table (Table 11) by Organ

Organ	Counts of Transplants and Actual¹ Patient Survival		Expected² Patient Survival	
	Adult	Pediatric	Adult	Pediatric
Heart	Yes	Yes	Yes	Yes
Heart-Lung	Yes	No	No	No
Lung	Yes	Yes	Yes	Yes
Liver	Yes	Yes	Yes	Yes
Kidney	Yes	Yes	Yes	No
Intestine	Yes	Yes	No	No
Pancreas	Yes	No	No	No
Kidney-Pancreas	Yes	No	Yes	No

¹ Patient survival is the actual patient survival for those centers with complete data and was estimated using the Kaplan-Meier methodology at those centers with incomplete follow-up reporting.

² Expected patients survival is based on data from the entire nation to evaluate the survival expected for patients at each center, based upon their characteristics.

Number of Patients

The total number of patients reported to have received their first transplant of the organ type during the accrual periods for the 1-month, 1-year and 3-year patient survival analyses are shown for each patient age cohort. The 1-month and 1-year counts are the same since the accrued periods are the same. Note that this line reports counts of patients rather than transplants and therefore will not be the same as the count of transplants in Table 10.

Patients receiving living donor transplants are included only for kidneys and livers. The heart, lung, liver, kidney, and pancreas tables include only patients receiving single-organ transplants. The kidney-pancreas and heart-lung tables include only patients receiving kidney-pancreas or heart-lung transplants, not other multi-organ transplants. The intestine tables include patients receiving single-organ intestine, liver-intestine, pancreas-intestine, or pancreas-liver-intestine transplants, but not other multi-organ transplants. Patients receiving heterotopic heart and liver transplants are not included.

Patient Survival

A patient is counted as having died when OPTN follow-up information, SSDMF data, or CMS data indicates that a death has occurred prior to the reporting time point. In the case of conflicting deaths dates from various sources, the OPTN death date takes precedence. If there is no OPTN death date but conflicting dates from SSDMF and CMS, the SSDMF

date takes precedence. If the patient is not reported to have died in any source, the patient is assumed to be alive.

Patients who are transplanted in the last six months of the accrual period for the 1-year reporting time point are only followed for six months after transplant because the 1-year follow-up information is not yet available in the current OPTN data. The reporting time point for this subset of patients is six months after transplantation.

The follow-up time for each patient (days at risk) is the number of days from transplantation until death or the reporting time point (e.g., 1 month, 1 year, or 3 years) occurs, whichever is earliest. The “Patient Survival” at 1 month, 1 year and 3 years was calculated using the Kaplan-Meier (KM) method. It is an estimate for the fraction of all accrued patients who would still be alive at the reporting time point had they been followed to that time.

Expected Patient Survival

The “Expected Patient Survival” is the fraction of patients who would be expected to be alive at each reported time point, based on the national experience for patients similar to those at this center. The “Patient Survival” can be compared to the “Expected Patient Survival” as the percent alive at the reporting time points. If the “Patient Survival” is greater than the “Expected Patient Survival”, then the patient survival is better at this center than would be expected based on the national transplant experience for similar patients.

The national experience was analyzed using data for all accrued transplants at all facilities in the United States. A Cox proportional hazards regression model for time to death (Cox 1972) was fitted to the national data, which yielded the probability of survival to the reporting time point for each patient, based upon the characteristics of each patient and the reporting time point. The expected survival is the average of these computed probabilities. The characteristics accounted for in these calculations are reported below and are similar to those that have been used in previous reports. The “Expected Patient Survival” for each organ was adjusted for the patient characteristics as listed in the Model Description Tables. See Section XII for details on the calculation of the expected patient survival.

Ratio of Observed to Expected Deaths

For statistical comparisons, it is appropriate to compare the number of deaths observed during follow-up (which is shorter than the reporting time point for censored patients) to the number of deaths that would be expected during follow-up, rather than by comparison of observed and expected survival rates at the reporting time points. The ratio of observed to expected deaths compares the entire survival curve up to the reporting time point to the curve expected for patients with the same characteristics based on the national experience rather than just the survival at the reporting time point. A ratio greater than 1.00 indicates that there were more deaths at the center than would have been expected based on the national experience, while a ratio less than 1.00 indicates that there were fewer deaths at the center than would have been expected based on the national experience. For example, a ratio of 1.20 indicates that the death rate at the center was, on average, 20%

higher than the national rate. A ratio equal to 1.00 indicates that the death rates at the center are the same as the national death rates.

Random variation

The ratio reported is an estimate of the true ratio of death rates at the center relative to the national death rates. A ratio different from 1.00 indicates that the true death rates at the center differ from the national death rates. *However, the value of the ratio varies from year to year above and below the true ratio due to random variation.* Thus, the ratio could differ from 1.00 due to random variation, rather than due to a true difference between the death rates at the center and in the nation. Both the p-value and the confidence interval, discussed below, are designed to help in the interpretation of the ratio in the face of such random fluctuations.

95% Confidence Interval

The 95% confidence interval for the ratio of observed to expected deaths gives a range of plausible values for the true ratio of center to national death rates, in light of the observed ratio. The true ratio lies within this range 95% of the time. The confidence interval is a measure of how precisely we are able to estimate the ratio. If the 95% confidence interval includes 1.00, then the ratio is not significantly different than 1.00, which means that the death rates at the center are not significantly different than the national rates ($p < 0.05$).

P-value

The p-value measures the statistical significance (or evidence) for testing the (two-sided) hypothesis that the true ratio of death rates for the center versus the nation equals 1.00. A smaller p-value tends to occur when the ratio differs more greatly from 1.00 and when more patient data are used to calculate the ratio. A p-value less than 0.05 is often taken as evidence that the ratio of death rates truly differs from 1.00. Thus, a p-value less than 0.05 indicates that the difference between the death rates at the center and the nation is unlikely to have arisen from random fluctuations alone. The smaller the p-value, the more *statistically significant* is the difference between the national and the center death rates. A small p-value helps to rule out the possibility that the difference of the ratio from 1.00 could have arisen by chance. However, a small p-value does not indicate whether or not the magnitude of the difference between the death rates at the center and the nation is important. The actual quantitative value of the ratio reflects the clinical importance of the difference between the center and national death rates. A ratio that differs greatly from 1.00 is more important while a ratio in the range 0.95 to 1.05 is not as important.

The p-value was calculated by testing whether the observed number of deaths was statistically greater or less than the expected number of deaths at a center, based on the Poisson distribution for the observed number of deaths. The p-value is not shown if the expected graft survival was not calculated.

How do the rates at this center compare to those in the nation?

This line indicates whether the actual patient survival is statistically different than the expected patient survival based on the p-value on the previous line. If the p-value is less than or equal 0.05 then this line reads "Statistically Higher" or "Statistically Lower" depending on whether the actual patient survival is higher or lower than the expected patient survival. "Statistically Higher" survival corresponds to better outcomes, while "Statistically Lower" survival corresponds to worse outcomes. If the p-value is greater than 0.05 then this line reads "Not Significantly Different". This value is not shown if the expected patient survival is not calculated.

Percent Retransplanted

This line reports the percentage the total number of transplants that are retransplanted during the given timeframe -- one month, one year or three years. A transplant is considered as having been retransplanted if the patient receives a subsequent transplant of the same organ in that timeframe.

Follow-up Days Reported

This line reports the percentage of days that are targeted for inclusion during the follow-up period relative to the number of days that were actually reported with OPTN transplant recipient follow-up forms. Days which were covered only by data from the SSDMF or CMS death data are not included in this percentage even though these days are included in the analyses. The percentage of follow-up days reported gives a measure of the amount of time for which we have follow-up from both the center and outside sources.

For patients who did not die before the end of the period, the targeted number of days of follow-up is the entire period (30, 365, or 1096 days; see next section for details on maximum follow-up). For non-thoracic grafts transplanted during the last 6 months of the period, the targeted follow-up for 1 year survival is 6 months. For patients who died before the end of the period, the number of targeted days of follow-up is the number of days until death. The total number of days of follow-up reported for all patients are summed and divided by the total number of days of follow-up targeted to obtain the percent reported in this line. This percentage is a measure of how dependent the results are on outside sources of data. A low percent of follow-up days reported indicates that there may be under-ascertainment of mortality for the facility since the completeness of follow-up data is still partially determined by center reporting.

Maximum Days of Follow-up

Patients were followed for up to 30 days for the 1-month statistics, up to 365 days for the 1-year statistics and up to 1096 days for the 3-year statistics starting at the day of transplant (day 1). The maximum follow-up time for patients in the center is reported on this line. If this maximum is less than 30 days for the 1-month, 365 for the 1-year or 1096 for the 3-year statistics, then the patient survival reported is not a reliable estimate of the true patient survival for the time period.

XII. Technical Notes on Computing Expected Patient or Graft Survival

Model Fitting Methods

Survival models are adjusted for patient characteristics. The model used for each organ is adjusted for patient characteristics specific to that organ, so we refer to the list of characteristics generically with the notation x . Individual patients are numbered sequentially and we refer generically to the i^{th} patient. The specific values of the characteristics for patient i are denoted by x_i . Based on a model, we calculate $S_i(t)$, the probability of survival to time t for patients with characteristics x_i . The probability of survival at time point t_0 for patient i is $S_i(t_0)$. The average survival for the n accrued transplant patients at the center is calculated as $(1/n) \sum S_i(t_0)$ (Zucker). The expected number of events during follow-up for each patient was calculated as $-\ln(S_i(t_i))$ where $S_i(t_i)$ is the survival curve adjusted to the characteristics of patient i , and t_i is the follow-up time for that patient up to time t_0 (SAS/STAT User's Guide, Andersen, Collett). The expected number of events is $\sum -\ln(S_i(t_i))$ for the n transplants during the follow-up times for the patients at this center.

The Model Description Tables indicate the value of the coefficient for each characteristic in each of the models (beta) as well as the corresponding standard error and a p-value indicating if the coefficient is significantly different than 0. The relative risk (RR) for mortality or graft loss associated with a particular patient characteristic, compared to the reference group for that characteristic, can be calculated as $RR = \exp(\text{beta})$. For continuous variables, this is interpreted as the RR associated with 1 unit higher value (e.g. for ischemia time, it would be the RR associated with 1 hour longer time). However, keep in mind that these models are estimated for the purposes of adjustment, not for interpretation of coefficients. Some standard errors are large, which reflects uncertainty in the interpretation of the corresponding covariate, but does not adversely affect the accuracy of the adjusted estimate. For example, coefficients more negative than -7 can occur when there are no events in the corresponding group of patients.

Missing Data

In general, patients with missing values for variables entered into the model as categorical variables were included in their own category or in the reference group. Missing values for variables entered into the model as continuous values were replaced with the mean value (these mean values are included as footnotes in the model description tables). In some cases there is also a categorical variable indicating whether the value was missing. Note that characteristics such as age are included in some models as categorical variables and in others as continuous variables.

The model description tables list all the covariates included in each model and indicates (indirectly) how missing values were handled in each particular case. Looking at the variables corresponding to a particular characteristic or value in a model will indicate whether missing values are included in a category. If there is no category that includes the missing values, patients with missing values are included with the reference group. For continuous values, there may be a category for those with missing values, but patients

with missing values are also assigned a value for the continuous variable itself. For most variables, missing values are replaced with the mean. The mean values needed are listed in the footnotes for each model description table.

Notes on Diagnosis, Ischemia Time, and Other Continuous Variables

Adjusting for Diagnosis

In models adjusting for diagnosis, the diagnosis groups and reference groups differ by organ and in some cases by age group.

Kidney - 8 groups for adult models, 9 for pediatric models:

- glomerular diseases* (reference group for adult models)
- diabetes
- hypertensive nephrosclerosis
- polycystic kidney disease
- tubular and interstitial diseases
- renovascular and other vascular diseases
- congenital, familial, and metabolic kidney diseases (ref. for pediatric models)
- other/missing

* For the pediatric models, this group was broken into two groups:

- focal segmental glomerulosclerosis (FSG)
- other glomerular diseases

Liver - 6 groups for adult models, 7 for pediatric models:

- cholestatic liver disease/cirrhosis
- non-cholestatic cirrhosis (reference for adult models)
- acute hepatic necrosis (AHN)
- metabolic disease
- malignancy
- other/missing
- For pediatric models only: biliary atresia (reference for pediatric models)

Lung Models by Diagnosis

For lungs, there are separate models for each of 4 diagnosis groups. These diagnosis groups are:

- COPD/Emphysema and alpha-1-antitrypsin deficiency
- Primary pulmonary hypertension and Eisenmenger's
- Cystic fibrosis
- Idiopathic pulmonary fibrosis

Any diagnosis that could not be included with one of these four groups was included with the idiopathic pulmonary fibrosis group. This group is therefore labeled "Idiopathic pulmonary fibrosis and not classified" in the model description tables. This grouping

system was developed by the OPTN Thoracic Committee (as of November 2002). A complete mapping of diagnoses is available from the SRTR.

Ischemia Time and Other Continuous Variables

Ischemia time refers to cold ischemia time for kidney and liver transplants, total time for heart transplants and maximum time for lung transplants. In all models, ischemia time was measured in hours. Ischemia time was generally included in the models as both a linear and a quadratic term as well as an indicator for missing ischemia time. Ischemia time was centered on the average ischemia time by organ and missing values were set to the mean as described in the previous section. The mean values for each organ are included as footnotes in the corresponding model description tables.

Other instances in which continuous variables are included in the models are treated similarly. The continuous term is centered on the mean and missing values are set equal to the mean as described in the previous section.

Calculation of Individual Expected Survival

The tables of coefficients can be used to calculate the expected graft or patient survival at 1 month, 1 year, and 3 years for a specific patient.

Suppose that p is the number of patient characteristics listed in the appropriate model table and x_{ij} is the specific value of the j^{th} characteristic for the i^{th} patient. For patient i , we calculate

$$\mathbf{X}_i' \mathbf{b} = \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_p x_{ip}$$

where β_j is the j^{th} coefficient from the model.

For a categorical characteristic, the value is 1 if the patient falls into the category and 0 otherwise. For continuous characteristics, subtract the average value (or 3.5 for HLA mismatch) given in the model description table from the patient's value for that characteristics before multiplying by the corresponding β_i . Missing values are set to the mean value before this subtraction and thus result in a 0 for the patient. For example, for linear ischemia time, subtract the average ischemia time from the patient's ischemia time (in hours) before multiplying by the corresponding β_i . For quadratic ischemia time, subtract the average ischemia time from the patient's ischemia time (in hours) and square it before multiplying by the corresponding β_i .

The Cox model yields estimates of the coefficients β_j and the baseline survival curve, $S_0(t)$. For patient i , with characteristics

$$\mathbf{X}_i = X_{i1}, X_{i2}, \dots, X_{ip}$$

we calculate

$$S_i(t_0) = [S_0(t_0)]^{\exp(\mathbf{x}_i' \mathbf{b})},$$

the expected survival at time point t_0 ($t_0 = 1$ month, 1 year, or 3 years).

Then

$$S_{\text{Avg}}(t_0) = (1/N) \sum_{i=1}^N S_i(t_0)$$

is the expected survival at time t_0 for this facility.

We also calculate

$$S_i(t_i) = [S_0(t_i)]^{\exp(\mathbf{x}_i' \mathbf{b})}$$

Then $-\ln(S_i(t_i))$ is equal to the expected number of events for patient i during follow-up and

$$\sum_{i=1}^N -\ln[S_i(t_i)]$$

is the expected number of events during follow-up at the facility.

NOTATION:

N = number of transplants accrued

t_0 = reporting time point (e.g. 1 month, 1 year, 3 years)

t_i = end of follow-up for patient i during period. Note $t_i < t_0$ for patients who die or are lost to follow-up during the period.

$S_i(t_0)$ = fraction surviving to end of period adjusted to characteristics of patient i

$S_{\text{Avg}}(t_0)$ = expected fraction surviving to end of period adjusted to average characteristics of patients at the facility

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Graft Survival Model Description
1 Month after Transplant
Organ: Heart
Adult (Age 18+)

95.0% graft functioning at 1 Month when all covariates=0.
The index of concordance is 69.0%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.1341	0.1268	0.2903
Diagnosis: Congenital Heart Disease	1.1578	0.2246	<0.0001
Diagnosis: Other/Missing	0.1245	0.2752	0.6510
Donor age: 0-17	-0.4196	0.2045	0.0402
Donor age: 18-34	-0.3672	0.1301	0.0048
Donor: cadaveric COD cerebrovascular/stroke	0.1529	0.1304	0.2409
Ischemia time: linear (ref=average time*)	0.2315	0.0544	<0.0001
Ischemia time: missing (ref=average time*)	0.4738	0.1528	0.0019
Previous transplant of this organ type	0.1645	0.2763	0.5516
Recipient age: 50-64 (ref=35-49)	0.2213	0.1219	0.0695
Recipient creatinine: >1.5	0.5827	0.1194	<0.0001
Recipient diabetes: yes (ref=no diabetes/unknown diabetes)	-0.2787	0.1512	0.0654
Recipient height (cm) (ref=avg height*)	-0.0108	0.0043	0.0129
Recipient on ECMO	0.6975	0.5407	0.1971
Recipient on IABP	0.0721	0.2019	0.7210
Recipient on ventilator	1.0881	0.1980	<0.0001
Recipient race: Asian	-0.2472	0.4180	0.5542
Recipient race: Black	-0.2538	0.1833	0.1660
Recipient race: Multi-racial, other, unknown or missing	-0.4246	0.5049	0.4004
Recipient status 1A at transplant	0.3101	0.1208	0.0103

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
1 Year after Transplant
Organ: Heart
Adult (Age 18+)

90.7% graft functioning at 1 Year when all covariates=0.
The index of concordance is 66.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.0502	0.0873	0.5653
Diagnosis: Congenital Heart Disease	0.8456	0.1924	<0.0001
Diagnosis: Other/Missing	0.2241	0.1887	0.2349
Donor age: 0-17	-0.4323	0.1470	0.0033
Donor age: 18-34	-0.3793	0.0952	0.0001
Donor age: 50-64	0.0988	0.1224	0.4192
Donor age: 65+	-0.8237	1.0034	0.4117
Donor: cadaveric COD cerebrovascular/stroke	0.0818	0.0930	0.3789
Ischemia time: linear (ref=average time*)	0.1674	0.0384	<0.0001
Ischemia time: missing (ref=average time*)	0.4107	0.1093	0.0002
Previous transplant of this organ type	0.1432	0.2084	0.4919
Recipient age: 50-64 (ref=35-49)	0.1577	0.0980	0.1075
Recipient age: 65+ (ref=35-49)	0.4167	0.1314	0.0015
Recipient creatinine: >1.5	0.5732	0.0835	<0.0001
Recipient height (cm) (ref=avg height*)	-0.0108	0.0032	0.0007
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2877	0.1045	0.0059
Recipient medical condition: in ICU (ref=not hospitalized)	0.3509	0.0933	0.0002
Recipient on ECMO	0.5725	0.4779	0.2309
Recipient on ventilator	0.9895	0.1476	<0.0001

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
3 Years after Transplant
Organ: Heart
Adult (Age 18+)

80.3% graft functioning at 3 Years when all covariates=0.
The index of concordance is 61.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.1998	0.0695	0.0040
Diagnosis: Congenital Heart Disease	0.1640	0.2008	0.4139
Donor age: 0-17	-0.1947	0.0966	0.0439
Donor age: 18-34	-0.2283	0.0669	0.0006
Donor age: 65+	0.9839	0.4143	0.0175
Ischemia time: linear (ref=average time*)	0.1328	0.0282	<0.0001
Ischemia time: missing (ref=average time*)	0.3152	0.0856	0.0002
Previous transplant of this organ type	0.4186	0.1543	0.0067
Recipient age: 18-34 (ref=35-49)	0.2105	0.1114	0.0588
Recipient age: 65+ (ref=35-49)	0.1362	0.0966	0.1583
Recipient creatinine: <1 and <=1.5	0.0614	0.0751	0.4134
Recipient creatinine: >1.5	0.1885	0.0831	0.0233
Recipient diabetes: yes (ref=no diabetes/unknown diabetes)	0.1514	0.0771	0.0495
Recipient female	0.1116	0.0861	0.1951
Recipient height (cm) (ref=avg height*)	-0.0106	0.0034	0.0019
Recipient on IABP	0.2111	0.1211	0.0813
Recipient on ventilator	1.0205	0.1198	<0.0001
Recipient race: Asian	0.2601	0.2294	0.2569
Recipient race: Black	0.2241	0.0885	0.0113
Recipient race: Multi-racial, other, unknown or missing	-0.5802	0.3807	0.1274
Recipient status 1A at transplant	0.0853	0.0712	0.2311
Recipient weight (kg) (ref=avg weight*)	0.0035	0.0022	0.1129

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
1 Month after Transplant
Organ: Heart
Pediatric (Age 0-17)

94.6% graft functioning at 1 Month when all covariates=0.
The index of concordance is 66.5%.

Patient Characteristic Covariates	beta	standard error	p-value
Recipient cardiac index (=cardiac output/BSA in sq. m) (ref=avg cardiac index*)	-0.1719	0.1907	0.3673
Recipient on ventilator	1.1717	0.2806	<0.0001
Recipient race: Black	-0.4108	0.4346	0.3446

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
1 Year after Transplant
Organ: Heart
Pediatric (Age 0-17)

91.7% graft functioning at 1 Year when all covariates=0.
The index of concordance is 64.9%.

Patient Characteristic Covariates	beta	standard error	p-value
Recipient cardiac index (=cardiac output/BSA in sq. m) (ref=avg cardiac index*)	-0.1914	0.1435	0.1823
Recipient female	0.5200	0.2079	0.0124
Recipient on ventilator	0.8626	0.2187	0.0001
Recipient race: Black	0.2290	0.2533	0.3660
Recipient weight (kg) (ref=avg weight*)	0.0005	0.0051	0.9202

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
3 Years after Transplant
Organ: Heart
Pediatric (Age 0-17)

80.6% graft functioning at 3 Years when all covariates=0.
The index of concordance is 59.1%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 18-34	0.0960	0.2923	0.7427
Donor age: 50-64	1.4227	0.7866	0.0705
Donor female	0.1638	0.1690	0.3322
Donor: cadaveric COD anoxia	-0.2687	0.2062	0.1925
Recipient height (cm) (ref=avg height*)	-0.0048	0.0038	0.2096
Recipient on ECMO	0.2763	0.3516	0.4320
Recipient on IABP	-0.5801	1.0722	0.5885
Recipient race: Black	0.4468	0.1903	0.0189
Recipient weight (kg) (ref=avg weight*)	-0.0002	0.0067	0.9816

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Adult (Age 18+)

98.2% graft functioning at 1 Month when all covariates=0.
The index of concordance is 65.7%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.1064	0.2175	0.6248
Diagnosis: Diabetes*	-0.2064	0.0897	0.0213
Diagnosis: Hypertensive Nephrosclerosis*	-0.0316	0.0904	0.7264
Diagnosis: Other/Missing*	0.0749	0.0997	0.4522
Diagnosis: Polycystic Kidney Disease*	-0.2503	0.1232	0.0422
Diagnosis: Renovascular & Other Vascular Diseases*	-0.2401	0.1461	0.1002
Diagnosis: Tubular and Interstitial Diseases*	0.0765	0.1329	0.5649
Donor Hispanic/Latino	0.0114	0.1005	0.9095
Donor age: 0-17 (ref=35-49)	0.0521	0.2000	0.7943
Donor age: 18-34 (ref=35-49)	-0.1251	0.1426	0.3802
Donor age: 50-64 (ref=35-49)	0.3180	0.1418	0.0249
Donor age: 65+ (ref=35-49)	0.8632	0.2978	0.0038
Donor history of hypertension	0.2855	0.0924	0.0020
Donor meets expanded donor criteria for cadaveric kidney	-0.0076	0.1304	0.9537
Donor serum creatinine: >1.5	0.1287	0.1053	0.2216
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.1058	0.4523	0.8150
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0367	0.1269	0.7725
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.3045	0.0904	0.0008
Donor: cadaveric COD other (ref=COD Head trauma)	-0.5661	0.3235	0.0802
Donor: living (ref=cadaveric - COD Head trauma)	-0.1441	0.1142	0.2069
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.1336	0.1108	0.2278
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.0801	0.1216	0.5104
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1715	0.0939	0.0678
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.2234	0.1150	0.0520
HLA mismatch: 2 B mismatches (ref=0 mismatch)	-0.0259	0.1246	0.8356
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.2941	0.1020	0.0039
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.3550	0.3525	0.0001
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.0770	0.1864	0.6798
Ischemia time: linear (ref=average time**)	-0.0020	0.0048	0.6707
Ischemia time: missing (ref=average time**)	0.1184	0.0778	0.1279
Ischemia time: quadratic (ref=average time**)	0.0002	0.0002	0.3152
Peak PRA: 10-79 (ref=<10)	0.2086	0.1045	0.0458
Peak PRA: 80-100 (ref=<10)	0.7490	0.1513	<0.0001
Peak PRA: missing (ref=<10)	-0.7520	0.7127	0.2914
Previous transplant of this organ type	0.1137	0.1086	0.2952
Recipient age: 18-34 (ref=35-49)	0.2258	0.1462	0.1224
Recipient age: 50-64 (ref=35-49)	0.2323	0.1212	0.0553
Recipient age: 65+ (ref=35-49)	0.3088	0.1680	0.0661
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.0737	0.1692	0.6630
Recipient female	0.2320	0.0740	0.0017
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2912	0.1863	0.1179
Recipient medical condition: in ICU (ref=not hospitalized)	1.3972	0.4520	0.0020
Transplant procedure type en-bloc or double	0.5491	0.1577	0.0005
Year of ESRD treatment: missing (ref=years 3-5)	3.4628	0.3002	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.2766	0.0903	0.0022
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0629	0.0892	0.4803
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.0082	0.0953	0.9312
Recipient age by donor age interaction: 18-34 and 0-17 (ref=35-49 and 35-49)	-0.1189	0.2994	0.6911
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	-0.1850	0.2176	0.3952
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	-0.4605	0.2434	0.0585
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	-0.4214	0.6530	0.5187
Recipient age by donor age interaction: 50-64 and 0-17 (ref=35-49 and 35-49)	-0.2439	0.2794	0.3826
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	-0.0583	0.1931	0.7626
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	-0.2526	0.1793	0.1589
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-0.5632	0.3464	0.1039
Recipient age by donor age interaction: 65+ and 0-17 (ref=35-49 and 35-49)	-0.7682	0.5063	0.1292
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	-0.0628	0.2910	0.8290
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	-0.4268	0.2507	0.0887
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	-0.7037	0.3755	0.0609
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.1553	0.2469	0.5293
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.4258	0.2488	0.0871
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.2254	0.3128	0.4712
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	-0.0979	0.1450	0.4994
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.5443	0.1941	0.0050
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	-0.6169	1.2277	0.6153

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Adult (Age 18+)

98.4% graft functioning at 1 Month when all covariates=0.
The index of concordance is 65.7%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.1638	0.2987	0.5834
Diagnosis: Diabetes*	-0.3451	0.1098	0.0017
Diagnosis: Hypertensive Nephrosclerosis*	-0.0887	0.1033	0.3907
Diagnosis: Other/Missing*	-0.0887	0.1233	0.4721
Diagnosis: Polycystic Kidney Disease*	-0.3329	0.1508	0.0272
Diagnosis: Renovascular & Other Vascular Diseases*	-0.2149	0.1607	0.1812
Diagnosis: Tubular and Interstitial Diseases*	-0.0444	0.1685	0.7921
Donor Hispanic/Latino	0.0899	0.1083	0.4068
Donor age: 0-17 (ref=35-49)	0.1664	0.2162	0.4415
Donor age: 18-34 (ref=35-49)	-0.0217	0.1856	0.9067
Donor age: 50-64 (ref=35-49)	0.3948	0.1833	0.0313
Donor age: 65+ (ref=35-49)	1.0570	0.3458	0.0022
Donor history of hypertension	0.2823	0.0936	0.0026
Donor meets expanded donor criteria for cadaveric kidney	-0.0304	0.1471	0.8363
Donor serum creatinine: >1.5	0.1119	0.1059	0.2906
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.1177	0.4528	0.7949
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0224	0.1276	0.8607
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.2894	0.0931	0.0019
Donor: cadaveric COD other (ref=COD Head trauma)	-0.5907	0.3240	0.0683
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.0157	0.1461	0.9145
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.0119	0.1569	0.9394
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1651	0.1114	0.1385
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.1235	0.1444	0.3925
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.0307	0.1559	0.8439
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.3255	0.1171	0.0054
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.7367	0.5963	0.0036
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.1347	0.2316	0.5609
Ischemia time: linear (ref=average time**)	0.0134	0.0072	0.0623
Ischemia time: missing (ref=average time**)	0.3385	0.0947	0.0004
Ischemia time: quadratic (ref=average time**)	-0.0002	0.0003	0.5330
Peak PRA: 10-79 (ref=<10)	0.0860	0.1212	0.4780
Peak PRA: 80-100 (ref=<10)	0.5429	0.1708	0.0015
Peak PRA: missing (ref=<10)	0.4616	1.0049	0.6460
Previous transplant of this organ type	0.1797	0.1237	0.1465
Recipient age: 18-34 (ref=35-49)	0.4461	0.1919	0.0201
Recipient age: 50-64 (ref=35-49)	0.3423	0.1591	0.0314
Recipient age: 65+ (ref=35-49)	0.5488	0.2111	0.0093
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.1494	0.2034	0.4627
Recipient female	0.1514	0.0918	0.0992
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3806	0.2192	0.0824
Recipient medical condition: in ICU (ref=not hospitalized)	1.4382	0.5127	0.0050
Transplant procedure type en-bloc or double	0.5042	0.1589	0.0015
Year of ESRD treatment: missing (ref=years 3-5)	3.5142	0.3169	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.2268	0.1256	0.0711
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0035	0.1063	0.9739
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.0324	0.1029	0.7529
Recipient age by donor age interaction: 18-34 and 0-17 (ref=35-49 and 35-49)	-0.3388	0.3231	0.2943
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	-0.3216	0.2835	0.2567
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	-0.6653	0.3160	0.0353
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	-0.4215	0.6739	0.5316
Recipient age by donor age interaction: 50-64 and 0-17 (ref=35-49 and 35-49)	-0.3475	0.2970	0.2420
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	-0.2201	0.2448	0.3686
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	-0.2553	0.2191	0.2440
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-0.7251	0.3795	0.0561
Recipient age by donor age interaction: 65+ and 0-17 (ref=35-49 and 35-49)	-0.9896	0.5211	0.0576
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	-0.4577	0.3566	0.1993
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	-0.6488	0.2936	0.0271
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	-1.0615	0.4176	0.0110
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.1882	0.3090	0.5424
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.3068	0.2901	0.2902
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.3498	0.3504	0.3181
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	-0.0276	0.1720	0.8725
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.4548	0.2207	0.0393
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	-9.4612	147.5480	0.9489

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Adult (Age 18+)

97.6% graft functioning at 1 Month when all covariates=0.
The index of concordance is 65.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.4823	0.3222	0.1345
Diagnosis: Diabetes*	0.0475	0.1565	0.7615
Diagnosis: Hypertensive Nephrosclerosis*	0.0025	0.1933	0.9898
Diagnosis: Other/Missing*	0.3852	0.1716	0.0248
Diagnosis: Polycystic Kidney Disease*	-0.0787	0.2159	0.7154
Diagnosis: Renovascular & Other Vascular Diseases*	-0.5622	0.3697	0.1283
Diagnosis: Tubular and Interstitial Diseases*	0.3038	0.2185	0.1645
Donor Hispanic/Latino	-0.6419	0.3176	0.0433
Donor age: 11-17 (ref==35-49)	-11.0109	1037.7366	0.9915
Donor age: 18-34 (ref=35-49)	-0.2655	0.2309	0.2503
Donor age: 50-64 (ref=35-49)	0.3084	0.2404	0.1995
Donor age: 65+ (ref=35-49)	0.3839	0.7193	0.5935
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.3382	0.1712	0.0481
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.1859	0.1943	0.3388
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1983	0.1776	0.2643
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.2858	0.2088	0.1711
HLA mismatch: 2 B mismatches (ref=0 mismatch)	-0.0682	0.2220	0.7585
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.2358	0.2128	0.2677
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.2796	0.4576	0.0052
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.0709	0.3262	0.8280
Ischemia time: linear (ref=average time**)	-0.0272	0.0360	0.4504
Ischemia time: missing (ref=average time**)	-0.5425	0.3960	0.1707
Ischemia time: quadratic (ref=average time**)	-0.0047	0.0030	0.1175
Peak PRA: 10-79 (ref=<10)	0.5077	0.2062	0.0138
Peak PRA: 80-100 (ref=<10)	1.5078	0.3301	<0.0001
Peak PRA: missing (ref=<10)	-1.0187	1.0079	0.3121
Previous transplant of this organ type	-0.0528	0.2466	0.8305
Recipient age: 18-34 (ref=35-49)	-0.0628	0.2310	0.7858
Recipient age: 50-64 (ref=35-49)	0.1275	0.1944	0.5121
Recipient age: 65+ (ref=35-49)	-0.1070	0.2942	0.7160
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	0.5688	0.3626	0.1167
Recipient female	0.3774	0.1280	0.0032
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.0047	0.3593	0.9895
Recipient medical condition: in ICU (ref=not hospitalized)	0.9541	1.0055	0.3427
Year of ESRD treatment: missing (ref=years 3-5)	3.7243	1.0398	0.0003
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3738	0.1433	0.0091
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1971	0.1684	0.2420
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.1843	0.2549	0.4698
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	0.0659	0.3481	0.8499
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	-0.2714	0.3941	0.4910
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	-10.4092	245.8277	0.9662
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	0.1452	0.3219	0.6519
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	-0.4169	0.3368	0.2157
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-0.4669	1.2440	0.7074
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	0.8901	0.5144	0.0836
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	0.0591	0.5440	0.9134
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	0.5109	0.9645	0.5963
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0463	0.4135	0.9108
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.8749	0.5099	0.0862
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.3223	0.7911	0.6837
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	-0.2694	0.2754	0.3280
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.8014	0.4229	0.0581
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	-0.2427	1.4217	0.8644

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Adult (Age 18+)

94.4% graft functioning at 1 Year when all covariates=0.
The index of concordance is 67.1%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.0871	0.1639	0.5949
Diagnosis: Diabetes*	0.0519	0.0561	0.3548
Diagnosis: Hypertensive Nephrosclerosis*	0.0058	0.0604	0.9241
Diagnosis: Other/Missing*	-0.0219	0.0691	0.7516
Diagnosis: Polycystic Kidney Disease*	-0.3014	0.0843	0.0003
Diagnosis: Renovascular & Other Vascular Diseases*	-0.1055	0.0907	0.2443
Diagnosis: Tubular and Interstitial Diseases*	0.0402	0.0923	0.6632
Donor Hispanic/Latino	0.0066	0.0668	0.9208
Donor age: 0-17 (ref=35-49)	-0.1531	0.0810	0.0588
Donor age: 18-34 (ref=35-49)	-0.3283	0.0561	<0.0001
Donor age: 50-64 (ref=35-49)	0.0552	0.0585	0.3452
Donor age: 65+ (ref=35-49)	0.4352	0.1032	<0.0001
Donor history of hypertension	0.1693	0.0584	0.0037
Donor meets expanded donor criteria for cadaveric kidney	0.1852	0.0813	0.0228
Donor race: Asian (ref=White)	-0.0818	0.1442	0.5704
Donor race: Black (ref=White)	0.1510	0.0598	0.0115
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.3471	0.1583	0.0284
Donor serum creatinine: >1.5	0.0802	0.0667	0.2289
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.1208	0.2808	0.6670
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1572	0.0782	0.0444
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.2293	0.0579	0.0001
Donor: cadaveric COD other (ref=COD Head trauma)	-0.0668	0.1618	0.6797
Donor: living (ref=cadaveric - COD Head trauma)	-0.2459	0.0750	0.0010
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.0268	0.0689	0.6975
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.0374	0.0806	0.6428
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1183	0.0596	0.0471
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.0153	0.0715	0.8310
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.0843	0.0821	0.3046
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.2396	0.0647	0.0002
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	0.8219	0.3006	0.0062
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.2060	0.1198	0.0855
Ischemia time: linear (ref=average time**)	0.0034	0.0031	0.2687
Ischemia time: missing (ref=average time**)	0.0986	0.0506	0.0511
Ischemia time: quadratic (ref=average time**)	0.0001	0.0001	0.2815
Peak PRA: 10-79 (ref=<10)	0.0590	0.0669	0.3775
Peak PRA: 80-100 (ref=<10)	0.5690	0.0995	<0.0001
Peak PRA: missing (ref=<10)	-0.2594	0.3815	0.4966
Previous transplant of this organ type	0.1060	0.0720	0.1411
Recipient age: 18-34 (ref=35-49)	0.0500	0.0665	0.4523
Recipient age: 50-64 (ref=35-49)	0.2415	0.0504	<0.0001
Recipient age: 65+ (ref=35-49)	0.4512	0.0657	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.2075	0.1211	0.0867
Recipient female	0.0078	0.0489	0.8740
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.4610	0.1135	<0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	1.1359	0.3555	0.0014
Recipient race: Asian (ref=White)	-0.3000	0.1123	0.0075
Recipient race: Black (ref=White)	0.0594	0.0506	0.2405
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0415	0.1417	0.7693
Year of ESRD treatment: missing (ref=years 3-5)	3.2117	0.2826	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.4112	0.0608	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1323	0.0573	0.0209
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.0620	0.0605	0.3056
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0172	0.1863	0.9265
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.1298	0.1575	0.4098
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.0602	0.2101	0.7743
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	0.0954	0.0949	0.3151
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.4037	0.1306	0.0020
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	0.0470	0.5885	0.9364

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Adult (Age 18+)

94.2% graft functioning at 1 Year when all covariates=0.
The index of concordance is 65.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.1876	0.2065	0.3636
Diagnosis: Diabetes*	-0.0287	0.0668	0.6670
Diagnosis: Hypertensive Nephrosclerosis*	-0.0199	0.0683	0.7712
Diagnosis: Other/Missing*	-0.1459	0.0835	0.0805
Diagnosis: Polycystic Kidney Disease*	-0.3499	0.1001	0.0005
Diagnosis: Renovascular & Other Vascular Diseases*	-0.0644	0.0996	0.5175
Diagnosis: Tubular and Interstitial Diseases*	-0.0244	0.1126	0.8283
Donor Hispanic/Latino	0.0324	0.0727	0.6553
Donor age: 0-17 (ref=35-49)	-0.1610	0.0843	0.0561
Donor age: 18-34 (ref=35-49)	-0.3852	0.0715	<0.0001
Donor age: 50-64 (ref=35-49)	0.1151	0.0743	0.1213
Donor age: 65+ (ref=35-49)	0.4965	0.1200	<0.0001
Donor history of hypertension	0.1679	0.0590	0.0044
Donor meets expanded donor criteria for cadaveric kidney	0.1298	0.0901	0.1498
Donor race: Asian (ref=White)	-0.0185	0.1599	0.9078
Donor race: Black (ref=White)	0.1718	0.0676	0.0111
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1879	0.2065	0.3628
Donor serum creatinine: >1.5	0.0782	0.0670	0.2430
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.1301	0.2810	0.6433
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1387	0.0786	0.0775
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.2032	0.0592	0.0006
Donor: cadaveric COD other (ref=COD Head trauma)	-0.1063	0.1621	0.5119
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.1212	0.0873	0.1652
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.1059	0.0969	0.2745
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1027	0.0691	0.1372
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.0800	0.0869	0.3574
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.0578	0.0960	0.5472
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.2495	0.0729	0.0006
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.0110	0.5834	0.0831
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.3075	0.1414	0.0297
Ischemia time: linear (ref=average time**)	0.0153	0.0046	0.0009
Ischemia time: missing (ref=average time**)	0.2576	0.0611	<0.0001
Ischemia time: quadratic (ref=average time**)	-0.0003	0.0002	0.2109
Peak PRA: 10-79 (ref=<10)	0.0229	0.0750	0.7603
Peak PRA: 80-100 (ref=<10)	0.3998	0.1110	0.0003
Peak PRA: missing (ref=<10)	0.0162	0.7103	0.9818
Previous transplant of this organ type	0.1706	0.0810	0.0353
Recipient age: 18-34 (ref=35-49)	0.0690	0.0812	0.3951
Recipient age: 50-64 (ref=35-49)	0.2345	0.0589	0.0001
Recipient age: 65+ (ref=35-49)	0.4388	0.0754	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.3168	0.1444	0.0282
Recipient female	-0.0351	0.0589	0.5508
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.4551	0.1370	0.0009
Recipient medical condition: in ICU (ref=not hospitalized)	1.1294	0.4124	0.0062
Recipient race: Asian (ref=White)	-0.2502	0.1181	0.0342
Recipient race: Black (ref=White)	0.0677	0.0552	0.2195
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1074	0.1729	0.5345
Year of ESRD treatment: missing (ref=years 3-5)	3.3121	0.2961	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.2564	0.0798	0.0013
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0865	0.0675	0.1997
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.0874	0.0651	0.1795
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0886	0.2319	0.7024
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.0459	0.1856	0.8045
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0690	0.2357	0.7698
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	0.0986	0.1089	0.3653
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.3616	0.1469	0.0138
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	0.1497	1.2288	0.9030

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Adult (Age 18+)

96.0% graft functioning at 1 Year when all covariates=0.
The index of concordance is 64.0%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.0938	0.2707	0.7289
Diagnosis: Diabetes*	0.2325	0.1038	0.0251
Diagnosis: Hypertensive Nephrosclerosis*	-0.0456	0.1348	0.7353
Diagnosis: Other/Missing*	0.2371	0.1241	0.0560
Diagnosis: Polycystic Kidney Disease*	-0.1887	0.1573	0.2302
Diagnosis: Renovascular & Other Vascular Diseases*	-0.4305	0.2319	0.0634
Diagnosis: Tubular and Interstitial Diseases*	0.1740	0.1619	0.2824
Donor Hispanic/Latino	-0.4028	0.2190	0.0659
Donor age: 11-17 (ref=35-49)	-7.9129	174.0312	0.9637
Donor age: 18-34 (ref=35-49)	-0.2375	0.0912	0.0093
Donor age: 50-64 (ref=35-49)	-0.0490	0.0998	0.6234
Donor age: 65+ (ref=35-49)	0.3113	0.2764	0.2600
Donor race: Asian (ref=White)	0.1809	0.4281	0.6726
Donor race: Black (ref=White)	0.0638	0.2438	0.7936
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.5294	0.3326	0.1115
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.1450	0.1128	0.1988
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.1193	0.1476	0.4187
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1370	0.1204	0.2550
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.2825	0.1372	0.0395
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.1593	0.1659	0.3368
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.1712	0.1442	0.2351
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	0.9868	0.3694	0.0076
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.1423	0.2355	0.5457
Ischemia time: linear (ref=average time**)	0.0042	0.0121	0.7270
Ischemia time: missing (ref=average time**)	-0.1146	0.1903	0.5470
Ischemia time: quadratic (ref=average time**)	0.0001	0.0003	0.7481
Peak PRA: 10-79 (ref=<10)	0.1292	0.1496	0.3877
Peak PRA: 80-100 (ref=<10)	1.3935	0.2276	<0.0001
Peak PRA: missing (ref=<10)	-0.1958	0.4539	0.6661
Previous transplant of this organ type	-0.1775	0.1709	0.2992
Recipient age: 18-34 (ref=35-49)	0.0436	0.1178	0.7112
Recipient age: 50-64 (ref=35-49)	0.2799	0.0991	0.0047
Recipient age: 65+ (ref=35-49)	0.4885	0.1380	0.0004
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	0.3440	0.2650	0.1943
Recipient female	0.1012	0.0890	0.2556
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.4044	0.2045	0.0480
Recipient medical condition: in ICU (ref=not hospitalized)	1.0231	0.7101	0.1497
Recipient race: Asian (ref=White)	-0.8409	0.4289	0.0499
Recipient race: Black (ref=White)	0.0556	0.2359	0.8135
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0338	0.3239	0.9169
Year of ESRD treatment: missing (ref=years 3-5)	2.8418	1.0161	0.0052
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.6356	0.0982	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.3033	0.1107	0.0062
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.0022	0.1712	0.9899
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.2071	0.3153	0.5114
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.3619	0.3028	0.2320
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.3907	0.5079	0.4418
Recipient sex by peak PRA interaction: female and 10-79 (ref=male and <10)	0.1137	0.2000	0.5698
Recipient sex by peak PRA interaction: female and 80+ (ref=male and <10)	-0.6007	0.2933	0.0406
Recipient sex by peak PRA interaction: female and missing (ref=male and <10)	-0.0902	0.6781	0.8942

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Adult (Age 18+)

89.9% graft functioning at 3 Years when all covariates=0.
The index of concordance is 65.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.0726	0.1079	0.5008
Diagnosis: Diabetes*	0.2320	0.0401	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.1957	0.0427	<0.0001
Diagnosis: Other/Missing*	0.0840	0.0491	0.0873
Diagnosis: Polycystic Kidney Disease*	-0.2459	0.0610	0.0001
Diagnosis: Renovascular & Other Vascular Diseases*	0.2129	0.0598	0.0004
Diagnosis: Tubular and Interstitial Diseases*	0.1148	0.0609	0.0596
Donor Hispanic/Latino	-0.0027	0.0477	0.9551
Donor age: 0-17 (ref=35-49)	-0.0190	0.0530	0.7203
Donor age: 18-34 (ref=35-49)	-0.0902	0.0385	0.0191
Donor age: 50-64 (ref=35-49)	0.2230	0.0421	<0.0001
Donor age: 65+ (ref=35-49)	0.3679	0.0798	<0.0001
Donor female	0.0679	0.0282	0.0161
Donor history of hypertension	0.1746	0.0424	<0.0001
Donor meets expanded donor criteria for cadaveric kidney	0.1294	0.0584	0.0267
Donor race: Asian (ref=White)	-0.0562	0.1010	0.5776
Donor race: Black (ref=White)	0.1453	0.0429	0.0007
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.0933	0.1275	0.4644
Donor serum creatinine: >1.5	0.0835	0.0485	0.0852
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.0024	0.1544	0.9874
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0219	0.0572	0.7015
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1401	0.0412	0.0007
Donor: cadaveric COD other (ref=COD Head trauma)	0.0091	0.1050	0.9312
Donor: living (ref=cadaveric - COD Head trauma)	-0.2122	0.0540	0.0001
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.0557	0.0479	0.2442
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.1050	0.0513	0.0405
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.0899	0.0392	0.0219
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.0946	0.0499	0.0583
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.1594	0.0533	0.0028
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.1561	0.0444	0.0004
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	-0.0923	0.1810	0.6103
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.0159	0.0767	0.8359
Ischemia time: linear (ref=average time**)	0.0057	0.0021	0.0063
Ischemia time: missing (ref=average time**)	0.0505	0.0369	0.1714
Ischemia time: quadratic (ref=average time**)	0.0001	0.0001	0.0880
Peak PRA: 10-79 (ref=<10)	0.0905	0.0343	0.0083
Peak PRA: 80-100 (ref=<10)	0.3397	0.0497	<0.0001
Peak PRA: missing (ref=<10)	-0.1141	0.1544	0.4600
Previous transplant of this organ type	0.2035	0.0519	0.0001
Recipient age: 18-34 (ref=35-49)	0.1238	0.0617	0.0449
Recipient age: 50-64 (ref=35-49)	0.2395	0.0496	<0.0001
Recipient age: 65+ (ref=35-49)	0.5650	0.0642	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.2454	0.0497	<0.0001
Recipient female	0.0111	0.0492	0.8212
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1270	0.0912	0.1635
Recipient medical condition: in ICU (ref=not hospitalized)	0.9388	0.1704	<0.0001
Recipient race: Asian (ref=White)	-0.4655	0.1442	0.0012
Recipient race: Black (ref=White)	0.2864	0.0552	<0.0001
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0173	0.1934	0.9286
Year of ESRD treatment: missing (ref=years 3-5)	2.3005	0.2492	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3099	0.0409	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0820	0.0384	0.0330
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.0135	0.0469	0.7729
Recipient age by recipient race interaction: 18-34 and Asian (ref=35-49 and White)	-0.1403	0.2489	0.5729
Recipient age by recipient race interaction: 18-34 and Black (ref=35-49 and White)	-0.0547	0.0813	0.5010
Recipient age by recipient race interaction: 18-34 and multi-racial/other/unknown/missing (ref=35-49 and White)	0.1952	0.2982	0.5128
Recipient age by recipient race interaction: 50-64 and Asian (ref=35-49 and White)	0.2821	0.1822	0.1214
Recipient age by recipient race interaction: 50-64 and Black (ref=35-49 and White)	-0.2125	0.0708	0.0027
Recipient age by recipient race interaction: 50-64 and multi-racial/other/unknown/missing (ref=35-49 and White)	0.0407	0.2377	0.8640
Recipient age by recipient race interaction: 65+ and Asian (ref=35-49 and White)	0.1003	0.2741	0.7144
Recipient age by recipient race interaction: 65+ and Black (ref=35-49 and White)	-0.2248	0.1075	0.0365
Recipient age by recipient race interaction: 65+ and multi-racial/other/unknown/missing (ref=35-49 and White)	-0.0592	0.3404	0.8619
Recipient age by recipient sex interaction: 18-34 and female (ref=35-49 and male)	0.1758	0.0774	0.0231
Recipient age by recipient sex interaction: 50-64 and female (ref=35-49 and male)	-0.0386	0.0666	0.5621
Recipient age by recipient sex interaction: 65+ and female (ref=35-49 and male)	-0.1401	0.0945	0.1385

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Adult (Age 18+)

89.0% graft functioning at 3 Years when all covariates=0.
The index of concordance is 63.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.0609	0.1360	0.6543
Diagnosis: Diabetes*	0.1981	0.0469	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.1577	0.0481	0.0010
Diagnosis: Other/Missing*	0.0536	0.0580	0.3555
Diagnosis: Polycystic Kidney Disease*	-0.2499	0.0688	0.0003
Diagnosis: Renovascular & Other Vascular Diseases*	0.1587	0.0677	0.0191
Diagnosis: Tubular and Interstitial Diseases*	-0.0126	0.0748	0.8665
Donor Hispanic/Latino	-0.0173	0.0532	0.7453
Donor age: 0-17 (ref=35-49)	-0.0410	0.0554	0.4592
Donor age: 18-34 (ref=35-49)	-0.1451	0.0483	0.0027
Donor age: 50-64 (ref=35-49)	0.2427	0.0527	<0.0001
Donor age: 65+ (ref=35-49)	0.3966	0.0905	<0.0001
Donor female	0.0588	0.0328	0.0736
Donor history of hypertension	0.1632	0.0428	0.0001
Donor meets expanded donor criteria for cadaveric kidney	0.1018	0.0641	0.1121
Donor race: Asian (ref=White)	-0.0339	0.1118	0.7615
Donor race: Black (ref=White)	0.1697	0.0487	0.0005
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1046	0.1659	0.5284
Donor serum creatinine: >1.5	0.0824	0.0488	0.0914
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.0057	0.1545	0.9703
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0114	0.0575	0.8434
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1199	0.0425	0.0048
Donor: cadaveric COD other (ref=COD Head trauma)	-0.0205	0.1053	0.8458
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.0297	0.0604	0.6228
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.1047	0.0601	0.0815
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.0685	0.0448	0.1264
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.0721	0.0603	0.2320
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.1774	0.0609	0.0036
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.1677	0.0492	0.0006
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	-0.2968	0.3582	0.4073
HLA mismatch: not a zero mismatch (ref=0 mismatch)	-0.0083	0.0885	0.9252
Ischemia time: linear (ref=average time**)	0.0075	0.0026	0.0047
Ischemia time: missing (ref=average time**)	0.0920	0.0476	0.0530
Ischemia time: quadratic (ref=average time**)	0.0001	0.0001	0.1134
Peak PRA: 10-79 (ref=<10)	0.0647	0.0387	0.0939
Peak PRA: 80-100 (ref=<10)	0.3358	0.0533	<0.0001
Peak PRA: missing (ref=<10)	0.1798	0.3355	0.5920
Previous transplant of this organ type	0.1585	0.0575	0.0058
Recipient age: 18-34 (ref=35-49)	0.0989	0.0775	0.2017
Recipient age: 50-64 (ref=35-49)	0.2567	0.0580	<0.0001
Recipient age: 65+ (ref=35-49)	0.5563	0.0732	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.2750	0.0563	<0.0001
Recipient female	0.0066	0.0572	0.9077
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1435	0.1094	0.1895
Recipient medical condition: in ICU (ref=not hospitalized)	1.0342	0.1878	<0.0001
Recipient race: Asian (ref=White)	-0.4933	0.1584	0.0018
Recipient race: Black (ref=White)	0.3096	0.0611	<0.0001
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.1244	0.2170	0.5662
Year of ESRD treatment: missing (ref=years 3-5)	1.9254	0.3084	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.2785	0.0519	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0955	0.0440	0.0299
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.0332	0.0497	0.5044
Recipient age by recipient race interaction: 18-34 and Asian (ref=35-49 and White)	-0.0223	0.2885	0.9384
Recipient age by recipient race interaction: 18-34 and Black (ref=35-49 and White)	-0.0515	0.0967	0.5946
Recipient age by recipient race interaction: 18-34 and multi-racial/other/unknown/missing (ref=35-49 and White)	0.0383	0.3877	0.9213
Recipient age by recipient race interaction: 50-64 and Asian (ref=35-49 and White)	0.3362	0.1982	0.0899
Recipient age by recipient race interaction: 50-64 and Black (ref=35-49 and White)	-0.2494	0.0787	0.0015
Recipient age by recipient race interaction: 50-64 and multi-racial/other/unknown/missing (ref=35-49 and White)	-0.0545	0.2672	0.8385
Recipient age by recipient race interaction: 65+ and Asian (ref=35-49 and White)	0.1578	0.2882	0.5841
Recipient age by recipient race interaction: 65+ and Black (ref=35-49 and White)	-0.2049	0.1155	0.0761
Recipient age by recipient race interaction: 65+ and multi-racial/other/unknown/missing (ref=35-49 and White)	-0.1957	0.3874	0.6135
Recipient age by recipient sex interaction: 18-34 and female (ref=35-49 and male)	0.1134	0.0947	0.2312
Recipient age by recipient sex interaction: 50-64 and female (ref=35-49 and male)	-0.0255	0.0761	0.7375
Recipient age by recipient sex interaction: 65+ and female (ref=35-49 and male)	-0.1192	0.1047	0.2547

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Adult (Age 18+)

92.6% graft functioning at 3 Years when all covariates=0.
The index of concordance is 62.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.3888	0.1784	0.0293
Diagnosis: Diabetes*	0.3102	0.0779	0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.2918	0.0941	0.0019
Diagnosis: Other/Missing*	0.1725	0.0932	0.0641
Diagnosis: Polycystic Kidney Disease*	-0.2560	0.1332	0.0547
Diagnosis: Renovascular & Other Vascular Diseases*	0.3995	0.1279	0.0018
Diagnosis: Tubular and Interstitial Diseases*	0.4142	0.1064	0.0001
Donor Hispanic/Latino	-0.0827	0.1498	0.5809
Donor age: 11-17 (ref=35-49)	-8.0824	98.4516	0.9346
Donor age: 18-34 (ref=35-49)	0.0002	0.0646	0.9970
Donor age: 50-64 (ref=35-49)	0.1951	0.0727	0.0073
Donor age: 65+ (ref=35-49)	0.3227	0.2336	0.1672
Donor female	0.1125	0.0558	0.0440
Donor race: Asian (ref=White)	0.1246	0.3225	0.6993
Donor race: Black (ref=White)	0.1862	0.1741	0.2849
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1890	0.2628	0.4720
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.1062	0.0791	0.1794
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.0740	0.1011	0.4642
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1545	0.0832	0.0633
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.2153	0.1018	0.0345
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.0669	0.1170	0.5676
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.0953	0.1063	0.3698
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	0.1318	0.2251	0.5582
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.1409	0.1598	0.3778
Ischemia time: linear (ref=average time**)	0.0086	0.0078	0.2696
Ischemia time: missing (ref=average time**)	-0.1299	0.1492	0.3839
Ischemia time: quadratic (ref=average time**)	-0.0006	0.0004	0.1724
Peak PRA: 10-79 (ref=<10)	0.1913	0.0741	0.0099
Peak PRA: 80-100 (ref=<10)	0.2667	0.1566	0.0885
Peak PRA: missing (ref=<10)	-0.1700	0.1755	0.3326
Previous transplant of this organ type	0.4723	0.1251	0.0002
Recipient age: 18-34 (ref=35-49)	0.1306	0.1062	0.2191
Recipient age: 50-64 (ref=35-49)	0.1788	0.0980	0.0681
Recipient age: 65+ (ref=35-49)	0.5901	0.1383	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.1209	0.1480	0.4139
Recipient female	0.0234	0.0980	0.8116
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.0870	0.1659	0.6002
Recipient medical condition: in ICU (ref=not hospitalized)	0.6855	0.4120	0.0961
Recipient race: Asian (ref=White)	-0.5007	0.4199	0.2331
Recipient race: Black (ref=White)	0.0325	0.1985	0.8699
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.3458	0.4482	0.4404
Year of ESRD treatment: missing (ref=years 3-5)	4.1542	0.4291	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3231	0.0760	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.0358	0.0845	0.6716
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.3326	0.1349	0.0137
Recipient age by recipient race interaction: 18-34 and Asian (ref=35-49 and White)	-0.4356	0.5109	0.3939
Recipient age by recipient race interaction: 18-34 and Black (ref=35-49 and White)	0.1542	0.1711	0.3676
Recipient age by recipient race interaction: 18-34 and multi-racial/other/unknown/missing (ref=35-49 and White)	0.5335	0.5243	0.3089
Recipient age by recipient race interaction: 50-64 and Asian (ref=35-49 and White)	-0.1900	0.4942	0.7007
Recipient age by recipient race interaction: 50-64 and Black (ref=35-49 and White)	0.0016	0.1780	0.9928
Recipient age by recipient race interaction: 50-64 and multi-racial/other/unknown/missing (ref=35-49 and White)	0.2810	0.5250	0.5925
Recipient age by recipient race interaction: 65+ and Asian (ref=35-49 and White)	-0.4719	1.0629	0.6570
Recipient age by recipient race interaction: 65+ and Black (ref=35-49 and White)	-0.4615	0.3363	0.1700
Recipient age by recipient race interaction: 65+ and multi-racial/other/unknown/missing (ref=35-49 and White)	0.2516	0.7183	0.7261
Recipient age by recipient sex interaction: 18-34 and female (ref=35-49 and male)	0.2520	0.1388	0.0695
Recipient age by recipient sex interaction: 50-64 and female (ref=35-49 and male)	-0.0854	0.1402	0.5427
Recipient age by recipient sex interaction: 65+ and female (ref=35-49 and male)	-0.1931	0.2307	0.4025

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Pediatric (Age 0-17)

96.2% graft functioning at 1 Month when all covariates=0.
The index of concordance is 68.6%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	0.0619	0.6480	0.9238
Donor age: 18-34 (ref=35-49)	-0.2165	0.4938	0.6611
Donor age: 50-64 (ref=35-49)	-14.3951	1386.9360	0.9917
Donor age: 65+ (ref=35-49)	-14.5103	7864.8485	0.9985
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-14.4001	3170.9260	0.9964
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1361	0.5739	0.8125
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.9225	0.4324	0.0329
Donor: cadaveric COD other (ref=COD Head trauma)	-14.4196	1795.7207	0.9936
Donor: living (ref=cadaveric - COD Head trauma)	-0.0284	0.4238	0.9466
Recipient age: 0-1 (ref=2-10)	-14.5181	1188.8096	0.9903
Recipient age: 11-17 (ref=2-10)	-0.8010	0.4751	0.0918
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3073	0.3935	0.4349
Year of ESRD treatment: year 2 (ref=years 3-5)	0.0576	0.4263	0.8925
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.4018	0.4922	0.4144
Recipient age by donor age interaction: 0-1 and 0-17 (ref=2-10 and 35-49)	-0.1276	2854.2630	1.0000
Recipient age by donor age interaction: 0-1 and 18-34 (ref=2-10 and 35-49)	15.2014	1188.8098	0.9898
Recipient age by donor age interaction: 0-1 and 50-64 (ref=2-10 and 35-49)	14.4428	4868.3788	0.9976
Recipient age by donor age interaction: 11-17 and 0-17 (ref=2-10 and 35-49)	1.0942	0.7681	0.1543
Recipient age by donor age interaction: 11-17 and 18-34 (ref=2-10 and 35-49)	0.2362	0.7076	0.7385
Recipient age by donor age interaction: 11-17 and 50-64 (ref=2-10 and 35-49)	14.6773	1386.9363	0.9916
Recipient age by donor age interaction: 11-17 and 65+ (ref=2-10 and 35-49)	0.9655	11122.5754	0.9999

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Pediatric (Age 0-17)

98.0% graft functioning at 1 Month when all covariates=0.
The index of concordance is 68.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	0.7237	0.8856	0.4138
Donor age: 18-34 (ref=35-49)	0.7146	0.8931	0.4236
Donor age: 50-64 (ref=35-49)	-13.5036	2434.4785	0.9956
Donor age: 65+ (ref=35-49)	-13.5065	6550.4465	0.9984
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-14.1652	2752.8907	0.9959
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1611	0.5759	0.7796
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.9347	0.4524	0.0388
Donor: cadaveric COD other (ref=COD Head trauma)	-13.8774	1541.3501	0.9928
Recipient age: 0-1 (ref=2-10)	-13.8076	3102.8934	0.9964
Recipient age: 11-17 (ref=2-10)	-0.0297	0.8743	0.9729
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3439	0.4893	0.4822
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1314	0.5282	0.8036
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.4851	0.5409	0.3697
Recipient age by donor age interaction: 0-1 and 0-17 (ref=2-10 and 35-49)	-0.4134	3789.5613	0.9999
Recipient age by donor age interaction: 0-1 and 18-34 (ref=2-10 and 35-49)	-0.0946	4023.4297	1.0000
Recipient age by donor age interaction: 11-17 and 0-17 (ref=2-10 and 35-49)	0.3207	1.0585	0.7619
Recipient age by donor age interaction: 11-17 and 18-34 (ref=2-10 and 35-49)	-0.9251	1.1213	0.4093
Recipient age by donor age interaction: 11-17 and 50-64 (ref=2-10 and 35-49)	14.4343	2434.4786	0.9953

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
1 Month after Transplant
Organ: Kidney
Pediatric (Age 0-17)

95.6% graft functioning at 1 Month when all covariates=0.
The index of concordance is 67.5%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 11-17 (ref=35-49)	-14.1192	6454.5754	0.9983
Donor age: 18-34 (ref=35-49)	-0.7217	0.6288	0.2511
Donor age: 50-64 (ref=35-49)	-15.1348	1947.5954	0.9938
Donor age: 65+ (ref=35-49)	-13.8284	9313.7364	0.9988
Recipient age: 0-1 (ref=2-10)	-15.1925	1491.2097	0.9919
Recipient age: 11-17 (ref=2-10)	-1.1655	0.5878	0.0474
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.1828	0.7648	0.8111
Year of ESRD treatment: year 2 (ref=years 3-5)	0.3507	0.8320	0.6734
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.1062	1.2299	0.9312
Recipient age by donor age interaction: 0-1 and 18-34 (ref=2-10 and 35-49)	16.0850	1491.2099	0.9914
Recipient age by donor age interaction: 0-1 and 50-64 (ref=2-10 and 35-49)	15.1727	5788.7358	0.9979
Recipient age by donor age interaction: 11-17 and 18-34 (ref=2-10 and 35-49)	1.0479	0.9631	0.2766
Recipient age by donor age interaction: 11-17 and 50-64 (ref=2-10 and 35-49)	1.2236	2295.8691	0.9996

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
 ** Ischemia time is centered on 13.70 hours.

Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Pediatric (Age 0-17)

90.3% graft functioning at 1 Year when all covariates=0.
The index of concordance is 63.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Ischemia time: linear (ref=average time**)	0.0180	0.0134	0.1805
Ischemia time: missing (ref=average time**)	-0.2090	0.2474	0.3983
Ischemia time: quadratic (ref=average time**)	0.0002	0.0006	0.7933
Recipient race: Asian (ref=White)	-1.0213	1.0077	0.3108
Recipient race: Black (ref=White)	-0.0904	0.2667	0.7347
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.2840	0.7205	0.6935
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.8205	0.2730	0.0026
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2982	0.2914	0.3062
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.0028	0.3501	0.9936

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
 ** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Pediatric (Age 0-17)

90.4% graft functioning at 1 Year when all covariates=0.
The index of concordance is 63.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Ischemia time: linear (ref=average time**)	-0.0356	0.0242	0.1410
Ischemia time: missing (ref=average time**)	0.1092	0.3634	0.7639
Ischemia time: quadratic (ref=average time**)	0.0035	0.0013	0.0066
Recipient race: Asian (ref=White)	-14.3273	905.2087	0.9874
Recipient race: Black (ref=White)	-0.1249	0.3232	0.6992
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.5058	1.0188	0.6196
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.9033	0.3784	0.0170
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.3599	0.3625	0.3207
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.0128	0.4202	0.9756

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
 ** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
1 Year after Transplant
Organ: Kidney
Pediatric (Age 0-17)

81.1% graft functioning at 1 Year when all covariates=0.
The index of concordance is 61.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Ischemia time: linear (ref=average time**)	0.0792	0.0369	0.0318
Ischemia time: missing (ref=average time**)	-1.3010	0.7050	0.0650
Ischemia time: quadratic (ref=average time**)	-0.0024	0.0019	0.2225
Recipient race: Asian (ref=White)	0.1052	1.0161	0.9175
Recipient race: Black (ref=White)	-0.0994	0.4811	0.8363
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.1116	1.0219	0.9130
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5298	0.4669	0.2565
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1491	0.5296	0.7783
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2124	0.6550	0.7458

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.
 ** Ischemia time is centered on 13.70 hours.

Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Pediatric (Age 0-17)

92.5% graft functioning at 3 Years when all covariates=0.
The index of concordance is 70.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Diabetes*	1.5737	0.7499	0.0358
Diagnosis: Focal Segmental Glomerulosclerosis*	0.7142	0.4083	0.0802
Diagnosis: Hypertensive Nephrosclerosis*	1.9116	0.7657	0.0125
Diagnosis: Other Glomerular Diseases*	0.8679	0.3336	0.0093
Diagnosis: Other/Missing*	-0.4850	0.4407	0.2710
Diagnosis: Polycystic Kidney Disease*	0.1721	0.5551	0.7565
Diagnosis: Renovascular & Other Vascular Diseases*	0.7651	1.0355	0.4600
Diagnosis: Tubular and Interstitial Diseases*	-0.7913	0.6246	0.2052
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4173	0.6026	0.4887
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.1320	0.2541	0.6035
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0395	0.1816	0.8279
Donor: cadaveric COD other (ref=COD Head trauma)	0.1784	0.4685	0.7033
Donor: living (ref=cadaveric - COD Head trauma)	-0.2998	0.2328	0.1978
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.1817	0.1933	0.3471
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.0649	0.2783	0.8157
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1005	0.1880	0.5930
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.0356	0.2197	0.8715
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.0825	0.2939	0.7791
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.3925	0.2158	0.0689
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.1042	0.4906	0.0244
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.3612	0.4421	0.4139
Ischemia time: linear (ref=average time**)	0.0045	0.0103	0.6617
Ischemia time: missing (ref=average time**)	-0.0970	0.1776	0.5847
Ischemia time: quadratic (ref=average time**)	0.0002	0.0006	0.7793
Pre-transplant blood transfusions given: missing (ref=no)	-0.1341	0.1669	0.4218
Pre-transplant blood transfusions given: yes (ref=no)	-0.0944	0.1427	0.5084
Previous transplant of this organ type	0.8009	0.2107	0.0001
Recipient age: 0-1 (ref=2-10)	0.3756	0.6336	0.5533
Recipient age: 11-17 (ref=2-10)	0.5482	0.2977	0.0655
Recipient race: Asian (ref=White)	-13.1872	701.6928	0.9850
Recipient race: Black (ref=White)	0.8979	0.2725	0.0010
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-12.1894	644.3788	0.9849
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.4561	0.1719	0.0080
Year of ESRD treatment: year 2 (ref=years 3-5)	0.0850	0.1840	0.6439
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.3031	0.2551	0.2348
Recipient age by diagnosis interaction: 0-1 and FSG (ref=2-10 and congenital disease)	-13.3496	421.0117	0.9747
Recipient age by diagnosis interaction: 0-1 and diagnosis other/missing (ref=2-10 and congenital disease)	1.8731	0.8393	0.0256
Recipient age by diagnosis interaction: 0-1 and hypertensive nephrosclerosis (ref=2-10 and congenital disease)	-14.8245	3369.4460	0.9965
Recipient age by diagnosis interaction: 0-1 and other glomerular diseases (ref=2-10 and congenital disease)	0.9311	0.9779	0.3410
Recipient age by diagnosis interaction: 0-1 and polycystic kidneys (ref=2-10 and congenital disease)	0.6877	1.1313	0.5433
Recipient age by diagnosis interaction: 0-1 and tubular and interstitial diseases (ref=2-10 and congenital disease)	-11.9781	778.8962	0.9877
Recipient age by diagnosis interaction: 11-17 and FSG (ref=2-10 and congenital disease)	-0.2868	0.4772	0.5478
Recipient age by diagnosis interaction: 11-17 and diagnosis other/missing (ref=2-10 and congenital disease)	0.7290	0.4956	0.1413
Recipient age by diagnosis interaction: 11-17 and hypertensive nephrosclerosis (ref=2-10 and congenital disease)	-1.2389	0.9284	0.1821
Recipient age by diagnosis interaction: 11-17 and other glomerular diseases (ref=2-10 and congenital disease)	-0.5175	0.3897	0.1842
Recipient age by diagnosis interaction: 11-17 and polycystic kidneys (ref=2-10 and congenital disease)	-0.9151	0.9128	0.3161
Recipient age by diagnosis interaction: 11-17 and renovascular & other vascular diseases (ref=2-10 and congenital disease)	-0.2973	1.2630	0.8139
Recipient age by diagnosis interaction: 11-17 and tubular and interstitial diseases (ref=2-10 and congenital disease)	1.2908	0.6678	0.0532
Recipient age by recipient race interaction: 0-1 and Black (ref=2-10 and white)	-14.7255	621.6032	0.9811
Recipient age by recipient race interaction: 0-1 and multi-racial/other/unknown/missing (ref=2-10 and white)	14.6237	644.3796	0.9819
Recipient age by recipient race interaction: 11-17 and Asian (ref=2-10 and White)	13.1856	701.6930	0.9850
Recipient age by recipient race interaction: 11-17 and Black (ref=2-10 and White)	-0.5622	0.3116	0.0713
Recipient age by recipient race interaction: 11-17 and multi-racial/other/unknown/missing (ref=2-10 and White)	12.1316	644.3790	0.9850

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Pediatric (Age 0-17)

87.5% graft functioning at 3 Years when all covariates=0.
The index of concordance is 68.7%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Diabetes*	1.7708	0.7795	0.0231
Diagnosis: Focal Segmental Glomerulosclerosis*	0.4262	0.4338	0.3259
Diagnosis: Hypertensive Nephrosclerosis*	-12.7615	1291.5805	0.9921
Diagnosis: Other Glomerular Diseases*	0.0788	0.4528	0.8618
Diagnosis: Other/Missing*	-0.4961	0.4725	0.2937
Diagnosis: Polycystic Kidney Disease*	-0.7913	1.0351	0.4446
Diagnosis: Renovascular & Other Vascular Diseases*	1.2015	1.0631	0.2584
Diagnosis: Tubular and Interstitial Diseases*	-1.0661	0.7668	0.1644
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4862	0.6173	0.4309
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0934	0.2562	0.7155
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0618	0.1857	0.7393
Donor: cadaveric COD other (ref=COD Head trauma)	0.1417	0.4782	0.7670
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.0951	0.3401	0.7799
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.3549	0.3849	0.3566
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.1039	0.2602	0.6896
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.0009	0.3410	0.9978
HLA mismatch: 2 B mismatches (ref=0 mismatch)	-0.3190	0.3775	0.3981
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.2099	0.2681	0.4337
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	2.3584	1.0880	0.0302
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.8360	0.5780	0.1481
Ischemia time: linear (ref=average time**)	0.0079	0.0158	0.6179
Ischemia time: missing (ref=average time**)	-0.0216	0.2124	0.9192
Ischemia time: quadratic (ref=average time**)	0.0004	0.0010	0.6984
Pre-transplant blood transfusions given: missing (ref=no)	-0.2333	0.2186	0.2858
Pre-transplant blood transfusions given: yes (ref=no)	-0.2527	0.1844	0.1705
Previous transplant of this organ type	0.8739	0.2465	0.0004
Recipient age: 0-1 (ref=2-10)	1.6723	0.6547	0.0106
Recipient age: 11-17 (ref=2-10)	0.1619	0.3372	0.6311
Recipient race: Asian (ref=White)	-12.8709	655.1335	0.9843
Recipient race: Black (ref=White)	0.9209	0.3144	0.0034
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-12.7391	838.3196	0.9879
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.7226	0.2165	0.0008
Year of ESRD treatment: year 2 (ref=years 3-5)	0.1123	0.2149	0.6012
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.3849	0.2917	0.1870
Recipient age by diagnosis interaction: 0-1 and diagnosis other/missing (ref=2-10 and congenital disease)	0.0352	1.2715	0.9779
Recipient age by diagnosis interaction: 0-1 and other glomerular diseases (ref=2-10 and congenital disease)	1.0862	1.2955	0.4018
Recipient age by diagnosis interaction: 0-1 and polycystic kidneys (ref=2-10 and congenital disease)	1.9824	1.5914	0.2129
Recipient age by diagnosis interaction: 11-17 and FSG (ref=2-10 and congenital disease)	0.0472	0.5197	0.9277
Recipient age by diagnosis interaction: 11-17 and diagnosis other/missing (ref=2-10 and congenital disease)	0.8289	0.5483	0.1306
Recipient age by diagnosis interaction: 11-17 and hypertensive nephrosclerosis (ref=2-10 and congenital disease)	12.5754	1291.5809	0.9922
Recipient age by diagnosis interaction: 11-17 and other glomerular diseases (ref=2-10 and congenital disease)	-0.0237	0.5279	0.9642
Recipient age by diagnosis interaction: 11-17 and polycystic kidneys (ref=2-10 and congenital disease)	-0.0459	1.4556	0.9748
Recipient age by diagnosis interaction: 11-17 and renovascular & other vascular diseases (ref=2-10 and congenital disease)	-0.3911	1.4914	0.7931
Recipient age by diagnosis interaction: 11-17 and tubular and interstitial diseases (ref=2-10 and congenital disease)	1.3962	0.8235	0.0900
Recipient age by recipient race interaction: 0-1 and Black (ref=2-10 and white)	-15.4447	838.0289	0.9853
Recipient age by recipient race interaction: 0-1 and multi-racial/other/unknown/missing (ref=2-10 and white)	-2.2070	1829.0918	0.9990
Recipient age by recipient race interaction: 11-17 and Asian (ref=2-10 and White)	12.9771	655.1337	0.9842
Recipient age by recipient race interaction: 11-17 and Black (ref=2-10 and White)	-0.6523	0.3704	0.0782
Recipient age by recipient race interaction: 11-17 and multi-racial/other/unknown/missing (ref=2-10 and White)	12.1558	838.3199	0.9884

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Graft Survival Model Description
3 Years after Transplant
Organ: Kidney
Pediatric (Age 0-17)

99.5% graft functioning at 3 Years when all covariates=0.
The index of concordance is 74.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Diabetes*	-13.5309	3486.5635	0.9969
Diagnosis: Focal Segmental Glomerulosclerosis*	1.8333	1.4291	0.1995
Diagnosis: Hypertensive Nephrosclerosis*	4.5728	1.2511	0.0003
Diagnosis: Other Glomerular Diseases*	3.2357	1.0533	0.0021
Diagnosis: Other/Missing*	0.2507	1.4186	0.8597
Diagnosis: Polycystic Kidney Disease*	2.5564	1.1662	0.0284
Diagnosis: Renovascular & Other Vascular Diseases*	-11.5394	2164.4377	0.9957
Diagnosis: Tubular and Interstitial Diseases*	0.7332	1.4176	0.6050
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.2147	0.2425	0.3759
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.4970	0.4301	0.2478
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.3328	0.2825	0.2388
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.6013	0.4345	0.1663
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.1871	0.5416	0.7297
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.0816	0.5145	0.8741
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	1.0584	0.6653	0.1116
HLA mismatch: not a zero mismatch (ref=0 mismatch)	-0.1906	0.7142	0.7895
Ischemia time: linear (ref=average time**)	-0.0335	0.0619	0.5878
Ischemia time: missing (ref=average time**)	-0.1187	0.8355	0.8871
Ischemia time: quadratic (ref=average time**)	-0.0024	0.0040	0.5586
Pre-transplant blood transfusions given: missing (ref=no)	-0.0316	0.2747	0.9083
Pre-transplant blood transfusions given: yes (ref=no)	0.2778	0.2402	0.2475
Previous transplant of this organ type	0.6268	0.4929	0.2035
Recipient age: 0-1 (ref=2-10)	-11.4151	546.1083	0.9833
Recipient age: 11-17 (ref=2-10)	2.2600	1.0517	0.0316
Recipient race: Asian (ref=White)	-14.4053	2059.9735	0.9944
Recipient race: Black (ref=White)	0.3959	0.6527	0.5441
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-11.4629	1407.1341	0.9935
Year of ESRD treatment: year 1 (ref=years 3-5)	0.1621	0.4262	0.7036
Year of ESRD treatment: year 2 (ref=years 3-5)	0.4462	0.4583	0.3304
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2706	0.6179	0.6615
Recipient age by diagnosis interaction: 0-1 and FSG (ref=2-10 and congenital disease)	-1.6354	3725.0315	0.9996
Recipient age by diagnosis interaction: 0-1 and diagnosis other/missing (ref=2-10 and congenital disease)	14.4628	546.1094	0.9789
Recipient age by diagnosis interaction: 0-1 and hypertensive nephrosclerosis (ref=2-10 and congenital disease)	-3.9775	4543.4229	0.9993
Recipient age by diagnosis interaction: 0-1 and other glomerular diseases (ref=2-10 and congenital disease)	11.6551	546.1094	0.9830
Recipient age by diagnosis interaction: 0-1 and polycystic kidneys (ref=2-10 and congenital disease)	11.0190	546.1098	0.9839
Recipient age by diagnosis interaction: 0-1 and tubular and interstitial diseases (ref=2-10 and congenital disease)	-1.0183	1476.3381	0.9994
Recipient age by diagnosis interaction: 11-17 and FSG (ref=2-10 and congenital disease)	-1.6234	1.5250	0.2871
Recipient age by diagnosis interaction: 11-17 and diagnosis other/missing (ref=2-10 and congenital disease)	-0.1054	1.4733	0.9429
Recipient age by diagnosis interaction: 11-17 and hypertensive nephrosclerosis (ref=2-10 and congenital disease)	-3.2244	1.4066	0.0219
Recipient age by diagnosis interaction: 11-17 and other glomerular diseases (ref=2-10 and congenital disease)	-2.6581	1.1014	0.0158
Recipient age by diagnosis interaction: 11-17 and polycystic kidneys (ref=2-10 and congenital disease)	-3.1599	1.5617	0.0430
Recipient age by diagnosis interaction: 11-17 and renovascular & other vascular diseases (ref=2-10 and congenital disease)	11.8993	2164.4379	0.9956
Recipient age by diagnosis interaction: 11-17 and tubular and interstitial diseases (ref=2-10 and congenital disease)	0.0294	1.4701	0.9841
Recipient age by recipient race interaction: 0-1 and Black (ref=2-10 and white)	-14.2457	1197.3648	0.9905
Recipient age by recipient race interaction: 0-1 and multi-racial/other/unknown/missing (ref=2-10 and white)	14.2679	1407.1346	0.9919
Recipient age by recipient race interaction: 11-17 and Asian (ref=2-10 and White)	14.4148	2059.9737	0.9944
Recipient age by recipient race interaction: 11-17 and Black (ref=2-10 and White)	0.3292	0.7061	0.6411
Recipient age by recipient race interaction: 11-17 and multi-racial/other/unknown/missing (ref=2-10 and White)	12.1895	1407.1343	0.9931

* Reference for diagnosis group is congenital, familial, and metabolic kidney diseases.

** Ischemia time is centered on 13.70 hours.

Kidney Graft Survival Model Description
1 Month after Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

97.9% graft functioning at 1 Month when all covariates=0.
The index of concordance is 65.7%.

Patient Characteristic Covariates	beta	standard error	p-value
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.4644	0.5340	0.3845
HLA mismatch: 1 B mismatch (ref=0 mismatch)	13.4179	549.4824	0.9805
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.5542	0.3840	0.1490
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.5660	0.5368	0.2917
HLA mismatch: 2 B mismatches (ref=0 mismatch)	12.8117	549.4824	0.9814
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.6016	0.3840	0.1172
HLA mismatch: not a zero mismatch (ref=0 mismatch)	-12.5130	549.4831	0.9818
Previous kidney transplant	-0.5971	0.6297	0.3430
Recipient age: 18-34 (ref=35-49)	0.3735	0.2762	0.1762
Recipient age: 50-64 (ref=35-49)	0.3620	0.3286	0.2705
Recipient age: 65+ (ref=35-49)	-13.0944	1862.9402	0.9944
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.7458	0.3384	0.0275
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1980	0.2961	0.5038
Year of ESRD treatment: years 6+ (ref=years 3-5)	1.1026	0.5040	0.0287

Kidney Graft Survival Model Description
1 Year after Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

90.5% graft functioning at 1 Year when all covariates=0.
The index of concordance is 63.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	-0.4923	0.2339	0.0353
Donor age: 18-34 (ref=35-49)	-0.3400	0.1815	0.0610
Donor age: 50-64 (ref=35-49)	0.4006	0.3665	0.2743
Donor age: 65+ (ref=35-49)	3.3430	1.0560	0.0015
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.0510	0.3046	0.8669
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.1819	0.5987	0.7613
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.5439	0.2778	0.0503
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.3701	0.2999	0.2171
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.1490	0.5906	0.8008
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.2127	0.2672	0.4262
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.3052	0.7758	0.6940
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.3906	0.2039	0.0554
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1192	0.1987	0.5486
Year of ESRD treatment: years 6+ (ref=years 3-5)	1.0609	0.2404	<0.0001
Years since onset of DM: 0-19 (ref=25-29)	-0.3428	0.2587	0.1851
Years since onset of DM: 20-24 (ref=25-29)	-0.0227	0.2226	0.9189
Years since onset of DM: 30+ (ref=25-29)	-0.2887	0.2143	0.1781
Years since onset of DM: missing (ref=25-29)	-0.2231	0.2724	0.4127

Kidney Graft Survival Model Description
3 Years after Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

76.7% graft functioning at 3 Years when all covariates=0.
The index of concordance is 59.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	-0.3957	0.1450	0.0063
Donor age: 18-34 (ref=35-49)	-0.4619	0.1208	0.0001
Donor age: 50-64 (ref=35-49)	0.2567	0.2474	0.2995
Recipient female	0.1244	0.1046	0.2343
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.4560	0.1287	0.0004
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2829	0.1359	0.0374
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2905	0.2082	0.1630
Years since onset of DM: 0-19 (ref=25-29)	-0.0391	0.1789	0.8270
Years since onset of DM: 20-24 (ref=25-29)	0.2194	0.1545	0.1557
Years since onset of DM: 30+ (ref=25-29)	0.0352	0.1543	0.8194
Years since onset of DM: missing (ref=25-29)	0.3772	0.1896	0.0466

Pancreas Graft Survival Model Description**1 Month after Transplant****Organ: Kidney / Pancreas****Adult (Age 18+)****91.9% graft functioning at 1 Month when all covariates=0.****The index of concordance is 62.7%.**

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	-0.3775	0.2392	0.1146
Donor age: 18-34 (ref=35-49)	-0.2613	0.1923	0.1741
Donor age: 50-64 (ref=35-49)	0.4866	0.3122	0.1191
Donor age: 65+ (ref=35-49)	2.4296	1.0330	0.0187
Donor female	0.0480	0.1665	0.7730
Donor race: Asian (ref=White)	0.5154	0.5092	0.3114
Donor race: Black (ref=White)	-0.3350	0.2658	0.2075
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.3636	0.7195	0.6134
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	1.0115	0.5953	0.0893
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1077	0.2873	0.7078
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.3432	0.1946	0.0777
Donor: cadaveric COD other (ref=COD Head trauma)	-0.6521	0.7188	0.3643
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.2639	0.2529	0.2967
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.7928	0.7210	0.2715
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.2961	0.2730	0.2780
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.1766	0.2526	0.4844
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.6134	0.7171	0.3923
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.0806	0.2666	0.7623
HLA mismatch: not a zero mismatch (ref=0 mismatch)	-0.2529	0.8499	0.7660
Recipient female	0.0751	0.1495	0.6154
Recipient race: Asian (ref=White)	-0.7386	1.0053	0.4625
Recipient race: Black (ref=White)	0.4098	0.1986	0.0391
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0962	0.7187	0.8935

Pancreas Graft Survival Model Description

1 Year after Transplant

Organ: Kidney / Pancreas

Adult (Age 18+)

90.3% graft functioning at 1 Year when all covariates=0.

The index of concordance is 59.5%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	-0.0477	0.8228	0.9538
Donor age: 18-34 (ref=35-49)	-0.4166	0.7699	0.5884
Donor age: 50-64 (ref=35-49)	-9.8976	375.2033	0.9790
Donor age: 65+ (ref=35-49)	2.4260	1.0418	0.0199
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.5904	0.5966	0.3224
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0195	0.2319	0.9331
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1414	0.1543	0.3595
Donor: cadaveric COD other (ref=COD Head trauma)	0.2461	0.3659	0.5013
Duct management: missing (ref=cystostomy)	-10.3322	490.0247	0.9832
Duct management: non-cystostomy (ref=cystostomy)	0.3481	0.1775	0.0498
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.0316	0.4209	0.9402
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.3464	1.0222	0.7347
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.5425	0.3985	0.1734
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.4419	0.4108	0.2820
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.2528	1.0161	0.8036
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.4585	0.3895	0.2391
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.1919	1.2480	0.8778
Recipient female	0.0946	0.1193	0.4279
Donor age by HLA mismatch interaction: 0-17 and 1 A mismatch (ref=35-49 and 0 mismatch)	0.0619	0.6906	0.9285
Donor age by HLA mismatch interaction: 0-17 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.4788	0.6864	0.4854
Donor age by HLA mismatch interaction: 0-17 and 1 B mismatch (ref=35-49 and 0 mismatch)	0.0501	1.4512	0.9725
Donor age by HLA mismatch interaction: 0-17 and 1 B mismatch (ref=35-49 and 0 mismatch)	-0.2385	1.4464	0.8691
Donor age by HLA mismatch interaction: 0-17 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.7038	0.7388	0.3407
Donor age by HLA mismatch interaction: 0-17 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.8787	0.7256	0.2259
Donor age by HLA mismatch interaction: 0-17 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	-0.7025	1.8336	0.7016
Donor age by HLA mismatch interaction: 18-34 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.0090	0.5378	0.9867
Donor age by HLA mismatch interaction: 18-34 and 1 B mismatch (ref=35-49 and 0 mismatch)	0.8846	1.4407	0.5392
Donor age by HLA mismatch interaction: 18-34 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.4980	0.5289	0.3464
Donor age by HLA mismatch interaction: 18-34 and 2 A mismatch (ref=35-49 and 0 mismatch)	-0.1371	0.5246	0.7939
Donor age by HLA mismatch interaction: 18-34 and 2 B mismatch (ref=35-49 and 0 mismatch)	1.0254	1.4310	0.4737
Donor age by HLA mismatch interaction: 18-34 and 2 DR mismatch (ref=35-49 and 0 mismatch)	0.6453	0.5169	0.2118
Donor age by HLA mismatch interaction: 18-34 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	-1.3185	1.7156	0.4422
Donor age by HLA mismatch interaction: 50-64 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.1498	0.9377	0.8730
Donor age by HLA mismatch interaction: 50-64 and 1 B mismatch (ref=35-49 and 0 mismatch)	-0.7238	0.6604	0.2731
Donor age by HLA mismatch interaction: 50-64 and 1 DR mismatch (ref=35-49 and 0 mismatch)	-0.3238	1.0275	0.7527
Donor age by HLA mismatch interaction: 50-64 and 2 A mismatch (ref=35-49 and 0 mismatch)	-1.2774	0.9538	0.1805
Donor age by HLA mismatch interaction: 50-64 and 2 DR mismatch (ref=35-49 and 0 mismatch)	0.5498	0.9347	0.5564
Donor age by HLA mismatch interaction: 50-64 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	10.9402	375.2049	0.9767

Pancreas Graft Survival Model Description
3 Years after Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

71.0% graft functioning at 3 Years when all covariates=0.
The index of concordance is 59.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-17 (ref=35-49)	-1.1572	0.7932	0.1446
Donor age: 18-34 (ref=35-49)	-0.1669	0.4350	0.7012
Donor age: 50-64 (ref=35-49)	0.0369	0.7959	0.9630
Donor female	-0.0723	0.0977	0.4592
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.0129	0.4543	0.9773
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0246	0.1863	0.8949
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0892	0.1166	0.4443
Donor: cadaveric COD other (ref=COD Head trauma)	0.1678	0.2719	0.5371
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.4371	0.3414	0.2004
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.2404	0.4726	0.6110
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-0.4099	0.3013	0.1737
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.7307	0.3368	0.0301
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.3752	0.4622	0.4170
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.3984	0.3011	0.1857
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	-9.8924	248.7933	0.9683
HLA mismatch: not a zero mismatch (ref=0 mismatch)	-0.4317	0.6797	0.5253
Recipient age: 18-34 (ref=35-49)	0.1241	0.1043	0.2343
Recipient age: 50-64 (ref=35-49)	-0.0295	0.1456	0.8394
Recipient age: 65+ (ref=35-49)	-10.4802	253.2103	0.9670
Years since onset of DM: 0-19 (ref=25-29)	0.0027	0.1432	0.9848
Years since onset of DM: 20-24 (ref=25-29)	0.0534	0.1290	0.6788
Years since onset of DM: 30+ (ref=25-29)	0.0048	0.1307	0.9704
Years since onset of DM: missing (ref=25-29)	0.1833	0.1618	0.2573
Donor age by HLA mismatch interaction: 0-17 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.2661	0.5352	0.6191
Donor age by HLA mismatch interaction: 0-17 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.5097	0.5294	0.3356
Donor age by HLA mismatch interaction: 0-17 and 1 B mismatch (ref=35-49 and 0 mismatch)	0.1094	0.8802	0.9010
Donor age by HLA mismatch interaction: 0-17 and 1 B mismatch (ref=35-49 and 0 mismatch)	0.2443	0.8612	0.7766
Donor age by HLA mismatch interaction: 0-17 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.5712	0.6082	0.3476
Donor age by HLA mismatch interaction: 0-17 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.7381	0.6014	0.2197
Donor age by HLA mismatch interaction: 0-17 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	0.0869	1.3439	0.9484
Donor age by HLA mismatch interaction: 0-17 and mismatch missing (ref=35-49 and 0 mismatch)	0.4450	407.2831	0.9991
Donor age by HLA mismatch interaction: 18-34 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.2487	0.4373	0.5696
Donor age by HLA mismatch interaction: 18-34 and 1 B mismatch (ref=35-49 and 0 mismatch)	-0.1990	0.6401	0.7560
Donor age by HLA mismatch interaction: 18-34 and 1 DR mismatch (ref=35-49 and 0 mismatch)	0.3263	0.4079	0.4238
Donor age by HLA mismatch interaction: 18-34 and 2 A mismatch (ref=35-49 and 0 mismatch)	-0.4474	0.4334	0.3020
Donor age by HLA mismatch interaction: 18-34 and 2 B mismatch (ref=35-49 and 0 mismatch)	-0.2521	0.6259	0.6871
Donor age by HLA mismatch interaction: 18-34 and 2 DR mismatch (ref=35-49 and 0 mismatch)	0.2548	0.4095	0.5338
Donor age by HLA mismatch interaction: 18-34 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	-0.0447	0.8873	0.9598
Donor age by HLA mismatch interaction: 18-34 and mismatch missing (ref=35-49 and 0 mismatch)	12.4795	248.7954	0.9600
Donor age by HLA mismatch interaction: 50-64 and 1 A mismatch (ref=35-49 and 0 mismatch)	-0.7635	0.7320	0.2969
Donor age by HLA mismatch interaction: 50-64 and 1 B mismatch (ref=35-49 and 0 mismatch)	-2.0926	0.9320	0.0247
Donor age by HLA mismatch interaction: 50-64 and 1 DR mismatch (ref=35-49 and 0 mismatch)	1.4634	0.9414	0.1201
Donor age by HLA mismatch interaction: 50-64 and 2 A mismatch (ref=35-49 and 0 mismatch)	-1.0137	0.6794	0.1357
Donor age by HLA mismatch interaction: 50-64 and 2 B mismatch (ref=35-49 and 0 mismatch)	-2.2777	0.9236	0.0137
Donor age by HLA mismatch interaction: 50-64 and 2 DR mismatch (ref=35-49 and 0 mismatch)	1.6096	0.9829	0.1015
Donor age by HLA mismatch interaction: 50-64 and NOT 0 mismatch (ref=35-49 and 0 mismatch)	1.7190	1.3619	0.2069
Donor age by HLA mismatch interaction: 50-64 and mismatch missing (ref=35-49 and 0 mismatch)	10.9925	248.7963	0.9648

Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Adult (Age 18+)

96.9% graft functioning at 1 Month when all covariates=0.
The index of concordance is 66.8%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0683	0.1039	0.5113
ABO compatibility: incompatible (ref=equal)	0.8746	0.2381	0.0002
Diagnosis: AHN*	0.3005	0.1144	0.0086
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.0156	0.1147	0.8917
Diagnosis: Malignant Neoplasms*	0.3525	0.1512	0.0197
Diagnosis: Metabolic Diseases*	-0.0794	0.2296	0.7295
Diagnosis: Other/Missing*	0.1835	0.1243	0.1397
Donor Hispanic/Latino	0.2229	0.1006	0.0268
Donor age: 0-17 (ref=35-49)	0.0646	0.1433	0.6524
Donor age: 18-34 (ref=35-49)	-0.0162	0.0999	0.8713
Donor age: 50-64 (ref=35-49)	0.3124	0.0951	0.0010
Donor age: 65+ (ref=35-49)	0.4519	0.1228	0.0002
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0670	0.0828	0.4183
Donor and recipient not in same region or OPO (ref=same OPO)	0.4027	0.1267	0.0015
Donor biopsy: Yes (ref=no, unknown, missing)	0.1052	0.0797	0.1867
Donor race: Asian (ref=White)	0.2520	0.2125	0.2355
Donor race: Black (ref=White)	0.2682	0.0977	0.0060
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.4405	0.2492	0.0770
Donor weight (ln kg) (ref=ln of avg weight**)	-0.3742	0.1445	0.0096
Donor weight: missing (ref=ln of avg weight**)	-1.8494	0.7631	0.0154
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.6159	0.2871	0.0319
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0701	0.1369	0.6087
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1204	0.0917	0.1892
Donor: cadaveric COD other (ref=COD Head trauma)	0.2404	0.2153	0.2642
Donor: living (ref=cadaveric - COD Head trauma)	-0.6064	0.2759	0.0279
Non heart beating donor	0.4397	0.2192	0.0449
Previous transplant of this organ type	0.2098	0.1098	0.0561
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.4693	0.1494	0.0017
Recipient age: 18-34 (ref=35-49)	0.1065	0.1310	0.4161
Recipient age: 50-64 (ref=35-49)	-0.0356	0.0752	0.6358
Recipient age: 65+ (ref=35-49)	-0.0430	0.1343	0.7486
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1705	0.0727	0.0189
Recipient ascites: missing (ref=no)	0.5671	0.1616	0.0004
Recipient ascites: yes (ref=no)	0.0559	0.0879	0.5251
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2873	0.0616	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1496	0.2143	0.4850
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	-0.3006	0.2393	0.2091
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2108	0.1085	0.0521
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1963	0.0982	0.0457
Recipient medical condition: in ICU (ref=not hospitalized)	0.3498	0.1086	0.0013
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.3001	0.1277	0.0188
Recipient on life support	0.2753	0.1284	0.0319
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2891	0.0739	0.0001
Recipient race: Asian (ref=White)	-0.1139	0.1850	0.5379
Recipient race: Black (ref=White)	0.0808	0.1218	0.5070
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0185	0.1953	0.9244
Split or partial liver (ref=whole liver)	0.7452	0.2114	0.0004

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Adult (Age 18+)

96.8% graft functioning at 1 Month when all covariates=0.
The index of concordance is 67.2%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0701	0.1106	0.5262
ABO compatibility: incompatible (ref=equal)	0.9669	0.2398	0.0001
Diagnosis: AHN*	0.2984	0.1160	0.0101
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.0620	0.1251	0.6203
Diagnosis: Malignant Neoplasms*	0.3250	0.1593	0.0413
Diagnosis: Metabolic Diseases*	-0.0230	0.2299	0.9202
Diagnosis: Other/Missing*	0.1489	0.1276	0.2435
Donor Hispanic/Latino	0.2264	0.1049	0.0308
Donor age: 0-17 (ref=35-49)	0.0341	0.1451	0.8142
Donor age: 18-34 (ref=35-49)	-0.0707	0.1067	0.5076
Donor age: 50-64 (ref=35-49)	0.2938	0.0980	0.0027
Donor age: 65+ (ref=35-49)	0.4686	0.1228	0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0693	0.0828	0.4027
Donor and recipient not in same region or OPO (ref=same OPO)	0.4150	0.1260	0.0010
Donor race: Asian (ref=White)	0.2785	0.2163	0.1979
Donor race: Black (ref=White)	0.2708	0.0988	0.0062
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.3224	0.2825	0.2538
Donor weight (ln kg) (ref=ln of avg weight**)	-0.3482	0.1477	0.0184
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.5882	0.2875	0.0408
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0724	0.1371	0.5973
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1146	0.0927	0.2165
Donor: cadaveric COD other (ref=COD Head trauma)	0.2063	0.2155	0.3383
Non heart beating donor	0.4518	0.2195	0.0396
Previous transplant of this organ type	0.2172	0.1115	0.0513
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.4757	0.1526	0.0018
Recipient age: 18-34 (ref=35-49)	0.1290	0.1365	0.3443
Recipient age: 50-64 (ref=35-49)	-0.0424	0.0783	0.5881
Recipient age: 65+ (ref=35-49)	0.0203	0.1362	0.8815
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1726	0.0750	0.0214
Recipient ascites: missing (ref=no)	0.6685	0.1677	0.0001
Recipient ascites: yes (ref=no)	0.0596	0.0922	0.5179
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2857	0.0628	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1708	0.2222	0.4422
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	-0.4518	0.2618	0.0844
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.1904	0.1126	0.0908
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1920	0.1024	0.0608
Recipient medical condition: in ICU (ref=not hospitalized)	0.3164	0.1105	0.0042
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.2983	0.1291	0.0209
Recipient on life support	0.2721	0.1304	0.0370
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.3141	0.0772	<0.0001
Recipient race: Asian (ref=White)	-0.0620	0.1875	0.7407
Recipient race: Black (ref=White)	0.0906	0.1242	0.4659
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0571	0.2134	0.7890
Recipient uncontrollable variceal bleeding (ref=no, unknown, missing)	0.2176	0.1322	0.0999
Split or partial liver (ref=whole liver)	0.7441	0.2114	0.0004

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Adult (Age 18+)

94.6% graft functioning at 1 Month when all covariates=0.
The index of concordance is 70.4%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0294	0.3170	0.9262
ABO compatibility: incompatible (ref=equal)	-13.1616	825.2015	0.9873
Diagnosis: AHN*	0.3524	0.7647	0.6450
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.5531	0.3117	0.0759
Diagnosis: Malignant Neoplasms*	0.9032	0.4932	0.0670
Diagnosis: Metabolic Diseases*	-13.1466	647.8057	0.9838
Diagnosis: Other/Missing*	0.6371	0.5684	0.2624
Donor age: 18-34 (ref=35-49)	0.3603	0.2920	0.2173
Donor age: 50+	0.5698	0.3723	0.1260
Previous transplant of this organ type	0.6282	1.0364	0.5444
Recipient age: 18-34 (ref=35-49)	-0.3586	0.4895	0.4638
Recipient age: 50-64 (ref=35-49)	-0.0416	0.2793	0.8817
Recipient age: 65+ (ref=35-49)	-1.6321	1.0305	0.1133
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.4575	0.3049	0.1335
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.2802	0.7321	0.7019
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.8626	0.6125	0.1590
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.7353	0.4244	0.0832
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.0374	0.3768	0.9210
Recipient medical condition: in ICU (ref=not hospitalized)	0.8749	0.6240	0.1609
Recipient on life support	0.8074	0.7215	0.2631
Recipient race: Asian (ref=White)	-0.7385	1.0153	0.4670
Recipient race: Black (ref=White)	0.0022	0.6130	0.9972
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.5262	0.4963	0.2890

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Adult (Age 18+)

91.8% graft functioning at 1 Year when all covariates=0.
The index of concordance is 65.1%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0285	0.0739	0.6998
ABO compatibility: incompatible (ref=equal)	0.4775	0.2080	0.0217
Diagnosis: AHN*	0.1386	0.0827	0.0938
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.1334	0.0797	0.0944
Diagnosis: Malignant Neoplasms*	0.2934	0.1023	0.0041
Diagnosis: Metabolic Diseases*	-0.1668	0.1564	0.2862
Diagnosis: Other/Missing*	0.1017	0.0887	0.2515
Donor Hispanic/Latino	0.1870	0.0698	0.0073
Donor age: 0-17 (ref=35-49)	-0.1004	0.1006	0.3186
Donor age: 18-34 (ref=35-49)	0.0117	0.0659	0.8592
Donor age: 50-64 (ref=35-49)	0.2406	0.0644	0.0002
Donor age: 65+ (ref=35-49)	0.5356	0.0804	<0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0954	0.0558	0.0874
Donor and recipient not in same region or OPO (ref=same OPO)	0.3425	0.0889	0.0001
Donor biopsy: Yes (ref=no, unknown, missing)	0.0389	0.0537	0.4689
Donor race: Asian (ref=White)	0.1338	0.1529	0.3818
Donor race: Black (ref=White)	0.2114	0.0670	0.0016
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.4311	0.1759	0.0142
Donor weight (ln kg) (ref=ln of avg weight**)	-0.3561	0.0991	0.0003
Donor weight: missing (ref=ln of avg weight**)	-1.6986	0.5123	0.0009
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4440	0.2142	0.0382
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0470	0.0891	0.5977
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1694	0.0615	0.0059
Donor: cadaveric COD other (ref=COD Head trauma)	0.3139	0.1451	0.0305
Donor: living (ref=cadaveric - COD Head trauma)	-0.3050	0.2016	0.1303
Non heart beating donor	0.5231	0.1455	0.0003
Previous transplant of this organ type	0.3269	0.0768	<0.0001
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.3289	0.1095	0.0027
Recipient age: 18-34 (ref=35-49)	-0.0452	0.0979	0.6444
Recipient age: 50-64 (ref=35-49)	0.0190	0.0507	0.7077
Recipient age: 65+ (ref=35-49)	0.1414	0.0856	0.0985
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1354	0.0488	0.0055
Recipient ascites: missing (ref=no)	0.4331	0.1180	0.0002
Recipient ascites: yes (ref=no)	0.1345	0.0604	0.0258
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.3040	0.0422	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1347	0.1467	0.3588
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.1805	0.0733	0.0138
Recipient height (ln cm) (ref=ln of avg height**)	-0.2807	0.2642	0.2879
Recipient height: missing (ref=ln of avg height**)	-1.2980	1.3206	0.3257
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.1498	0.1239	0.2266
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2882	0.0710	<0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2497	0.0643	0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.3418	0.0734	<0.0001
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.1388	0.0947	0.1428
Recipient on life support	0.2319	0.0908	0.0106
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2025	0.0492	<0.0001
Recipient race: Asian (ref=White)	-0.1448	0.1243	0.2442
Recipient race: Black (ref=White)	0.1113	0.0824	0.1766
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0070	0.1319	0.9575
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	0.2008	0.3054	0.5108
Split or partial liver (ref=whole liver)	0.5265	0.1608	0.0011

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Adult (Age 18+)

91.8% graft functioning at 1 Year when all covariates=0.
The index of concordance is 65.4%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0107	0.0787	0.8916
ABO compatibility: incompatible (ref=equal)	0.6053	0.2086	0.0037
Diagnosis: AHN*	0.1408	0.0834	0.0916
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.1467	0.0853	0.0853
Diagnosis: Malignant Neoplasms*	0.2448	0.1083	0.0237
Diagnosis: Metabolic Diseases*	-0.2299	0.1661	0.1662
Diagnosis: Other/Missing*	0.0985	0.0907	0.2776
Donor Hispanic/Latino	0.2123	0.0715	0.0030
Donor age: 0-17 (ref=35-49)	-0.0996	0.1019	0.3287
Donor age: 18-34 (ref=35-49)	0.0071	0.0705	0.9202
Donor age: 50-64 (ref=35-49)	0.2409	0.0667	0.0003
Donor age: 65+ (ref=35-49)	0.5596	0.0806	<0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0987	0.0558	0.0770
Donor and recipient not in same region or OPO (ref=same OPO)	0.3483	0.0884	0.0001
Donor race: Asian (ref=White)	0.1947	0.1542	0.2067
Donor race: Black (ref=White)	0.2202	0.0678	0.0012
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.4267	0.1919	0.0262
Donor weight (ln kg) (ref=ln of avg weight**)	-0.3505	0.1006	0.0005
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4420	0.2144	0.0393
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0466	0.0893	0.6016
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1724	0.0622	0.0056
Donor: cadaveric COD other (ref=COD Head trauma)	0.3018	0.1451	0.0375
Non heart beating donor	0.5269	0.1455	0.0003
Previous transplant of this organ type	0.3260	0.0779	<0.0001
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.2881	0.1138	0.0114
Recipient age: 18-34 (ref=35-49)	-0.0601	0.1034	0.5607
Recipient age: 50-64 (ref=35-49)	0.0177	0.0526	0.7365
Recipient age: 65+ (ref=35-49)	0.1625	0.0880	0.0647
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1396	0.0504	0.0056
Recipient ascites: missing (ref=no)	0.5085	0.1227	<0.0001
Recipient ascites: yes (ref=no)	0.1333	0.0632	0.0348
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.3027	0.0431	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1549	0.1523	0.3093
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.1526	0.0749	0.0417
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2840	0.0733	0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2321	0.0673	0.0006
Recipient medical condition: in ICU (ref=not hospitalized)	0.3209	0.0743	<0.0001
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.1547	0.0957	0.1057
Recipient on life support	0.2107	0.0922	0.0224
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2082	0.0513	<0.0001
Recipient race: Asian (ref=White)	-0.0779	0.1254	0.5342
Recipient race: Black (ref=White)	0.1069	0.0845	0.2056
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0077	0.1397	0.9561
Split or partial liver (ref=whole liver)	0.5277	0.1606	0.0010

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Adult (Age 18+)

86.5% graft functioning at 1 Year when all covariates=0.
The index of concordance is 65.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.1299	0.2215	0.5574
ABO compatibility: incompatible (ref=equal)	-13.5940	519.1358	0.9791
Diagnosis: AHN*	-0.1306	0.6183	0.8327
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.0685	0.2317	0.7676
Diagnosis: Malignant Neoplasms*	0.8422	0.3263	0.0098
Diagnosis: Metabolic Diseases*	0.5016	0.4770	0.2930
Diagnosis: Other/Missing*	0.4021	0.4206	0.3390
Donor race: Asian (ref=White)	-0.6290	1.3157	0.6326
Donor race: Black (ref=White)	-1.5549	0.7510	0.0384
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.0969	0.6885	0.8880
Donor weight (ln kg) (ref=ln of avg weight**)	-0.6711	0.4848	0.1663
Donor weight: missing (ref=ln of avg weight**)	-2.6859	2.0344	0.1868
Previous transplant of this organ type	0.6002	0.6152	0.3292
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.8390	0.4218	0.0467
Recipient age: 18-34 (ref=35-49)	0.0195	0.3172	0.9509
Recipient age: 50-64 (ref=35-49)	0.1771	0.1925	0.3575
Recipient age: 65+ (ref=35-49)	0.0699	0.3621	0.8469
Recipient ascites: missing (ref=no)	-0.4712	0.4311	0.2743
Recipient ascites: yes (ref=no)	0.1231	0.2096	0.5569
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2986	0.2129	0.1607
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.1465	0.5231	0.7794
Recipient height (ln cm) (ref=ln of avg height**)	2.6795	1.4435	0.0634
Recipient height: missing (ref=ln of avg height**)	13.7677	7.1824	0.0553
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.5049	0.2967	0.0888
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.4403	0.2312	0.0568
Recipient medical condition: in ICU (ref=not hospitalized)	0.9355	0.4781	0.0504
Recipient on life support	0.6866	0.5278	0.1933
Recipient race: Asian (ref=White)	-0.6984	0.9445	0.4597
Recipient race: Black (ref=White)	1.7915	0.6655	0.0071
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.2776	0.6002	0.6437

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Adult (Age 18+)

83.6% graft functioning at 3 Years when all covariates=0.
The index of concordance is 63.8%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0185	0.0627	0.7681
ABO compatibility: incompatible (ref=equal)	0.1221	0.1523	0.4229
Diagnosis: AHN*	-0.0823	0.0698	0.2385
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.2556	0.0652	0.0001
Diagnosis: Malignant Neoplasms*	0.3656	0.1075	0.0007
Diagnosis: Metabolic Diseases*	-0.0268	0.1193	0.8223
Diagnosis: Other/Missing*	-0.1295	0.0914	0.1568
Donor Hispanic/Latino	0.0826	0.0622	0.1837
Donor age: 0-17 (ref=35-49)	-0.1350	0.0747	0.0707
Donor age: 18-34 (ref=35-49)	-0.1982	0.0546	0.0003
Donor age: 50-64 (ref=35-49)	0.1641	0.0524	0.0017
Donor age: 65+ (ref=35-49)	0.3192	0.0693	<0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0992	0.0465	0.0329
Donor and recipient not in same region or OPO (ref=same OPO)	0.2800	0.0768	0.0003
Donor biopsy: Yes (ref=no, unknown, missing)	0.1216	0.0513	0.0179
Donor race: Asian (ref=White)	0.1555	0.1351	0.2498
Donor race: Black (ref=White)	0.2784	0.0566	<0.0001
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1286	0.1911	0.5010
Donor weight (ln kg) (ref=ln of avg weight**)	-0.1623	0.0782	0.0379
Donor weight: missing (ref=ln of avg weight**)	-0.3558	0.3895	0.3610
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4712	0.1605	0.0033
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2091	0.0737	0.0046
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1680	0.0505	0.0009
Donor: cadaveric COD other (ref=COD Head trauma)	0.0292	0.1279	0.8194
Donor: living (ref=cadaveric - COD Head trauma)	-0.1088	0.1709	0.5241
Non heart beating donor	0.6485	0.1916	0.0007
Previous transplant of this organ type	0.3608	0.0641	<0.0001
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.0836	0.1130	0.4598
Recipient age: 18-34 (ref=35-49)	0.0123	0.0785	0.8756
Recipient age: 50-64 (ref=35-49)	-0.0355	0.0412	0.3895
Recipient age: 65+ (ref=35-49)	0.1346	0.0676	0.0464
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.0767	0.0403	0.0571
Recipient ascites: missing (ref=no)	0.1705	0.0945	0.0713
Recipient ascites: yes (ref=no)	0.0925	0.0498	0.0635
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2439	0.0355	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.2265	0.1131	0.0452
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.0585	0.0597	0.3274
Recipient height (ln cm) (ref=ln of avg height**)	-0.5648	0.2226	0.0112
Recipient height: missing (ref=ln of avg height**)	-2.6447	1.1059	0.0168
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.3241	0.0863	0.0002
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2185	0.0629	0.0005
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2262	0.0564	0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.1831	0.0575	0.0015
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.1979	0.0763	0.0095
Recipient on life support	0.2728	0.0708	0.0001
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.1933	0.0406	<0.0001
Recipient race: Asian (ref=White)	-0.0875	0.1033	0.3969
Recipient race: Black (ref=White)	0.2545	0.0644	0.0001
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1595	0.1328	0.2296
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	0.5221	0.2106	0.0132
Split or partial liver (ref=whole liver)	0.4669	0.1250	0.0002

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Adult (Age 18+)

83.4% graft functioning at 3 Years when all covariates=0.
The index of concordance is 63.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0267	0.0649	0.6806
ABO compatibility: incompatible (ref=equal)	0.1318	0.1523	0.3868
Diagnosis: AHN*	-0.0995	0.0710	0.1607
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.2635	0.0679	0.0001
Diagnosis: Malignant Neoplasms*	0.3832	0.1165	0.0010
Diagnosis: Metabolic Diseases*	-0.0185	0.1218	0.8793
Diagnosis: Other/Missing*	-0.1263	0.0934	0.1760
Donor Hispanic/Latino	0.0935	0.0637	0.1421
Donor age: 0-17 (ref=35-49)	-0.1402	0.0755	0.0636
Donor age: 18-34 (ref=35-49)	-0.1952	0.0574	0.0007
Donor age: 50-64 (ref=35-49)	0.1564	0.0536	0.0035
Donor age: 65+ (ref=35-49)	0.3095	0.0697	<0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.1016	0.0465	0.0289
Donor and recipient not in same region or OPO (ref=same OPO)	0.2854	0.0768	0.0002
Donor biopsy: Yes (ref=no, unknown, missing)	0.1264	0.0513	0.0138
Donor race: Asian (ref=White)	0.0923	0.1435	0.5201
Donor race: Black (ref=White)	0.2686	0.0575	<0.0001
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.0454	0.2103	0.8290
Donor weight (ln kg) (ref=ln of avg weight**)	-0.1730	0.0794	0.0294
Donor weight: missing (ref=ln of avg weight**)	-8.6957	104.5100	0.9337
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4700	0.1606	0.0034
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2059	0.0738	0.0053
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1716	0.0510	0.0008
Donor: cadaveric COD other (ref=COD Head trauma)	0.0464	0.1279	0.7167
Non heart beating donor	0.6447	0.1916	0.0008
Previous transplant of this organ type	0.3627	0.0648	<0.0001
Recipient age: 18-34 (ref=35-49)	0.0051	0.0814	0.9503
Recipient age: 50-64 (ref=35-49)	-0.0491	0.0423	0.2455
Recipient age: 65+ (ref=35-49)	0.1283	0.0692	0.0636
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.0823	0.0413	0.0465
Recipient ascites: missing (ref=no)	0.1738	0.0975	0.0748
Recipient ascites: yes (ref=no)	0.0856	0.0514	0.0961
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2486	0.0362	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.2377	0.1167	0.0416
Recipient height (ln cm) (ref=ln of avg height**)	-0.6000	0.2207	0.0066
Recipient height: missing (ref=ln of avg height**)	-2.8151	1.0970	0.0103
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.3147	0.0878	0.0003
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2311	0.0642	0.0003
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2198	0.0583	0.0002
Recipient medical condition: in ICU (ref=not hospitalized)	0.1656	0.0581	0.0044
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.2128	0.0766	0.0055
Recipient on life support	0.2583	0.0717	0.0003
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.1936	0.0418	<0.0001
Recipient race: Asian (ref=White)	-0.1075	0.1066	0.3132
Recipient race: Black (ref=White)	0.2446	0.0655	0.0002
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.2078	0.1383	0.1330
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	0.5520	0.2107	0.0088
Split or partial liver (ref=whole liver)	0.4616	0.1249	0.0002

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Adult (Age 18+)

81.1% graft functioning at 3 Years when all covariates=0.
The index of concordance is 64.0%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0547	0.2574	0.8316
Diagnosis: AHN*	0.5486	0.3951	0.1649
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.0676	0.2433	0.7812
Diagnosis: Malignant Neoplasms*	0.2893	0.2958	0.3282
Diagnosis: Metabolic Diseases*	-0.0094	0.5982	0.9875
Diagnosis: Other/Missing*	-0.2973	0.5020	0.5537
Donor age: 18-34 (ref=35-49)	-0.1782	0.1833	0.3309
Donor age: 50-64 (ref=35-49)	0.5312	0.2637	0.0440
Donor age: 65+ (ref=35-49)	0.8820	1.0321	0.3928
Donor female	0.2503	0.1907	0.1894
Donor weight (ln kg) (ref=ln of avg weight**)	0.4089	0.4914	0.4053
Donor weight: missing (ref=ln of avg weight**)	2.0726	2.0652	0.3156
Previous transplant of this organ type	0.4628	0.5528	0.4025
Recipient age: 18-34 (ref=35-49)	0.3455	0.3156	0.2736
Recipient age: 50-64 (ref=35-49)	0.2854	0.1969	0.1473
Recipient age: 65+ (ref=35-49)	0.3697	0.3420	0.2797
Recipient ascites: missing (ref=no)	0.2660	0.4024	0.5086
Recipient ascites: yes (ref=no)	0.2851	0.2097	0.1741
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2582	0.1854	0.1636
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.0110	0.4945	0.9822
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	1.9104	1.2632	0.1305
Recipient on life support	1.1201	0.3357	0.0008
Recipient race: Asian (ref=White)	0.4427	0.4042	0.2734
Recipient race: Black (ref=White)	0.8368	0.3094	0.0068
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.8214	0.4832	0.0892
Recipient uncontrollable variceal bleeding (ref=no, unknown, missing)	0.4067	0.3287	0.2160

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Pediatric (Age 0-17)

91.2% graft functioning at 1 Month when all covariates=0.
The index of concordance is 72.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.1976	0.2139	0.3555
ABO compatibility: incompatible (ref=equal)	0.2267	0.4500	0.6144
Diagnosis: AHN*	-0.1266	0.2599	0.6262
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.7955	0.6022	0.1865
Diagnosis: Malignant Neoplasms*	-0.5902	0.4602	0.1997
Diagnosis: Metabolic Diseases*	-0.3662	0.3476	0.2921
Diagnosis: Non-Cholestatic Cirrhosis*	-1.0317	0.5431	0.0575
Diagnosis: Other/Missing*	-0.4288	0.2403	0.0744
Donor age: 0-17 (ref=35-49)	-0.1819	0.3738	0.6265
Donor age: 18-34 (ref=35-49)	0.0207	0.2869	0.9425
Donor age: 50+	1.3736	0.3710	0.0002
Donor biopsy: Yes (ref=no, unknown, missing)	0.6152	0.3195	0.0542
Donor race: Asian (ref=White)	-0.3647	0.7519	0.6277
Donor race: Black (ref=White)	0.4174	0.2287	0.0680
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.8346	0.7373	0.2577
Donor weight (ln kg) (ref=ln of avg weight**)	-0.4455	0.1907	0.0195
Donor weight: missing (ref=ln of avg weight**)	-1.5898	1.0110	0.1158
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.6841	1.0686	0.5220
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.3854	0.2815	0.1710
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1885	0.2576	0.4643
Donor: cadaveric COD other (ref=COD Head trauma)	-0.7131	0.6164	0.2474
Donor: living (ref=cadaveric - COD Head trauma)	0.0966	0.3113	0.7563
Recipient age: 0-1 (ref=2-10)	0.0146	0.2140	0.9455
Recipient age: 11-17 (ref=2-10)	-0.6788	0.3189	0.0333
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2521	0.1089	0.0207
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.1862	0.4053	0.6459
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	2.3731	0.7786	0.0023
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.5026	0.2588	0.0521
Recipient on life support	0.9257	0.2240	<0.0001
Recipient race: Asian (ref=White)	-0.3622	0.4173	0.3854
Recipient race: Black (ref=White)	-0.1662	0.2205	0.4509
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.8109	0.6112	0.1846
Split or partial liver (ref=whole liver)	0.5861	0.2852	0.0399

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Pediatric (Age 0-17)

84.1% graft functioning at 1 Month when all covariates=0.
The index of concordance is 74.0%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0154	0.2383	0.9484
ABO compatibility: incompatible (ref=equal)	0.1154	0.5115	0.8215
Diagnosis: AHN*	0.0277	0.2884	0.9236
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.9247	0.7342	0.2079
Diagnosis: Malignant Neoplasms*	-0.3271	0.4939	0.5078
Diagnosis: Metabolic Diseases*	-0.4013	0.3902	0.3037
Diagnosis: Non-Cholestatic Cirrhosis*	-1.3745	0.7442	0.0647
Diagnosis: Other/Missing*	-0.3893	0.2700	0.1493
Donor age: 0-17 (ref=35-49)	-0.4770	0.3369	0.1567
Donor age: 18-34 (ref=35-49)	-0.6424	0.3817	0.0924
Donor age: 50+	1.0388	0.4126	0.0118
Donor female	-0.3232	0.2028	0.1110
Donor race: Asian (ref=White)	0.2260	0.7418	0.7607
Donor race: Black (ref=White)	0.2847	0.2460	0.2470
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.4126	0.7376	0.5759
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.2027	1.0935	0.8529
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.3828	0.2773	0.1675
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1642	0.2692	0.5420
Donor: cadaveric COD other (ref=COD Head trauma)	-0.8950	0.6265	0.1531
Recipient age: 0-1 (ref=2-10)	0.5216	0.2383	0.0286
Recipient age: 11-17 (ref=2-10)	-0.9731	0.3290	0.0031
Recipient ascites: missing (ref=no)	0.6928	0.3295	0.0355
Recipient ascites: yes (ref=no)	0.1197	0.2114	0.5714
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2260	0.1197	0.0591
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.1599	0.4779	0.7379
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	1.6474	1.0989	0.1338
Recipient on life support	1.1520	0.2231	<0.0001
Recipient race: Asian (ref=White)	-0.4071	0.4134	0.3248
Recipient race: Black (ref=White)	-0.3050	0.2391	0.2020
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.5751	0.6089	0.3449

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Graft Survival Model Description
1 Month after Transplant
Organ: Liver
Pediatric (Age 0-17)

94.0% graft functioning at 1 Month when all covariates=0.
The index of concordance is 77.0%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	1.1118	0.4857	0.0221
ABO compatibility: incompatible (ref=equal)	0.5547	1.0974	0.6132
Donor age: 18-34 (ref=35-49)	0.9418	0.4808	0.0501
Donor age: 50+	3.8968	1.0105	0.0001
Donor weight (ln kg) (ref=ln of avg weight**)	-1.2077	1.1916	0.3108
Donor weight: missing (ref=ln of avg weight**)	-5.1131	5.8667	0.3834
Recipient age: 0-1 (ref=2-10)	-0.8675	0.4297	0.0435
Recipient age: 11-17 (ref=2-10)	0.2270	0.5823	0.6967
Recipient ascites: missing (ref=no)	-1.5450	0.8934	0.0837
Recipient ascites: yes (ref=no)	0.1299	0.4293	0.7622
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	0.5355	0.4598	0.2442
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	-0.9136	0.7744	0.2381
Recipient medical condition: in ICU (ref=not hospitalized)	0.3067	0.4304	0.4761
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	1.4080	0.5851	0.0161

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Pediatric (Age 0-17)

83.0% graft functioning at 1 Year when all covariates=0.
The index of concordance is 69.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0724	0.1799	0.6875
ABO compatibility: incompatible (ref=equal)	-0.0695	0.4157	0.8673
Diagnosis: AHN*	0.3023	0.2088	0.1476
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.0565	0.3616	0.8758
Diagnosis: Malignant Neoplasms*	-0.0451	0.3344	0.8928
Diagnosis: Metabolic Diseases*	-0.2216	0.2805	0.4295
Diagnosis: Non-Cholestatic Cirrhosis*	-0.2551	0.3437	0.4580
Diagnosis: Other/Missing*	-0.2570	0.1968	0.1916
Donor age: 0-17 (ref=35-49)	-0.4774	0.2789	0.0870
Donor age: 18-34 (ref=35-49)	-0.1531	0.2192	0.4849
Donor age: 50+	0.8870	0.3109	0.0043
Donor race: Asian (ref=White)	0.4814	0.4419	0.2760
Donor race: Black (ref=White)	0.1966	0.1946	0.3125
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.8697	0.5973	0.1454
Donor weight (ln kg) (ref=ln of avg weight**)	-0.2814	0.1536	0.0669
Donor weight: missing (ref=ln of avg weight**)	-0.8910	0.8215	0.2782
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.7414	1.0464	0.4786
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.1391	0.2208	0.5288
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1332	0.2067	0.5194
Donor: cadaveric COD other (ref=COD Head trauma)	0.0020	0.3637	0.9957
Donor: living (ref=cadaveric - COD Head trauma)	-0.2234	0.2490	0.3696
Previous transplant of this organ type	0.4939	0.1829	0.0069
Recipient age: 0-1 (ref=2-10)	-0.2225	0.2136	0.2974
Recipient age: 11-17 (ref=2-10)	-0.2183	0.2664	0.4125
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.1656	0.0927	0.0740
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.0286	0.3000	0.9239
Recipient height (ln cm) (ref=ln of avg height**)	-0.7193	0.3183	0.0238
Recipient height: missing (ref=ln of avg height**)	-3.5042	1.7066	0.0400
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	1.8690	0.7826	0.0169
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.3255	0.2242	0.1466
Recipient on life support	0.7287	0.1814	0.0001
Recipient race: Asian (ref=White)	-0.2657	0.3235	0.4115
Recipient race: Black (ref=White)	-0.3097	0.1881	0.0997
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0116	0.3711	0.9751
Split or partial liver (ref=whole liver)	0.4918	0.2240	0.0281

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Pediatric (Age 0-17)

74.7% graft functioning at 1 Year when all covariates=0.
The index of concordance is 71.0%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.2713	0.1989	0.1725
ABO compatibility: incompatible (ref=equal)	0.0823	0.4403	0.8517
Diagnosis: AHN*	0.4187	0.2311	0.0700
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.0884	0.3874	0.8195
Diagnosis: Malignant Neoplasms*	-0.0265	0.3863	0.9453
Diagnosis: Metabolic Diseases*	-0.2347	0.3021	0.4372
Diagnosis: Non-Cholestatic Cirrhosis*	-0.2271	0.3771	0.5471
Diagnosis: Other/Missing*	-0.2550	0.2186	0.2433
Donor age: 0-17 (ref=35-49)	-0.6361	0.2642	0.0161
Donor age: 18-34 (ref=35-49)	-0.4093	0.2918	0.1607
Donor age: 50+	0.4932	0.3446	0.1524
Donor race: Asian (ref=White)	0.7641	0.4724	0.1058
Donor race: Black (ref=White)	0.0857	0.2064	0.6781
Donor race: Multi-racial, other, unknown or missing (ref=White)	-1.1084	0.7398	0.1341
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.3879	1.0574	0.7137
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.1781	0.2149	0.4072
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0863	0.2138	0.6863
Donor: cadaveric COD other (ref=COD Head trauma)	-0.0113	0.3597	0.9749
Previous transplant of this organ type	0.5807	0.1872	0.0019
Recipient age: 0-1 (ref=2-10)	0.0462	0.2407	0.8478
Recipient age: 11-17 (ref=2-10)	-0.3738	0.2789	0.1803
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.1228	0.1009	0.2236
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.2641	0.3343	0.4296
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.3336	0.2007	0.0965
Recipient height (ln cm) (ref=ln of avg height**)	-0.9141	0.3337	0.0062
Recipient height: missing (ref=ln of avg height**)	-4.5489	1.8072	0.0118
Recipient on life support	0.8382	0.1896	<0.0001
Recipient race: Asian (ref=White)	-0.2731	0.3318	0.4105
Recipient race: Black (ref=White)	-0.4206	0.2026	0.0379
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0011	0.3981	0.9979

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Graft Survival Model Description
1 Year after Transplant
Organ: Liver
Pediatric (Age 0-17)

88.9% graft functioning at 1 Year when all covariates=0.
The index of concordance is 74.6%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	1.1515	0.4633	0.0129
ABO compatibility: incompatible (ref=equal)	0.0228	1.1324	0.9839
Diagnosis: AHN*	-0.2183	0.5968	0.7145
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.3472	1.1115	0.7547
Diagnosis: Malignant Neoplasms*	0.4810	0.7237	0.5063
Diagnosis: Metabolic Diseases*	-0.4986	0.8259	0.5461
Diagnosis: Non-Cholestatic Cirrhosis*	-0.6337	0.8891	0.4760
Diagnosis: Other/Missing*	-0.1404	0.5383	0.7942
Donor age: 18-34 (ref=35-49)	0.4276	0.4051	0.2912
Donor age: 50+	3.5454	0.8719	<0.0001
Donor race: Asian (ref=White)	-0.7115	1.1524	0.5370
Donor race: Black (ref=White)	0.6786	0.5894	0.2496
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.7600	1.1161	0.4959
Donor weight (ln kg) (ref=ln of avg weight**)	0.5051	0.9835	0.6076
Donor weight: missing (ref=ln of avg weight**)	3.4026	4.9100	0.4883
Recipient age: 0-1 (ref=2-10)	-0.8237	0.4318	0.0564
Recipient age: 11-17 (ref=2-10)	0.2978	0.5946	0.6165
Recipient ascites: missing (ref=no)	-1.7362	0.7881	0.0276
Recipient ascites: yes (ref=no)	0.4242	0.3934	0.2809
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	2.8024	1.2158	0.0212
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	-0.3052	0.5832	0.6008
Recipient medical condition: in ICU (ref=not hospitalized)	0.7409	0.4968	0.1359
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.7944	0.5694	0.1630
Recipient on life support	0.3413	0.5298	0.5194

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Pediatric (Age 0-17)

91.2% graft functioning at 3 Years when all covariates=0.
The index of concordance is 70.4%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.3369	0.1400	0.0161
ABO compatibility: incompatible (ref=equal)	-0.0829	0.2400	0.7297
Diagnosis: AHN*	0.1991	0.1770	0.2605
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.6749	0.2592	0.0092
Diagnosis: Malignant Neoplasms*	0.6158	0.2546	0.0156
Diagnosis: Metabolic Diseases*	-0.2916	0.2281	0.2011
Diagnosis: Non-Cholestatic Cirrhosis*	0.3098	0.2277	0.1737
Diagnosis: Other/Missing*	0.1255	0.1695	0.4590
Donor age: 0-17 (ref=35-49)	-0.1191	0.1994	0.5503
Donor age: 18-34 (ref=35-49)	-0.2100	0.1671	0.2090
Donor age: 50+	0.2869	0.2753	0.2972
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.2369	0.1351	0.0796
Donor and recipient not in same region or OPO (ref=same OPO)	0.3119	0.1801	0.0832
Donor anti-CMV: Positive (ref=negative, cannot disclose, indeterminate, not done, unknown)	0.2070	0.1223	0.0904
Donor history of cancer: Yes (ref=no, unknown, missing)	0.8985	0.5687	0.1142
Donor race: Asian (ref=White)	0.2381	0.3873	0.5386
Donor race: Black (ref=White)	0.3101	0.1478	0.0359
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1422	0.4265	0.7389
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.9269	1.1055	0.4018
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1566	0.1668	0.3479
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.3701	0.1684	0.0280
Donor: cadaveric COD other (ref=COD Head trauma)	0.0907	0.2865	0.7516
Donor: living (ref=cadaveric - COD Head trauma)	-0.3754	0.2600	0.1488
Previous transplant of this organ type	0.2393	0.1437	0.0958
Recipient age: 0-1 (ref=2-10)	0.3551	0.1427	0.0128
Recipient age: 11-17 (ref=2-10)	-0.0437	0.1722	0.7995
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2127	0.0757	0.0050
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.0923	0.2255	0.6821
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	1.1002	0.4374	0.0119
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1583	0.1802	0.3797
Recipient medical condition: in ICU (ref=not hospitalized)	0.3467	0.1660	0.0367
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.3974	0.1875	0.0341
Recipient on life support	0.5241	0.1628	0.0013
Recipient race: Asian (ref=White)	-0.0713	0.3219	0.8247
Recipient race: Black (ref=White)	0.2347	0.1317	0.0747
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1789	0.3490	0.6083
Split or partial liver (ref=whole liver)	0.6501	0.1586	<0.0001

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Pediatric (Age 0-17)

91.9% graft functioning at 3 Years when all covariates=0.
The index of concordance is 71.5%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.2745	0.1549	0.0764
ABO compatibility: incompatible (ref=equal)	-0.2048	0.2571	0.4256
Diagnosis: AHN*	0.2761	0.1984	0.1640
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.6628	0.2814	0.0185
Diagnosis: Malignant Neoplasms*	0.7339	0.2781	0.0083
Diagnosis: Metabolic Diseases*	-0.3185	0.2530	0.2081
Diagnosis: Non-Cholestatic Cirrhosis*	0.2657	0.2474	0.2829
Diagnosis: Other/Missing*	0.2163	0.1877	0.2493
Donor age: 0-17 (ref=35-49)	-0.0403	0.2237	0.8571
Donor age: 18-34 (ref=35-49)	-0.0112	0.2148	0.9584
Donor age: 50+	0.3944	0.2937	0.1792
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.2227	0.1354	0.1000
Donor and recipient not in same region or OPO (ref=same OPO)	0.3152	0.1809	0.0814
Donor race: Asian (ref=White)	0.5110	0.4221	0.2261
Donor race: Black (ref=White)	0.4555	0.1548	0.0032
Donor race: Multi-racial, other, unknown or missing (ref=White)	-1.1417	1.0099	0.2582
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.2959	1.0116	0.7699
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1462	0.1670	0.3811
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.4852	0.1727	0.0050
Donor: cadaveric COD other (ref=COD Head trauma)	0.1321	0.2856	0.6437
Previous transplant of this organ type	0.3211	0.1539	0.0369
Recipient age: 0-1 (ref=2-10)	0.4805	0.1572	0.0022
Recipient age: 11-17 (ref=2-10)	-0.0255	0.1819	0.8885
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2301	0.0823	0.0052
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1128	0.2575	0.6615
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.9582	0.4786	0.0453
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2539	0.2095	0.2256
Recipient medical condition: in ICU (ref=not hospitalized)	0.3034	0.1836	0.0984
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.4453	0.1954	0.0227
Recipient on life support	0.4859	0.1790	0.0066
Recipient race: Asian (ref=White)	0.0307	0.3385	0.9277
Recipient race: Black (ref=White)	0.2348	0.1399	0.0932
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.3008	0.3922	0.4430
Split or partial liver (ref=whole liver)	0.6213	0.1628	0.0001

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Graft Survival Model Description
3 Years after Transplant
Organ: Liver
Pediatric (Age 0-17)

68.7% graft functioning at 3 Years when all covariates=0.
The index of concordance is 72.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	1.1126	0.3439	0.0012
ABO compatibility: incompatible (ref=equal)	1.3607	0.6953	0.0503
Diagnosis: AHN*	-0.4270	0.4250	0.3151
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.4657	0.7066	0.5099
Diagnosis: Malignant Neoplasms*	0.0201	0.6350	0.9747
Diagnosis: Metabolic Diseases*	-0.3452	0.5177	0.5049
Diagnosis: Non-Cholestatic Cirrhosis*	-0.1443	0.6213	0.8163
Diagnosis: Other/Missing*	-0.4437	0.4288	0.3007
Donor age: 18-34 (ref=35-49)	-0.5405	0.2921	0.0643
Donor age: 50+	0.1734	1.0619	0.8703
Donor race: Asian (ref=White)	-0.0388	0.7396	0.9582
Donor race: Black (ref=White)	-0.4907	0.4797	0.3064
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.7754	0.5429	0.1532
Recipient age: 0-1 (ref=2-10)	-0.4171	0.3485	0.2315
Recipient age: 11-17 (ref=2-10)	-0.0556	0.5660	0.9217
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	2.5650	1.1179	0.0218
Recipient on life support	1.3198	0.3403	0.0001

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Graft Survival Model Description
1 Month after Transplant
Organ: Lung
Adult (Age 12+)

98.4% graft functioning at 1 Month when all covariates=0.
The index of concordance is 76.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Cardiac Index (=cardiac output/BSA in sq. m) (ref=mean cardiac index*)	-0.2375	0.1379	0.0850
Cardiac Index: missing (ref=mean cardiac index*)	0.1414	0.2846	0.6193
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.6010	0.3777	0.1116
Diagnosis Group C: includes Cystic Fibrosis	0.0459	0.3712	0.9017
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.4881	0.2132	0.0221
Diagnosis: Eisenmengers	1.0596	0.5833	0.0693
Diagnosis: lymphangioliomyomatosis	0.0513	1.0238	0.9600
Diagnosis: obliterative bronchiolitis (not retransplanted)	-0.1459	1.0320	0.8876
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.8216	0.4097	0.0449
Diagnosis: pulmonary fibrosis other	-0.2417	0.4789	0.6138
Donor age: 50+	-0.1410	0.2504	0.5734
Donor body surface area (m ²): linear (ref=mean BSA*)	-0.6223	0.3458	0.0719
Donor body surface area: missing (ref=mean BSA*)	-8.6330	313.9149	0.9781
Donor race: Asian	-0.0280	0.7263	0.9693
Donor race: Black	-0.0557	0.2208	0.8009
Donor race: Multi-racial, other, unknown or missing	-0.1376	1.0271	0.8934
Donor used cocaine, IV drugs or other drugs in last six months: missing (no to all)	0.6794	0.3949	0.0853
Donor used cocaine, IV drugs or other drugs in last six months: yes to any	0.5900	0.4398	0.1798
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	-0.3579	0.4671	0.4436
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.0698	0.1854	0.7067
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	0.3075	0.4692	0.5123
FVC (% predicted): linear (ref=mean FVC*)	-0.0057	0.0054	0.2872
FVC (% predicted): missing (ref=mean FVC*)	0.2181	0.2442	0.3718
Hemodynamics PA systolic (mm/Hg): linear (ref=mean*)	0.0094	0.0055	0.0882
Hemodynamics PA systolic (mm/Hg): missing (ref=mean*)	-0.0344	0.2995	0.9086
Ischemia time: linear (ref=average time*)	0.0860	0.0578	0.1367
Ischemia time: missing (ref=average time*)	0.5488	0.1954	0.0050
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	1.0415	0.1785	<0.0001
O2 required at rest (L/min): linear (ref=mean*)	0.1119	0.0344	0.0012
Oxygen required at rest: missing (ref=mean*)	-0.1038	0.2408	0.6665
Previous transplant of this organ type	0.0141	0.4259	0.9735
Recipient age: years (ref=mean age*)	0.0098	0.0086	0.2576
Recipient creatinine: linear (ref=mean creatinine*)	0.0877	0.0643	0.1727
Recipient creatinine: missing (ref=mean creatinine*)	1.1603	0.3253	0.0004
Recipient female	-0.1195	0.1808	0.5086
Recipient on ventilator	0.4846	0.3386	0.1524
Recipient race: Asian	0.9530	0.7404	0.1981
Recipient race: Black	0.2287	0.2825	0.4182
Recipient race: Multi-racial, other, unknown or missing	1.0789	0.5321	0.0426
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	-0.3774	1.0509	0.7195
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.7266	0.7608	0.3396

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.

Graft Survival Model Description
1 Year after Transplant
Organ: Lung
Adult (Age 12+)

85.1% graft functioning at 1 Year when all covariates=0.
The index of concordance is 65.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Cardiac Index (=cardiac output/BSA in sq. m) (ref=mean cardiac index*)	-0.1369	0.0732	0.0614
Cardiac Index: missing (ref=mean cardiac index*)	0.1193	0.0978	0.2227
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.6498	0.2122	0.0022
Diagnosis Group C: includes Cystic Fibrosis	-0.0195	0.1961	0.9207
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.3240	0.1132	0.0042
Diagnosis: Eisenmengers	0.5423	0.4895	0.2679
Diagnosis: lymphangioliomyomatosis	-0.2846	0.5902	0.6297
Diagnosis: obliterative bronchiolitis (not retransplanted)	-0.3319	0.5949	0.5769
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.3751	0.2482	0.1308
Diagnosis: pulmonary fibrosis other	0.0223	0.2653	0.9331
Donor age: 50+	0.3575	0.1254	0.0044
Donor body surface area (m^2): linear (ref=mean BSA*)	-0.5296	0.1940	0.0063
Donor body surface area: missing (ref=mean BSA*)	-9.3745	227.0500	0.9671
Donor history of diabetes: Missing (ref=no)	-0.1410	1.0078	0.8888
Donor history of diabetes: Yes (ref=no)	0.6529	0.2074	0.0016
Donor race: Asian	0.1941	0.3313	0.5579
Donor race: Black	0.0735	0.1192	0.5378
Donor race: Multi-racial, other, unknown or missing	-0.1023	0.5845	0.8611
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	0.0129	0.2028	0.9493
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.1372	0.1028	0.1822
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	0.1444	0.2440	0.5539
FVC (% predicted): linear (ref=mean FVC*)	-0.0033	0.0029	0.2464
FVC (% predicted): missing (ref=mean FVC*)	0.2122	0.1395	0.1283
Ischemia time: linear (ref=average time*)	-0.0120	0.0328	0.7153
Ischemia time: quadratic (ref=average time*)	0.0255	0.0095	0.0071
Ischemia time: missing (ref=average time*)	0.2241	0.1174	0.0563
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	0.4809	0.1079	<0.0001
O2 required at rest (L/min): linear (ref=mean*)	0.0663	0.0228	0.0037
Oxygen required at rest: missing (ref=mean*)	0.0575	0.1267	0.6502
Previous transplant of this organ type	0.4959	0.2375	0.0368
Recipient age: years (ref=mean age*)	0.0076	0.0050	0.1248
Recipient creatinine: linear (ref=mean creatinine*)	0.0548	0.0373	0.1422
Recipient creatinine: missing (ref=mean creatinine*)	0.7739	0.2180	0.0004
Recipient female	-0.2429	0.0972	0.0124
Recipient on ventilator	0.5287	0.2272	0.0200
Recipient race: Asian	-0.0263	0.7205	0.9709
Recipient race: Black	-0.1411	0.1855	0.4466
Recipient race: Multi-racial, other, unknown or missing	0.7166	0.3890	0.0654
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	0.6234	0.4436	0.1599
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.0444	0.4050	0.9127

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.

Graft Survival Model Description
3 Years after Transplant
Organ: Lung
Adult (Age 12+)

67.4% graft functioning at 3 Years when all covariates=0.
The index of concordance is 62.0%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.5082	0.1864	0.0064
Diagnosis Group C: includes Cystic Fibrosis	0.1648	0.1451	0.2562
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.1727	0.0922	0.0611
Diagnosis: Eisenmengers	-0.5389	0.4778	0.2594
Diagnosis: lymphangioleiomyomatosis	-0.6104	0.5856	0.2973
Diagnosis: obliterative bronchiolitis (not retransplanted)	0.4458	0.4229	0.2919
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.2210	0.2003	0.2699
Diagnosis: pulmonary fibrosis other	0.3508	0.1926	0.0686
Donor BMI (kg/m ²): linear (ref=avg BMI*)	0.0031	0.0106	0.7695
Donor BMI: missing (ref=avg BMI*)	-0.2626	0.5109	0.6073
Donor age: 50+	0.0728	0.1173	0.5349
Donor body surface area (m ²): linear (ref=mean BSA*)	-0.3196	0.2148	0.1367
Donor coronary angiogram: Missing (ref=No/Yes, normal)	-0.0183	0.0949	0.8471
Donor coronary angiogram: Yes, not normal (ref=No/Yes, normal)	0.7150	0.4198	0.0885
Donor history of diabetes: Missing (ref=no)	0.5259	0.4150	0.2051
Donor history of diabetes: Yes (ref=no)	0.5828	0.1865	0.0018
Donor race: Asian	-0.2210	0.3048	0.4683
Donor race: Black	0.3032	0.0940	0.0013
Donor race: Multi-racial, other, unknown or missing	-0.2265	0.3595	0.5286
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	-0.2579	0.1720	0.1338
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.0971	0.0803	0.2266
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	-0.3233	0.2121	0.1274
FVC (% predicted): linear (ref=mean FVC*)	-0.0030	0.0023	0.1888
FVC (% predicted): missing (ref=mean FVC*)	0.2028	0.1048	0.0530
Hemodynamics PCW pressure for Group D: 20+ mm/Hg (ref=PCW pressure<20)	0.5627	0.2442	0.0212
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	0.3905	0.0865	<0.0001
Previous transplant of this organ type	0.7707	0.2142	0.0003
Recipient age: years (ref=mean age*)	0.0125	0.0040	0.0016
Recipient female	-0.0465	0.0771	0.5467
Recipient on ventilator	0.4063	0.1819	0.0255
Recipient race: Asian	0.4334	0.4635	0.3498
Recipient race: Black	0.0800	0.1441	0.5789
Recipient race: Multi-racial, other, unknown or missing	0.7901	0.3119	0.0113
Recipient six minute walk distance < 150 ft at listing: unknown or missing	0.2028	0.1003	0.0432
Recipient six minute walk distance < 150 ft at listing: yes	0.2892	0.1172	0.0136
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	-0.0738	0.4276	0.8630
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.8720	0.4633	0.0598

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.

Patient Survival Model Description
1 Month after First Transplant
Organ: Heart
Adult (Age 18+)

95.7% alive at 1 Month when all covariates=0.
The index of concordance is 68.0%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.1469	0.1280	0.2513
Diagnosis: Congenital Heart Disease	1.1310	0.2424	<0.0001
Diagnosis: Other/Missing	0.2802	0.2806	0.3179
Donor age: 0-34	-0.3393	0.1294	0.0088
Donor: cadaveric COD cerebrovascular/stroke	0.1335	0.1360	0.3261
Ischemia time: linear (ref=average time*)	0.2259	0.0555	<0.0001
Ischemia time: missing (ref=average time*)	0.5259	0.1580	0.0009
Recipient age: 50-64 (ref=35-49)	0.1836	0.1251	0.1420
Recipient creatinine: >1.5	0.6700	0.1215	<0.0001
Recipient height (cm) (ref=avg height*)	-0.0108	0.0044	0.0148
Recipient on ECMO	1.0926	0.6146	0.0755
Recipient on IABP	-0.0137	0.2162	0.9494
Recipient on ventilator	1.0307	0.2202	<0.0001
Recipient race: Asian, multi-racial, other, unknown or missing	-0.3557	0.3403	0.2960
Recipient status 1A at transplant	0.3421	0.1235	0.0056

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
1 Year after First Transplant
Organ: Heart
Adult (Age 18+)

89.2% alive at 1 Year when all covariates=0.
The index of concordance is 65.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.1322	0.0845	0.1176
Diagnosis: Congenital Heart Disease	0.6015	0.1951	0.0021
Diagnosis: Other/Missing	0.2260	0.1976	0.2527
Donor age: 0-34	-0.3904	0.0895	<0.0001
Donor: cadaveric COD cerebrovascular/stroke	0.0783	0.0947	0.4082
Ischemia time: linear (ref=average time*)	0.1762	0.0393	<0.0001
Ischemia time: missing (ref=average time*)	0.4432	0.1121	0.0001
Recipient creatinine: >1.5	0.6704	0.0845	<0.0001
Recipient height (cm) (ref=avg height*)	-0.0107	0.0032	0.0009
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2820	0.1066	0.0082
Recipient medical condition: in ICU (ref=not hospitalized)	0.3380	0.0952	0.0004
Recipient on ECMO	1.3177	0.5209	0.0114
Recipient on ventilator	0.9455	0.1598	<0.0001

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
3 Years after First Transplant
Organ: Heart
Adult (Age 18+)

81.0% alive at 3 Years when all covariates=0.
The index of concordance is 60.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Cardiomyopathy	-0.1910	0.0714	0.0075
Diagnosis: Congenital Heart Disease	0.1207	0.2227	0.5880
Donor age: 0-17	-0.1501	0.0992	0.1301
Donor age: 18-34	-0.2175	0.0688	0.0016
Donor age: 65+	1.0072	0.4144	0.0151
Ischemia time: linear (ref=average time*)	0.1322	0.0290	<0.0001
Ischemia time: missing (ref=average time*)	0.2722	0.0887	0.0022
Recipient age: 18-34 (ref=35-49)	0.2878	0.1149	0.0123
Recipient age: 65+ (ref=35-49)	0.1547	0.0982	0.1153
Recipient creatinine: <1 and <=1.5	0.0759	0.0768	0.3227
Recipient creatinine: >1.5	0.2004	0.0860	0.0199
Recipient diabetes: yes (ref=no diabetes/unknown diabetes)	0.1423	0.0792	0.0722
Recipient female	0.1097	0.0887	0.2161
Recipient height (cm) (ref=avg height*)	-0.0109	0.0035	0.0018
Recipient on IABP	0.1997	0.1262	0.1136
Recipient on ventilator	0.9476	0.1290	<0.0001
Recipient race: Asian	0.2881	0.2354	0.2210
Recipient race: Black	0.2562	0.0901	0.0045
Recipient race: Multi-racial, other, unknown or missing	-0.5555	0.3808	0.1446
Recipient status 1A at transplant	0.0942	0.0730	0.1965
Recipient weight (kg) (ref=avg weight*)	0.0047	0.0022	0.0342

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 79.61 kg; recipient height is centered on 173.67 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
1 Month after First Transplant
Organ: Heart
Pediatric (Age 0-17)

95.5% alive at 1 Month when all covariates=0.
The index of concordance is 67.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Recipient height (cm) (ref=avg height*)	0.0172	0.0080	0.0322
Recipient on ventilator	1.2078	0.3122	0.0001
Recipient weight (kg) (ref=avg weight*)	-0.0312	0.0167	0.0613

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
1 Year after First Transplant
Organ: Heart
Pediatric (Age 0-17)

89.8% alive at 1 Year when all covariates=0.
The index of concordance is 57.5%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor: cadaveric COD cerebrovascular/stroke	-0.1892	0.3710	0.6102
Recipient female	0.5913	0.2187	0.0069

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
3 Years after First Transplant
Organ: Heart
Pediatric (Age 0-17)

85.2% alive at 3 Years when all covariates=0.
The index of concordance is 59.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Donor age: 0-34	0.2633	0.5229	0.6146
Donor: cadaveric COD anoxia	-0.3840	0.2296	0.0945
Ischemia time: linear (ref=average time*)	0.0934	0.0714	0.1912
Recipient creatinine: >1.5	0.6746	0.4267	0.1139
Recipient height (cm) (ref=avg height*)	-0.0049	0.0023	0.0341
Recipient on ECMO	0.3343	0.3728	0.3699
Recipient on IABP	-12.0079	371.8333	0.9742
Recipient race: Black	0.2591	0.2217	0.2426

* Ischemia time is centered on 3.15 hours; recipient weight is centered on 26.86 kg; recipient height is centered on 110.97 cm; cardiac index is centered on 2.23 L/min/sq m.

Patient Survival Model Description
1 Month after First Transplant
Organ: Kidney
Adult (Age 18+)

99.4% alive at 1 Month when all covariates=0.
The index of concordance is 73.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.4088	0.5995	0.4953
Diagnosis: Diabetes*	0.3872	0.1859	0.0373
Diagnosis: Hypertensive Nephrosclerosis*	0.3657	0.1978	0.0645
Diagnosis: Other/Missing*	0.1662	0.2605	0.5235
Diagnosis: Polycystic Kidney Disease*	-0.7041	0.3387	0.0377
Diagnosis: Renovascular & Other Vascular Diseases*	0.1378	0.2994	0.6453
Diagnosis: Tubular and Interstitial Diseases*	0.2991	0.3018	0.3216
Donor age: 0-17 (ref=35-49)	-0.8451	0.6278	0.1782
Donor age: 18-34 (ref=35-49)	-0.1443	0.3469	0.6775
Donor age: 50-64 (ref=35-49)	-0.2124	0.4213	0.6141
Donor age: 65+ (ref=35-49)	0.7119	0.7703	0.3554
Donor history of hypertension	0.0396	0.1920	0.8367
Donor meets expanded donor criteria for cadaveric kidney	-0.1227	0.2702	0.6498
Donor serum creatinine: >1.5	-0.1948	0.2391	0.4153
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-12.7674	462.5839	0.9780
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2671	0.2396	0.2649
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0574	0.1806	0.7508
Donor: cadaveric COD other (ref=COD Head trauma)	-0.7852	0.7206	0.2758
Donor: living (ref=cadaveric - COD Head trauma)	-0.2956	0.1934	0.1263
Peak PRA: 10-79 (ref=<10)	0.0791	0.1638	0.6290
Peak PRA: 80-100 (ref=<10)	0.5158	0.2392	0.0311
Peak PRA: missing (ref=<10)	-0.3704	1.0056	0.7126
Recipient age: 18-34 (ref=35-49)	-0.5360	0.4980	0.2818
Recipient age: 50-64 (ref=35-49)	0.6265	0.2653	0.0182
Recipient age: 65+ (ref=35-49)	1.3160	0.2863	<0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1705	0.4527	0.7065
Recipient medical condition: in ICU (ref=not hospitalized)	2.2857	0.7148	0.0014
Transplant procedure type en-bloc or double	0.6359	0.3439	0.0644
Year of ESRD treatment: missing (ref=years 3-5)	4.7794	0.3659	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.6562	0.1939	0.0007
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2409	0.1728	0.1633
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.1185	0.2028	0.5590
Recipient age by donor age interaction: 18-34 and 0-17 (ref=35-49 and 35-49)	0.7754	1.0394	0.4557
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	-0.1609	0.7196	0.8231
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	0.3378	0.8406	0.6878
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	-12.5717	1163.8888	0.9914
Recipient age by donor age interaction: 50-64 and 0-17 (ref=35-49 and 35-49)	0.1437	0.7394	0.8459
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	0.0829	0.4107	0.8400
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	0.2132	0.4707	0.6506
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-1.0270	0.9064	0.2572
Recipient age by donor age interaction: 65+ and 0-17 (ref=35-49 and 35-49)	-13.1446	390.6248	0.9732
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	-0.2024	0.4863	0.6773
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	0.0783	0.5081	0.8775
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	-0.5366	0.8210	0.5134

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Kidney
Adult (Age 18+)

99.1% alive at 1 Month when all covariates=0.
The index of concordance is 72.6%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.4379	1.0183	0.6672
Diagnosis: Diabetes*	0.0817	0.2158	0.7051
Diagnosis: Hypertensive Nephrosclerosis*	0.1543	0.2205	0.4841
Diagnosis: Other/Missing*	-0.1165	0.3153	0.7117
Diagnosis: Polycystic Kidney Disease*	-0.8046	0.3768	0.0327
Diagnosis: Renovascular & Other Vascular Diseases*	0.0016	0.3345	0.9961
Diagnosis: Tubular and Interstitial Diseases*	0.2128	0.3430	0.5349
Donor age: 0-17 (ref=35-49)	-0.9983	0.6461	0.1223
Donor age: 18-34 (ref=35-49)	-0.2082	0.4103	0.6119
Donor age: 50-64 (ref=35-49)	-0.2405	0.4786	0.6153
Donor age: 65+ (ref=35-49)	0.7766	0.8131	0.3395
Donor history of hypertension	-0.0165	0.1926	0.9316
Donor meets expanded donor criteria for cadaveric kidney	-0.0637	0.2964	0.8299
Donor serum creatinine: >1.5	-0.1972	0.2400	0.4111
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-14.2729	956.8536	0.9881
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2225	0.2407	0.3552
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	-0.0219	0.1831	0.9048
Donor: cadaveric COD other (ref=COD Head trauma)	-0.8243	0.7215	0.2532
Peak PRA: 10-79 (ref=<10)	0.0426	0.1857	0.8187
Peak PRA: 80-100 (ref=<10)	0.3088	0.2752	0.2618
Peak PRA: missing (ref=<10)	-14.1694	2000.5155	0.9943
Recipient age: 18-34 (ref=35-49)	-0.5794	0.6394	0.3648
Recipient age: 50-64 (ref=35-49)	0.5168	0.3274	0.1144
Recipient age: 65+ (ref=35-49)	1.5011	0.3439	<0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.0094	0.5838	0.9871
Recipient medical condition: in ICU (ref=not hospitalized)	2.7780	0.7210	0.0001
Transplant procedure type en-bloc or double	0.6287	0.3453	0.0687
Year of ESRD treatment: missing (ref=years 3-5)	4.8582	0.3968	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5566	0.2692	0.0387
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1568	0.2042	0.4427
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.1922	0.2099	0.3597
Recipient age by donor age interaction: 18-34 and 0-17 (ref=35-49 and 35-49)	0.7776	1.1138	0.4851
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	-13.5460	472.7061	0.9771
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	0.4407	1.0253	0.6673
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	-14.5227	3082.9116	0.9962
Recipient age by donor age interaction: 50-64 and 0-17 (ref=35-49 and 35-49)	0.2761	0.7636	0.7176
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	0.0154	0.4895	0.9749
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	0.3161	0.5314	0.5520
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-1.0550	0.9271	0.2551
Recipient age by donor age interaction: 65+ and 0-17 (ref=35-49 and 35-49)	-14.7807	829.4936	0.9858
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	-0.6529	0.5773	0.2581
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	-0.2544	0.5701	0.6555
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	-1.0131	0.8547	0.2359

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Kidney
Adult (Age 18+)

99.7% alive at 1 Month when all covariates=0.
The index of concordance is 76.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	1.5654	0.7928	0.0483
Diagnosis: Diabetes*	1.1654	0.3931	0.0030
Diagnosis: Hypertensive Nephrosclerosis*	0.9664	0.4458	0.0302
Diagnosis: Other/Missing*	0.8724	0.4937	0.0772
Diagnosis: Polycystic Kidney Disease*	-0.4965	0.7910	0.5302
Diagnosis: Renovascular & Other Vascular Diseases*	0.5178	0.6740	0.4423
Diagnosis: Tubular and Interstitial Diseases*	0.5053	0.6724	0.4523
Donor age: 18-34 (ref=35-49)	-0.3007	0.6783	0.6575
Donor age: 50-64 (ref=35-49)	-0.6036	1.0612	0.5695
Donor age: 65+ (ref=35-49)	-11.2938	771.8728	0.9883
Peak PRA: 10-79 (ref=<10)	0.1794	0.3468	0.6049
Peak PRA: 80-100 (ref=<10)	1.3776	0.4760	0.0038
Peak PRA: missing (ref=<10)	0.0527	1.0122	0.9585
Recipient age: 18-34 (ref=35-49)	-0.4671	0.7980	0.5584
Recipient age: 50-64 (ref=35-49)	0.7735	0.4515	0.0866
Recipient age: 65+ (ref=35-49)	0.7820	0.5438	0.1504
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.4079	0.7208	0.5714
Recipient medical condition: in ICU (ref=not hospitalized)	-11.4000	1303.9601	0.9930
Year of ESRD treatment: missing (ref=years 3-5)	4.9200	1.1100	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.8008	0.2865	0.0052
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.4873	0.3197	0.1274
Year of ESRD treatment: years 6+ (ref=years 3-5)	-0.9633	1.0261	0.3478
Recipient age by donor age interaction: 18-34 and 18-34 (ref=35-49 and 35-49)	0.9125	1.0781	0.3973
Recipient age by donor age interaction: 18-34 and 50-64 (ref=35-49 and 35-49)	0.5764	1.6213	0.7222
Recipient age by donor age interaction: 18-34 and 65+ (ref=35-49 and 35-49)	0.5588	2100.1258	0.9998
Recipient age by donor age interaction: 50-64 and 18-34 (ref=35-49 and 35-49)	0.3653	0.7832	0.6409
Recipient age by donor age interaction: 50-64 and 50-64 (ref=35-49 and 35-49)	0.3931	1.1604	0.7348
Recipient age by donor age interaction: 50-64 and 65+ (ref=35-49 and 35-49)	-0.6752	1149.5301	0.9995
Recipient age by donor age interaction: 65+ and 18-34 (ref=35-49 and 35-49)	1.2146	0.9373	0.1950
Recipient age by donor age interaction: 65+ and 50-64 (ref=35-49 and 35-49)	1.5579	1.2431	0.2101
Recipient age by donor age interaction: 65+ and 65+ (ref=35-49 and 35-49)	12.8901	771.8732	0.9867

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Patient Survival Model Description
1 Year after First Transplant
Organ: Kidney
Adult (Age 18+)

97.3% alive at 1 Year when all covariates=0.
The index of concordance is 72.9%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.0320	0.3250	0.9217
Diagnosis: Diabetes*	0.4633	0.0867	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.1647	0.0982	0.0934
Diagnosis: Other/Missing*	0.0761	0.1242	0.5400
Diagnosis: Polycystic Kidney Disease*	-0.4189	0.1400	0.0028
Diagnosis: Renovascular & Other Vascular Diseases*	0.1147	0.1407	0.4153
Diagnosis: Tubular and Interstitial Diseases*	0.2675	0.1459	0.0668
Donor age: 0-17 (ref=35-49)	-0.3985	0.1321	0.0026
Donor age: 18-34 (ref=35-49)	-0.3342	0.0861	0.0001
Donor age: 50-64 (ref=35-49)	-0.1036	0.0907	0.2534
Donor age: 65+ (ref=35-49)	0.3553	0.1498	0.0177
Donor history of hypertension	0.0539	0.0868	0.5346
Donor meets expanded donor criteria for cadaveric kidney	0.1736	0.1223	0.1559
Donor race: Asian (ref=White)	-0.1056	0.2086	0.6125
Donor race: Black (ref=White)	0.0159	0.0975	0.8701
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.2538	0.2427	0.2956
Donor serum creatinine: >1.5	0.0295	0.1023	0.7729
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.3071	0.4521	0.4970
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2770	0.1165	0.0174
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1987	0.0878	0.0236
Donor: cadaveric COD other (ref=COD Head trauma)	0.1861	0.2230	0.4041
Donor: living (ref=cadaveric - COD Head trauma)	-0.2378	0.0992	0.0165
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.0111	0.1059	0.9169
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.1376	0.1180	0.2434
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1095	0.0896	0.2217
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.0535	0.1104	0.6279
HLA mismatch: 2 B mismatches (ref=0 mismatch)	-0.0111	0.1209	0.9267
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.1142	0.0991	0.2494
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	-0.2640	0.7188	0.7134
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.2275	0.1810	0.2090
Peak PRA: 10-79 (ref=<10)	0.0471	0.0761	0.5359
Peak PRA: 80-100 (ref=<10)	0.0991	0.1333	0.4572
Peak PRA: missing (ref=<10)	0.1884	0.3832	0.6230
Recipient age: 18-34 (ref=35-49)	-0.5454	0.1458	0.0002
Recipient age: 50-64 (ref=35-49)	0.6245	0.0793	<0.0001
Recipient age: 65+ (ref=35-49)	1.0462	0.0911	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.4094	0.1044	0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.5147	0.1799	0.0042
Recipient medical condition: in ICU (ref=not hospitalized)	1.1634	0.5798	0.0448
Recipient race: Asian (ref=White)	-0.1258	0.1540	0.4141
Recipient race: Black (ref=White)	-0.1133	0.0786	0.1496
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0657	0.1988	0.7410
Year of ESRD treatment: missing (ref=years 3-5)	4.0026	0.3291	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.7394	0.0938	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2167	0.0802	0.0069
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.1593	0.0957	0.0960

* Reference for diagnosis group is glomerular diseases.
** Ischemia time is centered on 13.70 hours.

Deceased Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Kidney
Adult (Age 18+)

96.7% alive at 1 Year when all covariates=0.
The index of concordance is 70.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.1616	0.4173	0.6986
Diagnosis: Diabetes*	0.3245	0.1009	0.0013
Diagnosis: Hypertensive Nephrosclerosis*	0.1075	0.1098	0.3273
Diagnosis: Other/Missing*	-0.1541	0.1523	0.3115
Diagnosis: Polycystic Kidney Disease*	-0.4574	0.1596	0.0042
Diagnosis: Renovascular & Other Vascular Diseases*	0.1066	0.1549	0.4912
Diagnosis: Tubular and Interstitial Diseases*	0.1666	0.1737	0.3375
Donor age: 0-17 (ref=35-49)	-0.4263	0.1359	0.0017
Donor age: 18-34 (ref=35-49)	-0.4481	0.1084	<0.0001
Donor age: 50-64 (ref=35-49)	-0.0129	0.1115	0.9081
Donor age: 65+ (ref=35-49)	0.4247	0.1733	0.0142
Donor history of hypertension	0.0374	0.0874	0.6684
Donor meets expanded donor criteria for cadaveric kidney	0.0965	0.1340	0.4712
Donor race: Asian (ref=White)	-0.1125	0.2352	0.6325
Donor race: Black (ref=White)	0.0513	0.1097	0.6402
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1281	0.3196	0.6885
Donor serum creatinine: >1.5	0.0301	0.1028	0.7696
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.3189	0.4524	0.4810
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.2564	0.1170	0.0285
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1556	0.0893	0.0816
Donor: cadaveric COD other (ref=COD Head trauma)	0.1334	0.2237	0.5510
HLA mismatch: 1 A mismatch (ref=0 mismatch)	-0.1968	0.1329	0.1386
HLA mismatch: 1 B mismatch (ref=0 mismatch)	-0.2750	0.1395	0.0486
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.1065	0.1043	0.3073
HLA mismatch: 2 A mismatches (ref=0 mismatch)	-0.1564	0.1317	0.2351
HLA mismatch: 2 B mismatches (ref=0 mismatch)	-0.0820	0.1379	0.5518
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	0.1459	0.1116	0.1910
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	0.8487	1.0079	0.3998
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.3362	0.2099	0.1092
Peak PRA: 10-79 (ref=<10)	0.0531	0.0848	0.5311
Peak PRA: 80-100 (ref=<10)	-0.0489	0.1498	0.7440
Peak PRA: missing (ref=<10)	0.2487	0.7110	0.7265
Recipient age: 18-34 (ref=35-49)	-0.6017	0.1880	0.0014
Recipient age: 50-64 (ref=35-49)	0.6287	0.0935	<0.0001
Recipient age: 65+ (ref=35-49)	1.0618	0.1059	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.4469	0.1228	0.0003
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3924	0.2275	0.0846
Recipient medical condition: in ICU (ref=not hospitalized)	1.0928	0.7113	0.1244
Recipient race: Asian (ref=White)	-0.0661	0.1603	0.6799
Recipient race: Black (ref=White)	-0.0934	0.0847	0.2699
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0968	0.2354	0.6809
Year of ESRD treatment: missing (ref=years 3-5)	4.1366	0.3524	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5337	0.1210	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2092	0.0953	0.0281
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.1559	0.1011	0.1229

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Kidney
Adult (Age 18+)

98.7% alive at 1 Year when all covariates=0.
The index of concordance is 74.3%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.4017	0.5225	0.4420
Diagnosis: Diabetes*	0.8022	0.1712	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.1335	0.2267	0.5559
Diagnosis: Other/Missing*	0.5402	0.2205	0.0143
Diagnosis: Polycystic Kidney Disease*	-0.3557	0.2976	0.2321
Diagnosis: Renovascular & Other Vascular Diseases*	-0.0347	0.3486	0.9207
Diagnosis: Tubular and Interstitial Diseases*	0.5060	0.2754	0.0662
Donor age: 18-34 (ref=35-49)	-0.2011	0.1429	0.1592
Donor age: 50-64 (ref=35-49)	-0.2968	0.1682	0.0777
Donor age: 65+ (ref=35-49)	0.5263	0.3687	0.1535
Donor race: Asian (ref=White)	0.6661	0.6307	0.2909
Donor race: Black (ref=White)	-0.0621	0.4195	0.8824
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.4120	0.5229	0.4307
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.3199	0.1767	0.0702
HLA mismatch: 1 B mismatch (ref=0 mismatch)	0.1944	0.2279	0.3937
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	0.0606	0.1772	0.7324
HLA mismatch: 2 A mismatches (ref=0 mismatch)	0.0692	0.2296	0.7632
HLA mismatch: 2 B mismatches (ref=0 mismatch)	0.2767	0.2625	0.2918
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.0453	0.2276	0.8422
HLA mismatch: missing the A, B, or DR mismatch (ref=0 mismatch)	-0.3440	1.0406	0.7409
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.2661	0.3921	0.4973
Peak PRA: 10-79 (ref=<10)	-0.0129	0.1747	0.9411
Peak PRA: 80-100 (ref=<10)	0.9338	0.2914	0.0014
Peak PRA: missing (ref=<10)	0.2862	0.4562	0.5303
Recipient age: 18-34 (ref=35-49)	-0.4742	0.2362	0.0447
Recipient age: 50-64 (ref=35-49)	0.6074	0.1525	0.0001
Recipient age: 65+ (ref=35-49)	0.9724	0.1854	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.3530	0.2001	0.0777
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.7547	0.2961	0.0108
Recipient medical condition: in ICU (ref=not hospitalized)	1.3373	1.0047	0.1832
Recipient race: Asian (ref=White)	-1.2003	0.6800	0.0775
Recipient race: Black (ref=White)	-0.1948	0.4052	0.6307
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1320	0.4976	0.7908
Year of ESRD treatment: missing (ref=years 3-5)	3.8437	1.0418	0.0002
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.9808	0.1489	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.3046	0.1534	0.0471
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2800	0.3111	0.3680

* Reference for diagnosis group is glomerular diseases.
** Ischemia time is centered on 13.70 hours.

Patient Survival Model Description
3 Years after First Transplant
Organ: Kidney
Adult (Age 18+)

93.4% alive at 3 Years when all covariates=0.
The index of concordance is 71.6%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.0654	0.2098	0.7552
Diagnosis: Diabetes*	0.6203	0.0584	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.2922	0.0667	<0.0001
Diagnosis: Other/Missing*	0.2374	0.0820	0.0038
Diagnosis: Polycystic Kidney Disease*	-0.3092	0.0928	0.0009
Diagnosis: Renovascular & Other Vascular Diseases*	0.4316	0.0873	<0.0001
Diagnosis: Tubular and Interstitial Diseases*	0.1533	0.0983	0.1187
Donor Hispanic/Latino	0.0067	0.0694	0.9232
Donor age: 0-17 (ref=35-49)	-0.0959	0.0794	0.2271
Donor age: 18-34 (ref=35-49)	-0.0970	0.0567	0.0872
Donor age: 50-64 (ref=35-49)	0.1998	0.0604	0.0009
Donor age: 65+ (ref=35-49)	0.2310	0.1093	0.0346
Donor history of hypertension	0.1136	0.0608	0.0618
Donor meets expanded donor criteria for cadaveric kidney	0.0963	0.0824	0.2425
Donor race: Asian (ref=White)	-0.0873	0.1482	0.5557
Donor race: Black (ref=White)	0.0735	0.0660	0.2654
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.2552	0.1691	0.1313
Donor serum creatinine: >1.5	0.0363	0.0699	0.6036
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.1057	0.2293	0.6448
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0862	0.0849	0.3100
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0814	0.0582	0.1618
Donor: cadaveric COD other (ref=COD Head trauma)	-0.1655	0.1692	0.3281
Donor: living (ref=cadaveric - COD Head trauma)	-0.2747	0.0638	<0.0001
Peak PRA: 10-79 (ref=<10)	0.0927	0.0500	0.0634
Peak PRA: 80-100 (ref=<10)	0.2243	0.0843	0.0078
Peak PRA: missing (ref=<10)	0.2189	0.1926	0.2556
Recipient age: 18-34 (ref=35-49)	-0.4244	0.0885	<0.0001
Recipient age: 50-64 (ref=35-49)	0.6294	0.0526	<0.0001
Recipient age: 65+ (ref=35-49)	1.0980	0.0633	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.3859	0.1427	0.0068
Recipient race: Asian (ref=White)	-0.3637	0.1137	0.0014
Recipient race: Black (ref=White)	-0.0989	0.0523	0.0589
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1721	0.1380	0.2121
Year of ESRD treatment: missing (ref=years 3-5)	2.7253	0.2977	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5335	0.0581	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1614	0.0517	0.0018
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2966	0.0696	<0.0001
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.5572	0.3109	0.0731
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0194	0.1674	0.9077
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.1642	0.2240	0.4636

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Deceased Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Kidney
Adult (Age 18+)

93.0% alive at 3 Years when all covariates=0.
The index of concordance is 69.4%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	-0.3282	0.2941	0.2644
Diagnosis: Diabetes*	0.5645	0.0674	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.2563	0.0750	0.0006
Diagnosis: Other/Missing*	0.1887	0.0960	0.0494
Diagnosis: Polycystic Kidney Disease*	-0.3214	0.1045	0.0021
Diagnosis: Renovascular & Other Vascular Diseases*	0.3718	0.0990	0.0002
Diagnosis: Tubular and Interstitial Diseases*	-0.0162	0.1206	0.8929
Donor Hispanic/Latino	0.0092	0.0763	0.9037
Donor age: 0-17 (ref=35-49)	-0.1231	0.0826	0.1362
Donor age: 18-34 (ref=35-49)	-0.1683	0.0703	0.0166
Donor age: 50-64 (ref=35-49)	0.2490	0.0750	0.0009
Donor age: 65+ (ref=35-49)	0.3103	0.1239	0.0123
Donor history of hypertension	0.1007	0.0611	0.0997
Donor meets expanded donor criteria for cadaveric kidney	0.0480	0.0898	0.5933
Donor race: Asian (ref=White)	-0.0604	0.1635	0.7118
Donor race: Black (ref=White)	0.1201	0.0741	0.1050
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.2875	0.2151	0.1814
Donor serum creatinine: >1.5	0.0433	0.0701	0.5366
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.0820	0.2290	0.7203
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.1031	0.0852	0.2263
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0510	0.0594	0.3913
Donor: cadaveric COD other (ref=COD Head trauma)	-0.2001	0.1696	0.2380
Peak PRA: 10-79 (ref=<10)	0.0545	0.0558	0.3293
Peak PRA: 80-100 (ref=<10)	0.2455	0.0874	0.0050
Peak PRA: missing (ref=<10)	0.5728	0.4106	0.1630
Recipient age: 18-34 (ref=35-49)	-0.4573	0.1113	<0.0001
Recipient age: 50-64 (ref=35-49)	0.6226	0.0610	<0.0001
Recipient age: 65+ (ref=35-49)	1.0777	0.0720	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.4016	0.1664	0.0158
Recipient race: Asian (ref=White)	-0.3104	0.1179	0.0085
Recipient race: Black (ref=White)	-0.0827	0.0557	0.1372
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0906	0.1503	0.5466
Year of ESRD treatment: missing (ref=years 3-5)	2.3582	0.3623	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5200	0.0738	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.1253	0.0579	0.0305
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2890	0.0730	0.0001
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.4486	0.3844	0.2432
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	0.0279	0.1948	0.8860
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.1267	0.2532	0.6168

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Living Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Kidney
Adult (Age 18+)

95.6% alive at 3 Years when all covariates=0.
The index of concordance is 70.9%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis: Congenital, Rare Familial, & Metabolic Disorders*	0.7494	0.3052	0.0141
Diagnosis: Diabetes*	0.7674	0.1177	<0.0001
Diagnosis: Hypertensive Nephrosclerosis*	0.3644	0.1483	0.0140
Diagnosis: Other/Missing*	0.3824	0.1587	0.0160
Diagnosis: Polycystic Kidney Disease*	-0.2890	0.2032	0.1549
Diagnosis: Renovascular & Other Vascular Diseases*	0.6139	0.1872	0.0010
Diagnosis: Tubular and Interstitial Diseases*	0.5633	0.1729	0.0011
Donor Hispanic/Latino	-0.0369	0.2238	0.8691
Donor age: 11-17 (ref=35-49)	-8.1970	160.1300	0.9592
Donor age: 18-34 (ref=35-49)	0.0647	0.0968	0.5041
Donor age: 50-64 (ref=35-49)	0.1498	0.1059	0.1574
Donor age: 65+ (ref=35-49)	-0.0730	0.3441	0.8321
Donor race: Asian (ref=White)	0.3120	0.4733	0.5097
Donor race: Black (ref=White)	-0.1289	0.2751	0.6394
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.4945	0.3846	0.1985
Peak PRA: 10-79 (ref=<10)	0.2703	0.1111	0.0150
Peak PRA: 80-100 (ref=<10)	-0.0951	0.3381	0.7784
Peak PRA: missing (ref=<10)	0.1501	0.2184	0.4920
Recipient age: 18-34 (ref=35-49)	-0.4110	0.1507	0.0064
Recipient age: 50-64 (ref=35-49)	0.6565	0.1057	<0.0001
Recipient age: 65+ (ref=35-49)	1.2144	0.1372	<0.0001
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.3277	0.3174	0.3019
Recipient race: Asian (ref=White)	-1.0139	0.4936	0.0400
Recipient race: Black (ref=White)	-0.0188	0.2687	0.9444
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.8217	0.4453	0.0650
Year of ESRD treatment: missing (ref=years 3-5)	4.8859	0.5669	<0.0001
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5689	0.1046	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2716	0.1176	0.0209
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.3867	0.2410	0.1086
Recipient age by recipient ethnicity interaction: 18-34 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.7352	0.5336	0.1683
Recipient age by recipient ethnicity interaction: 50-64 and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.0043	0.3307	0.9897
Recipient age by recipient ethnicity interaction: 65+ and Hispanic/Latino (ref=35-49 and Non-Hispanic/Non-Latino)	-0.3009	0.4988	0.5463

* Reference for diagnosis group is glomerular diseases.

** Ischemia time is centered on 13.70 hours.

Patient Survival Model Description
1 Month after First Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

100.0% alive at 1 Month when all covariates=0.
The index of concordance is 74.4%.

Patient Characteristic Covariates	beta	standard error	p-value
HLA mismatch: 1 A mismatch (ref=0 mismatch)	0.9774	1.0439	0.3491
HLA mismatch: 1 B mismatch (ref=0 mismatch)	14.6348	1313.2243	0.9911
HLA mismatch: 1 DR mismatch (ref=0 mismatch)	-1.2568	0.5721	0.0280
HLA mismatch: 2 A mismatches (ref=0 mismatch)	1.0984	1.0504	0.2957
HLA mismatch: 2 B mismatches (ref=0 mismatch)	13.5913	1313.2243	0.9917
HLA mismatch: 2 DR mismatches (ref=0 mismatch)	-0.7327	0.5269	0.1644
HLA mismatch: not a zero mismatch (ref=0 mismatch)	0.2639	1764.5652	0.9999
Recipient age: 18-34 (ref=35-49)	0.2080	0.4464	0.6413
Recipient age: 50-64 (ref=35-49)	0.2707	0.5249	0.6061
Recipient age: 65+ (ref=35-49)	-14.4403	5888.5031	0.9980
Year of ESRD treatment: year 1 (ref=years 3-5)	-1.4775	0.6418	0.0213
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.5594	0.4709	0.2349
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.8738	0.5776	0.1303

Patient Survival Model Description
1 Year after First Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

94.5% alive at 1 Year when all covariates=0.
The index of concordance is 60.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Recipient age: 18-34 (ref=35-49)	-0.0340	0.2438	0.8892
Recipient age: 50-64 (ref=35-49)	0.2937	0.2588	0.2564
Recipient age: 65+ (ref=35-49)	-11.1839	567.8332	0.9843
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.5768	0.2617	0.0275
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.2709	0.2521	0.2824
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.9079	0.3048	0.0029

Patient Survival Model Description
3 Years after First Transplant
Organ: Kidney / Pancreas
Adult (Age 18+)

86.3% alive at 3 Years when all covariates=0.
The index of concordance is 62.8%.

Patient Characteristic Covariates	beta	standard error	p-value
Recipient age: 18-34 (ref=35-49)	-0.2956	0.1795	0.0995
Recipient age: 50-64 (ref=35-49)	0.1000	0.2016	0.6200
Recipient age: 65+ (ref=35-49)	-10.2950	340.6258	0.9759
Recipient female	0.0418	0.1357	0.7579
Year of ESRD treatment: year 1 (ref=years 3-5)	-0.7809	0.1679	<0.0001
Year of ESRD treatment: year 2 (ref=years 3-5)	-0.4021	0.1689	0.0173
Year of ESRD treatment: years 6+ (ref=years 3-5)	0.2714	0.2526	0.2826
Years since onset of DM: 0-19 (ref=25-29)	-0.1723	0.2406	0.4741
Years since onset of DM: 20-24 (ref=25-29)	0.0035	0.2051	0.9864
Years since onset of DM: 30+ (ref=25-29)	0.0557	0.1940	0.7742
Years since onset of DM: missing (ref=25-29)	0.5266	0.2281	0.0210

Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Adult (Age 18+)

97.8% alive at 1 Month when all covariates=0.
The index of concordance is 66.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0937	0.1509	0.5343
ABO compatibility: incompatible (ref=equal)	0.2265	0.4598	0.6224
Diagnosis: AHN*	0.4414	0.1549	0.0044
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.1254	0.1676	0.4545
Diagnosis: Malignant Neoplasms*	0.2729	0.2129	0.2000
Diagnosis: Metabolic Diseases*	-0.2272	0.3237	0.4827
Diagnosis: Other/Missing*	0.2187	0.1970	0.2672
Donor age: 0-17 (ref=35-49)	0.1258	0.1833	0.4926
Donor age: 18-34 (ref=35-49)	0.0288	0.1334	0.8290
Donor age: 50-64 (ref=35-49)	0.1665	0.1309	0.2033
Donor age: 65+ (ref=35-49)	0.0111	0.1809	0.9512
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0410	0.1171	0.7262
Donor and recipient not in same region or OPO (ref=same OPO)	0.5123	0.1681	0.0023
Donor race: Asian (ref=White)	0.5450	0.2597	0.0359
Donor race: Black (ref=White)	-0.0620	0.1466	0.6723
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.6207	0.3249	0.0561
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4952	0.3894	0.2035
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0241	0.1750	0.8905
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0677	0.1235	0.5833
Donor: cadaveric COD other (ref=COD Head trauma)	-0.0462	0.3282	0.8882
Donor: living (ref=cadaveric - COD Head trauma)	-1.3682	0.3918	0.0005
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.5600	0.2160	0.0095
Recipient age: 18-34 (ref=35-49)	0.1400	0.1948	0.4724
Recipient age: 50-64 (ref=35-49)	0.2302	0.1083	0.0335
Recipient age: 65+ (ref=35-49)	0.3688	0.1723	0.0323
Recipient ascites: missing (ref=no)	0.5133	0.2256	0.0229
Recipient ascites: yes (ref=no)	-0.0137	0.1211	0.9101
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.4054	0.0827	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.2372	0.3197	0.4582
Recipient height (ln cm) (ref=ln of avg height**)	-0.6929	0.3748	0.0645
Recipient height: missing (ref=ln of avg height**)	-2.8099	1.8769	0.1344
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	-0.5652	0.3580	0.1144
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3824	0.1312	0.0036
Recipient medical condition: in ICU (ref=not hospitalized)	0.4934	0.1468	0.0008
Recipient on life support	0.4713	0.1717	0.0061
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2769	0.0949	0.0035
Recipient race: Asian (ref=White)	-0.3432	0.2702	0.2041
Recipient race: Black (ref=White)	0.1470	0.1613	0.3621
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0697	0.2758	0.8005
Split or partial liver (ref=whole liver)	0.6264	0.2864	0.0287

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Adult (Age 18+)

97.8% alive at 1 Month when all covariates=0.
The index of concordance is 66.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0500	0.1609	0.7560
ABO compatibility: incompatible (ref=equal)	0.3091	0.4631	0.5045
Diagnosis: AHN*	0.4256	0.1578	0.0070
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.1056	0.1737	0.5433
Diagnosis: Malignant Neoplasms*	0.1928	0.2261	0.3939
Diagnosis: Metabolic Diseases*	-0.1804	0.3244	0.5781
Diagnosis: Other/Missing*	0.1636	0.2076	0.4308
Donor age: 0-17 (ref=35-49)	0.1058	0.1846	0.5667
Donor age: 18-34 (ref=35-49)	0.0086	0.1390	0.9507
Donor age: 50-64 (ref=35-49)	0.1270	0.1335	0.3415
Donor age: 65+ (ref=35-49)	-0.0008	0.1814	0.9966
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0433	0.1171	0.7116
Donor and recipient not in same region or OPO (ref=same OPO)	0.5167	0.1681	0.0021
Donor race: Asian (ref=White)	0.5940	0.2592	0.0219
Donor race: Black (ref=White)	-0.0664	0.1480	0.6535
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.5322	0.3602	0.1395
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.5008	0.3896	0.1986
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.0217	0.1752	0.9013
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.0688	0.1243	0.5799
Donor: cadaveric COD other (ref=COD Head trauma)	-0.0501	0.3283	0.8787
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.5907	0.2164	0.0063
Recipient age: 18-34 (ref=35-49)	0.1292	0.2023	0.5229
Recipient age: 50-64 (ref=35-49)	0.2087	0.1107	0.0595
Recipient age: 65+ (ref=35-49)	0.3726	0.1746	0.0329
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1789	0.1026	0.0813
Recipient ascites: missing (ref=no)	0.5511	0.2345	0.0188
Recipient ascites: yes (ref=no)	-0.0394	0.1248	0.7522
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.4145	0.0839	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.2288	0.3361	0.4961
Recipient height (ln cm) (ref=ln of avg height**)	-0.6893	0.3912	0.0781
Recipient height: missing (ref=ln of avg height**)	-2.7669	1.9591	0.1579
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	-0.6934	0.3823	0.0697
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3735	0.1349	0.0056
Recipient medical condition: in ICU (ref=not hospitalized)	0.4714	0.1488	0.0015
Recipient on life support	0.4662	0.1742	0.0074
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2989	0.0977	0.0022
Recipient race: Asian (ref=White)	-0.3202	0.2787	0.2506
Recipient race: Black (ref=White)	0.1531	0.1633	0.3484
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.1087	0.2956	0.7132
Split or partial liver (ref=whole liver)	0.6128	0.2864	0.0324

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Adult (Age 18+)

99.8% alive at 1 Month when all covariates=0.
The index of concordance is 79.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.6254	0.4936	0.2051
ABO compatibility: incompatible (ref=equal)	-14.2812	1716.4268	0.9934
Diagnosis: AHN*	2.1747	0.8661	0.0120
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.6163	0.7068	0.3833
Diagnosis: Malignant Neoplasms*	2.5475	0.7855	0.0012
Diagnosis: Metabolic Diseases*	-12.9361	1741.5217	0.9941
Diagnosis: Other/Missing*	2.2835	0.8508	0.0073
Donor Hispanic/Latino	1.8904	1.0142	0.0623
Donor age: 18-34 (ref=35-49)	0.4641	0.5454	0.3948
Donor age: 50+	0.8832	0.6416	0.1686
Donor female	1.2663	0.5213	0.0151
Recipient age: 18-34 (ref=35-49)	-0.3952	0.8296	0.6339
Recipient age: 50-64 (ref=35-49)	0.3167	0.5555	0.5686
Recipient age: 65+ (ref=35-49)	-0.3832	1.1390	0.7365
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.8879	0.5070	0.0799
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.8243	1.0498	0.4323
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	1.1444	0.7051	0.1046
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.1244	0.6413	0.8462
Recipient medical condition: in ICU (ref=not hospitalized)	1.5392	0.7223	0.0331
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	2.9922	1.3085	0.0222
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	-0.9870	0.5328	0.0640
Recipient race: Asian (ref=White)	0.3470	1.0696	0.7456
Recipient race: Black (ref=White)	-0.0893	1.1179	0.9363
Recipient race: Multi-racial, other, unknown or missing (ref=White)	1.5637	0.8302	0.0596

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Adult (Age 18+)

93.4% alive at 1 Year when all covariates=0.
The index of concordance is 64.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0090	0.0956	0.9250
ABO compatibility: incompatible (ref=equal)	-0.0003	0.3373	0.9993
Diagnosis: AHN*	0.2762	0.1007	0.0061
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.3348	0.1063	0.0016
Diagnosis: Malignant Neoplasms*	0.2463	0.1234	0.0460
Diagnosis: Metabolic Diseases*	-0.3191	0.1967	0.1048
Diagnosis: Other/Missing*	0.1746	0.1256	0.1643
Donor Hispanic/Latino	0.1662	0.0852	0.0511
Donor age: 0-17 (ref=35-49)	0.0702	0.1153	0.5428
Donor age: 18-34 (ref=35-49)	0.0682	0.0793	0.3898
Donor age: 50-64 (ref=35-49)	0.1540	0.0786	0.0501
Donor age: 65+ (ref=35-49)	0.3938	0.0975	0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0863	0.0693	0.2133
Donor and recipient not in same region or OPO (ref=same OPO)	0.3294	0.1081	0.0023
Donor race: Asian (ref=White)	0.3921	0.1707	0.0216
Donor race: Black (ref=White)	0.0140	0.0867	0.8721
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.6134	0.1983	0.0020
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.1413	0.2832	0.6178
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0295	0.1062	0.7814
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1773	0.0738	0.0164
Donor: cadaveric COD other (ref=COD Head trauma)	0.2040	0.1824	0.2632
Donor: living (ref=cadaveric - COD Head trauma)	-0.4377	0.2475	0.0770
Non heart beating donor	0.4305	0.1907	0.0239
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.3836	0.1388	0.0057
Recipient age: 18-34 (ref=35-49)	-0.1940	0.1382	0.1605
Recipient age: 50-64 (ref=35-49)	0.1593	0.0631	0.0116
Recipient age: 65+ (ref=35-49)	0.3715	0.0989	0.0002
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1205	0.0596	0.0431
Recipient ascites: missing (ref=no)	0.3601	0.1470	0.0143
Recipient ascites: yes (ref=no)	0.0297	0.0736	0.6867
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.3970	0.0507	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.0193	0.1828	0.9161
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.2190	0.0898	0.0147
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.2379	0.1366	0.0816
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.3464	0.0875	0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3857	0.0765	<0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.4809	0.0878	<0.0001
Recipient on life support	0.2881	0.1114	0.0097
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2142	0.0562	0.0001
Recipient race: Asian (ref=White)	-0.2755	0.1551	0.0756
Recipient race: Black (ref=White)	0.1415	0.0995	0.1548
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0375	0.1608	0.8156
Split or partial liver (ref=whole liver)	0.3742	0.1977	0.0583

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Adult (Age 18+)

93.3% alive at 1 Year when all covariates=0.
The index of concordance is 64.6%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0085	0.1028	0.9344
ABO compatibility: incompatible (ref=equal)	0.1052	0.3384	0.7560
Diagnosis: AHN*	0.2562	0.1024	0.0123
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.2861	0.1105	0.0096
Diagnosis: Malignant Neoplasms*	0.1663	0.1323	0.2089
Diagnosis: Metabolic Diseases*	-0.3865	0.2085	0.0637
Diagnosis: Other/Missing*	0.1469	0.1304	0.2601
Donor Hispanic/Latino	0.2074	0.0865	0.0165
Donor age: 0-17 (ref=35-49)	0.0606	0.1169	0.6040
Donor age: 18-34 (ref=35-49)	0.0670	0.0846	0.4284
Donor age: 50-64 (ref=35-49)	0.1563	0.0812	0.0542
Donor age: 65+ (ref=35-49)	0.4084	0.0986	<0.0001
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0921	0.0694	0.1842
Donor and recipient not in same region or OPO (ref=same OPO)	0.3310	0.1082	0.0022
Donor race: Asian (ref=White)	0.4608	0.1702	0.0068
Donor race: Black (ref=White)	0.0182	0.0881	0.8359
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.6607	0.2123	0.0019
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.1349	0.2834	0.6341
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.0277	0.1064	0.7946
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1721	0.0747	0.0213
Donor: cadaveric COD other (ref=COD Head trauma)	0.2020	0.1825	0.2684
Non heart beating donor	0.4328	0.1908	0.0233
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.3649	0.1442	0.0114
Recipient age: 18-34 (ref=35-49)	-0.1785	0.1442	0.2157
Recipient age: 50-64 (ref=35-49)	0.1619	0.0655	0.0134
Recipient age: 65+ (ref=35-49)	0.3487	0.1027	0.0007
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.1156	0.0616	0.0605
Recipient ascites: missing (ref=no)	0.3782	0.1551	0.0147
Recipient ascites: yes (ref=no)	0.0101	0.0764	0.8943
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.4037	0.0519	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.0649	0.1965	0.7412
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.1784	0.0915	0.0513
Recipient height (ln cm) (ref=ln of avg height**)	-0.4355	0.2821	0.1226
Recipient height: missing (ref=ln of avg height**)	-1.9401	1.4149	0.1703
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.2524	0.1394	0.0703
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.3453	0.0902	0.0001
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3703	0.0800	<0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.4644	0.0890	<0.0001
Recipient on life support	0.2704	0.1132	0.0169
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.2053	0.0583	0.0004
Recipient race: Asian (ref=White)	-0.2514	0.1584	0.1125
Recipient race: Black (ref=White)	0.1075	0.1026	0.2948
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0063	0.1691	0.9701
Split or partial liver (ref=whole liver)	0.3552	0.1979	0.0726

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Adult (Age 18+)

91.2% alive at 1 Year when all covariates=0.
The index of concordance is 70.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.0331	0.2739	0.9039
ABO compatibility: incompatible (ref=equal)	-13.1199	643.8791	0.9837
Diagnosis: AHN*	0.4808	0.6017	0.4243
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.9687	0.3814	0.0111
Diagnosis: Malignant Neoplasms*	0.6895	0.3522	0.0503
Diagnosis: Metabolic Diseases*	0.6119	0.6014	0.3090
Diagnosis: Other/Missing*	0.3844	0.4817	0.4248
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.8659	0.5536	0.1178
Recipient age: 18-34 (ref=35-49)	-0.4620	0.5083	0.3634
Recipient age: 50-64 (ref=35-49)	0.2425	0.2432	0.3186
Recipient age: 65+ (ref=35-49)	0.4989	0.3783	0.1873
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-1.1327	0.4696	0.0159
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.5186	0.2735	0.0579
Recipient medical condition: in ICU (ref=not hospitalized)	0.8025	0.5599	0.1517
Recipient on life support	0.7563	0.6689	0.2582
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.3514	0.2177	0.1065
Recipient race: Asian (ref=White)	-0.6751	0.7210	0.3491
Recipient race: Black (ref=White)	0.7803	0.4058	0.0545
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.0287	0.4742	0.9518

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Adult (Age 18+)

87.6% alive at 3 Years when all covariates=0.
The index of concordance is 63.6%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0582	0.0780	0.4556
ABO compatibility: incompatible (ref=equal)	-0.0567	0.2037	0.7807
Diagnosis: AHN*	-0.0670	0.0858	0.4348
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.3958	0.0818	<0.0001
Diagnosis: Malignant Neoplasms*	0.5178	0.1185	<0.0001
Diagnosis: Metabolic Diseases*	-0.1357	0.1480	0.3592
Diagnosis: Other/Missing*	0.0769	0.1301	0.5546
Donor age: 0-17 (ref=35-49)	-0.0289	0.0840	0.7312
Donor age: 18-34 (ref=35-49)	-0.1230	0.0640	0.0544
Donor age: 50-64 (ref=35-49)	0.1562	0.0623	0.0122
Donor age: 65+ (ref=35-49)	0.2307	0.0837	0.0058
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0943	0.0556	0.0900
Donor and recipient not in same region or OPO (ref=same OPO)	0.2406	0.0959	0.0121
Donor biopsy: Yes (ref=no, unknown, missing)	0.0998	0.0607	0.1000
Donor race: Asian (ref=White)	0.0826	0.1601	0.6060
Donor race: Black (ref=White)	0.1988	0.0685	0.0037
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1611	0.2259	0.4759
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4464	0.1909	0.0194
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1625	0.0860	0.0588
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1566	0.0598	0.0088
Donor: cadaveric COD other (ref=COD Head trauma)	0.0944	0.1511	0.5319
Donor: living (ref=cadaveric - COD Head trauma)	0.2715	0.1391	0.0510
Non heart beating donor	0.6448	0.2115	0.0023
Recipient age: 18-34 (ref=35-49)	-0.2196	0.1079	0.0419
Recipient age: 50-64 (ref=35-49)	0.1076	0.0490	0.0281
Recipient age: 65+ (ref=35-49)	0.3766	0.0755	<0.0001
Recipient ascites: missing (ref=no)	0.1514	0.1173	0.1966
Recipient ascites: yes (ref=no)	0.1302	0.0620	0.0356
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2981	0.0421	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.2848	0.1324	0.0315
Recipient height (ln cm) (ref=ln of avg height**)	-1.0972	0.1843	<0.0001
Recipient height: missing (ref=ln of avg height**)	-5.2611	0.9184	<0.0001
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.4489	0.0916	<0.0001
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2441	0.0743	0.0010
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.2884	0.0655	<0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.1704	0.0689	0.0133
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.2189	0.0977	0.0251
Recipient on life support	0.4198	0.0891	<0.0001
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.1971	0.0449	<0.0001
Recipient race: Asian (ref=White)	-0.1564	0.1233	0.2048
Recipient race: Black (ref=White)	0.3942	0.0738	<0.0001
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.2775	0.1629	0.0885
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	0.6621	0.2447	0.0068

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.85 kg.

Deceased Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Adult (Age 18+)

87.5% alive at 3 Years when all covariates=0.
The index of concordance is 63.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0468	0.0816	0.5663
ABO compatibility: incompatible (ref=equal)	-0.0613	0.2038	0.7636
Diagnosis: AHN*	-0.0762	0.0876	0.3845
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.3996	0.0857	<0.0001
Diagnosis: Malignant Neoplasms*	0.5512	0.1291	<0.0001
Diagnosis: Metabolic Diseases*	-0.1197	0.1516	0.4298
Diagnosis: Other/Missing*	0.0839	0.1343	0.5319
Donor age: 0-17 (ref=35-49)	-0.0393	0.0848	0.6432
Donor age: 18-34 (ref=35-49)	-0.1387	0.0673	0.0394
Donor age: 50-64 (ref=35-49)	0.1490	0.0637	0.0194
Donor age: 65+ (ref=35-49)	0.2197	0.0843	0.0092
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.0960	0.0557	0.0847
Donor and recipient not in same region or OPO (ref=same OPO)	0.2389	0.0960	0.0128
Donor biopsy: Yes (ref=no, unknown, missing)	0.0983	0.0607	0.1053
Donor race: Asian (ref=White)	0.0041	0.1726	0.9811
Donor race: Black (ref=White)	0.1962	0.0696	0.0048
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.1730	0.2377	0.4667
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.4428	0.1910	0.0204
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.1589	0.0861	0.0648
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.1537	0.0603	0.0108
Donor: cadaveric COD other (ref=COD Head trauma)	0.0963	0.1512	0.5241
Non heart beating donor	0.6364	0.2116	0.0026
Recipient age: 18-34 (ref=35-49)	-0.2318	0.1125	0.0394
Recipient age: 50-64 (ref=35-49)	0.0882	0.0504	0.0799
Recipient age: 65+ (ref=35-49)	0.3674	0.0772	<0.0001
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.0763	0.0486	0.1164
Recipient ascites: missing (ref=no)	0.1425	0.1220	0.2429
Recipient ascites: yes (ref=no)	0.1115	0.0641	0.0818
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2901	0.0430	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.2820	0.1380	0.0410
Recipient height (ln cm) (ref=ln of avg height**)	-1.1047	0.1824	<0.0001
Recipient height: missing (ref=ln of avg height**)	-5.2916	0.9101	<0.0001
Recipient incidental tumor found at time of txp: yes (ref=no, unknown, missing)	0.4483	0.0932	<0.0001
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	0.2690	0.0758	0.0004
Recipient medical condition: hospitalized not in ICU (ref=not hospitalized)	0.3060	0.0680	<0.0001
Recipient medical condition: in ICU (ref=not hospitalized)	0.1766	0.0697	0.0113
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	0.2236	0.0981	0.0226
Recipient on life support	0.4194	0.0905	<0.0001
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.1958	0.0466	<0.0001
Recipient race: Asian (ref=White)	-0.1950	0.1293	0.1315
Recipient race: Black (ref=White)	0.3946	0.0752	<0.0001
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.2847	0.1689	0.0881
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	0.6767	0.2450	0.0057

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 75.73 kg.

Living Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Adult (Age 18+)

84.3% alive at 3 Years when all covariates=0.
The index of concordance is 64.7%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.2272	0.2726	0.4047
Diagnosis: AHN*	0.7663	0.4695	0.1027
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.1553	0.2957	0.5994
Diagnosis: Malignant Neoplasms*	0.4346	0.3296	0.1874
Diagnosis: Metabolic Diseases*	-0.2117	0.7340	0.7730
Diagnosis: Other/Missing*	0.1375	0.5466	0.8013
Donor age: 18-34 (ref=35-49)	-0.0325	0.2105	0.8774
Donor age: 50+	0.2975	0.3079	0.3340
Donor race: Asian (ref=White)	1.0410	0.4719	0.0274
Donor race: Black (ref=White)	0.6679	0.3793	0.0783
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.0861	0.7262	0.9056
Donor weight (ln kg) (ref=ln of avg weight**)	0.4217	0.5339	0.4296
Donor weight: missing (ref=ln of avg weight**)	2.0787	2.2424	0.3539
Recipient age: 18-34 (ref=35-49)	0.0588	0.4023	0.8838
Recipient age: 50-64 (ref=35-49)	0.3841	0.2274	0.0912
Recipient age: 65+ (ref=35-49)	0.4958	0.3681	0.1781
Recipient ascites: missing (ref=no)	0.4203	0.4441	0.3439
Recipient ascites: yes (ref=no)	0.3091	0.2500	0.2163
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.5798	0.2121	0.0063
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1896	0.5054	0.7075
Recipient on life support	0.6997	0.4314	0.1048

* Reference for diagnosis group is non-cholestatic cirrhosis.

** Recipient serum creatinine is centered on 1.20 mg/dl; Recipient height 171.99 cm; donor weight is centered on 78.14 kg.

Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Pediatric (Age 0-17)

97.4% alive at 1 Month when all covariates=0.
The index of concordance is 85.2%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.8082	0.3304	0.0144
ABO compatibility: incompatible (ref=equal)	1.0479	0.6067	0.0841
Diagnosis: AHN*	-0.6245	0.5330	0.2414
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-1.1368	1.0686	0.2874
Diagnosis: Malignant Neoplasms*	-16.2357	1200.7225	0.9892
Diagnosis: Metabolic Diseases*	0.2846	0.5243	0.5872
Diagnosis: Non-Cholestatic Cirrhosis*	-0.5853	0.8322	0.4818
Diagnosis: Other/Missing*	-0.8024	0.4645	0.0841
Donor age: 0-17 (ref=35-49)	-0.4650	0.5911	0.4315
Donor age: 18-34 (ref=35-49)	-0.3300	0.4397	0.4530
Donor age: 50+	2.3667	0.5106	<0.0001
Donor race: Asian (ref=White)	-14.6909	675.2619	0.9826
Donor race: Black (ref=White)	0.8327	0.3685	0.0238
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.0136	1.0511	0.9897
Donor weight (ln kg) (ref=ln of avg weight**)	-0.5397	0.3134	0.0851
Donor weight: missing (ref=ln of avg weight**)	-1.3433	1.6459	0.4144
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.9781	1.1776	0.4062
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-1.9207	0.7499	0.0104
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.3192	0.4212	0.4486
Donor: cadaveric COD other (ref=COD Head trauma)	0.2814	0.6698	0.6744
Donor: living (ref=cadaveric - COD Head trauma)	-0.0422	0.4997	0.9327
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	1.7372	0.5204	0.0008
Recipient age: 0-1 (ref=2-10)	-0.1770	0.3838	0.6447
Recipient age: 11-17 (ref=2-10)	-1.3383	0.5288	0.0114
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.7096	0.1700	<0.0001
Recipient creatinine: missing (ref=ln of avg creatinine**)	-1.4502	1.0432	0.1645
Recipient on life support	1.9225	0.3361	<0.0001
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	0.6350	0.3779	0.0929
Recipient race: Asian (ref=White)	0.0593	0.6354	0.9256
Recipient race: Black (ref=White)	-0.5915	0.3749	0.1146
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.9199	1.0692	0.3896
Split or partial liver (ref=whole liver)	0.9923	0.4696	0.0346

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Pediatric (Age 0-17)

94.4% alive at 1 Month when all covariates=0.
The index of concordance is 86.0%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.5910	0.3649	0.1053
ABO compatibility: incompatible (ref=equal)	0.6841	0.7818	0.3816
Diagnosis: AHN*	-0.9185	0.5671	0.1053
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-1.2740	1.1421	0.2646
Diagnosis: Malignant Neoplasms*	-16.8098	1618.3175	0.9917
Diagnosis: Metabolic Diseases*	-0.2450	0.5377	0.6487
Diagnosis: Non-Cholestatic Cirrhosis*	-1.3082	1.1001	0.2344
Diagnosis: Other/Missing*	-1.5189	0.5979	0.0111
Donor age: 0-17 (ref=35-49)	-0.9035	0.6760	0.1814
Donor age: 18-34 (ref=35-49)	-1.0148	0.6654	0.1272
Donor age: 50+	2.0868	0.6234	0.0008
Donor female	-0.2104	0.3493	0.5469
Donor race: Asian (ref=White)	-15.7993	1281.5064	0.9902
Donor race: Black (ref=White)	0.6294	0.4060	0.1211
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.8769	1.0475	0.4025
Donor weight (ln kg) (ref=ln of avg weight**)	-0.5748	0.3392	0.0901
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.8564	1.3452	0.5244
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-1.9428	0.7617	0.0108
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.2163	0.4850	0.6555
Donor: cadaveric COD other (ref=COD Head trauma)	0.1907	0.7016	0.7857
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	1.8427	0.5522	0.0008
Recipient age: 0-1 (ref=2-10)	0.1550	0.5044	0.7586
Recipient age: 11-17 (ref=2-10)	-1.1038	0.6166	0.0735
Recipient ascites: missing (ref=no)	1.5127	0.5434	0.0054
Recipient ascites: yes (ref=no)	0.4055	0.3728	0.2767
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.7194	0.1962	0.0002
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.4094	1.0427	0.6946
Recipient on life support	1.7585	0.3908	<0.0001
Recipient race: Asian (ref=White)	-0.2620	0.6609	0.6918
Recipient race: Black (ref=White)	-0.8901	0.4290	0.0380
Recipient race: Multi-racial, other, unknown or missing (ref=White)	-0.9768	1.1632	0.4010
Split or partial liver (ref=whole liver)	0.9632	0.5169	0.0624

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Patient Survival Model Description
1 Month after First Transplant
Organ: Liver
Pediatric (Age 0-17)

99.7% alive at 1 Month when all covariates=0.
The index of concordance is 82.3%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	1.6904	0.9635	0.0794
ABO compatibility: incompatible (ref=equal)	2.7215	1.3373	0.0418
Donor age: 18-34 (ref=35-49)	0.6505	0.7642	0.3946
Donor age: 50+	4.5789	1.2753	0.0003
Donor weight (ln kg) (ref=ln of avg weight**)	-2.6329	2.0739	0.2043
Donor weight: missing (ref=ln of avg weight**)	-10.9450	10.0381	0.2756
Recipient age: 0-1 (ref=2-10)	-1.0142	0.6820	0.1370
Recipient age: 11-17 (ref=2-10)	0.3331	1.0277	0.7458
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	1.2985	0.7884	0.0995
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	1.4554	0.7792	0.0618
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	1.6190	0.9516	0.0889
Recipient on life support	1.1637	0.7797	0.1356
Recipient previous abdominal surgery: Yes (ref=no, unknown, missing)	1.3462	0.7419	0.0696

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Pediatric (Age 0-17)

88.9% alive at 1 Year when all covariates=0.
The index of concordance is 72.1%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0160	0.2591	0.9507
ABO compatibility: incompatible (ref=equal)	-0.0957	0.5729	0.8673
Diagnosis: AHN*	0.2814	0.3219	0.3820
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.8307	0.7370	0.2597
Diagnosis: Malignant Neoplasms*	0.1329	0.4128	0.7475
Diagnosis: Metabolic Diseases*	-0.0107	0.3543	0.9759
Diagnosis: Non-Cholestatic Cirrhosis*	-0.4400	0.5124	0.3905
Diagnosis: Other/Missing*	-0.3167	0.3150	0.3147
Donor age: 0-17 (ref=35-49)	-0.1343	0.3570	0.7068
Donor age: 18-34 (ref=35-49)	-0.6734	0.2977	0.0237
Donor age: 50+	1.2080	0.3994	0.0025
Donor race: Asian (ref=White)	0.3176	0.6834	0.6421
Donor race: Black (ref=White)	0.3285	0.2839	0.2471
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.8925	1.0223	0.3827
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	-0.2777	1.1318	0.8062
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.7377	0.3931	0.0606
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.3413	0.3036	0.2609
Donor: cadaveric COD other (ref=COD Head trauma)	0.2848	0.4584	0.5345
Donor: living (ref=cadaveric - COD Head trauma)	0.3467	0.3287	0.2916
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.7619	0.4385	0.0823
Recipient age: 0-1 (ref=2-10)	0.1939	0.2518	0.4413
Recipient age: 11-17 (ref=2-10)	-0.8834	0.3289	0.0072
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.4046	0.1382	0.0034
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.4258	0.5210	0.4137
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.4793	0.2652	0.0707
Recipient on life support	0.9888	0.2537	0.0001
Recipient race: Asian (ref=White)	-0.7413	0.5958	0.2135
Recipient race: Black (ref=White)	-0.5580	0.2850	0.0503
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.0690	0.5275	0.8960
Split or partial liver (ref=whole liver)	0.4845	0.2768	0.0801

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Pediatric (Age 0-17)

88.5% alive at 1 Year when all covariates=0.
The index of concordance is 71.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0228	0.2881	0.9368
ABO compatibility: incompatible (ref=equal)	-0.1649	0.6634	0.8037
Diagnosis: AHN*	0.4675	0.3747	0.2122
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-0.2739	0.7454	0.7133
Diagnosis: Malignant Neoplasms*	0.1315	0.5163	0.7990
Diagnosis: Metabolic Diseases*	0.0842	0.3997	0.8332
Diagnosis: Non-Cholestatic Cirrhosis*	-0.3532	0.5835	0.5450
Diagnosis: Other/Missing*	-0.1905	0.3691	0.6058
Donor age: 0-17 (ref=35-49)	-0.5632	0.3889	0.1475
Donor age: 18-34 (ref=35-49)	-0.8896	0.4773	0.0624
Donor age: 50+	0.8399	0.4605	0.0682
Donor race: Asian (ref=White)	0.2258	0.7961	0.7767
Donor race: Black (ref=White)	0.2643	0.3046	0.3857
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.2361	1.0170	0.8164
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.3210	1.0944	0.7693
Donor: cadaveric COD anoxia (ref=COD Head trauma)	-0.8236	0.3912	0.0353
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.2793	0.3261	0.3918
Donor: cadaveric COD other (ref=COD Head trauma)	0.1659	0.4672	0.7226
Recipient Portal Vein Thrombosis: Yes (ref=no, unknown, missing)	0.8294	0.4527	0.0670
Recipient age: 0-1 (ref=2-10)	0.4538	0.2971	0.1267
Recipient age: 11-17 (ref=2-10)	-0.6454	0.3589	0.0721
Recipient ascites: missing (ref=no)	0.7648	0.3953	0.0530
Recipient ascites: yes (ref=no)	0.2126	0.2487	0.3927
Recipient ethnicity: Hispanic/Latino (ref=Non-Hispanic/Non-Latino)	-0.6030	0.3094	0.0513
Recipient on life support	1.1278	0.2906	0.0001
Recipient race: Asian (ref=White)	-0.6975	0.6439	0.2787
Recipient race: Black (ref=White)	-0.5279	0.3080	0.0866
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.1761	0.5361	0.7426

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Patient Survival Model Description
1 Year after First Transplant
Organ: Liver
Pediatric (Age 0-17)

84.9% alive at 1 Year when all covariates=0.
The index of concordance is 73.8%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	-0.2592	0.6396	0.6853
ABO compatibility: incompatible (ref=equal)	0.4232	1.0757	0.6940
Diagnosis: AHN*	0.8536	0.6310	0.1761
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-14.2566	1253.8093	0.9909
Diagnosis: Malignant Neoplasms*	0.9533	0.7533	0.2057
Diagnosis: Metabolic Diseases*	0.6703	0.8120	0.4091
Diagnosis: Non-Cholestatic Cirrhosis*	-0.0884	1.1824	0.9404
Diagnosis: Other/Missing*	0.1462	0.6326	0.8172
Donor age: 18-34 (ref=35-49)	-0.4185	0.4106	0.3080
Donor age: 50+	3.5310	0.9697	0.0003
Recipient age: 0-1 (ref=2-10)	-0.1846	0.5141	0.7195
Recipient age: 11-17 (ref=2-10)	-0.4489	0.7136	0.5293
Recipient ascites: missing (ref=no)	-2.2066	1.1655	0.0583
Recipient ascites: yes (ref=no)	0.2039	0.4427	0.6450
Recipient on life support	0.6683	0.4931	0.1753

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Pediatric (Age 0-17)

95.7% alive at 3 Years when all covariates=0.
The index of concordance is 74.1%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.2973	0.1963	0.1299
ABO compatibility: incompatible (ref=equal)	0.4113	0.3377	0.2232
Diagnosis: AHN*	0.6203	0.2411	0.0101
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.6228	0.4238	0.1417
Diagnosis: Malignant Neoplasms*	0.8049	0.3070	0.0087
Diagnosis: Metabolic Diseases*	-0.3248	0.3008	0.2802
Diagnosis: Non-Cholestatic Cirrhosis*	0.0785	0.3701	0.8320
Diagnosis: Other/Missing*	0.4539	0.2395	0.0581
Donor age: 0-17 (ref=35-49)	0.0583	0.3065	0.8493
Donor age: 18-34 (ref=35-49)	-0.0595	0.2493	0.8114
Donor age: 50+	0.3623	0.4037	0.3694
Donor and recipient in the same region but not same OPO (ref=same OPO)	0.1898	0.1943	0.3288
Donor and recipient not in same region or OPO (ref=same OPO)	0.3444	0.2360	0.1445
Donor race: Asian (ref=White)	0.0910	0.4831	0.8507
Donor race: Black (ref=White)	0.2765	0.2001	0.1670
Donor race: Multi-racial, other, unknown or missing (ref=White)	0.0085	0.4950	0.9862
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.2838	1.0224	0.7813
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.3948	0.2228	0.0763
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.5352	0.2505	0.0326
Donor: cadaveric COD other (ref=COD Head trauma)	0.2737	0.3891	0.4818
Donor: living (ref=cadaveric - COD Head trauma)	-0.2276	0.3357	0.4978
Recipient age: 0-1 (ref=2-10)	0.3450	0.2205	0.1177
Recipient age: 11-17 (ref=2-10)	0.0143	0.2756	0.9586
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.5185	0.1625	0.0014
Recipient ascites: missing (ref=no)	-0.9497	0.4025	0.0183
Recipient ascites: yes (ref=no)	-0.1330	0.1610	0.4086
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.3000	0.1068	0.0050
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.1976	0.3251	0.5435
Recipient height (ln cm) (ref=ln of avg height**)	-0.5613	0.2875	0.0509
Recipient height: missing (ref=ln of avg height**)	-2.7973	1.4992	0.0621
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	1.5385	0.5547	0.0055
Recipient on life support	0.9118	0.1908	<0.0001
Recipient race: Asian (ref=White)	-0.1178	0.4416	0.7896
Recipient race: Black (ref=White)	0.3504	0.1809	0.0527
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.6776	0.4161	0.1034
Split or partial liver (ref=whole liver)	0.5657	0.2229	0.0112

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 44.05 kg.

Deceased Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Pediatric (Age 0-17)

96.3% alive at 3 Years when all covariates=0.
The index of concordance is 74.6%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	0.0648	0.2306	0.7788
ABO compatibility: incompatible (ref=equal)	0.2216	0.3853	0.5652
Diagnosis: AHN*	0.8736	0.2733	0.0014
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	0.8165	0.4374	0.0619
Diagnosis: Malignant Neoplasms*	1.2005	0.3311	0.0003
Diagnosis: Metabolic Diseases*	-0.2125	0.3393	0.5311
Diagnosis: Non-Cholestatic Cirrhosis*	0.2692	0.4108	0.5123
Diagnosis: Other/Missing*	0.5925	0.2793	0.0339
Donor age: 0-17 (ref=35-49)	-0.0092	0.3421	0.9784
Donor age: 18-34 (ref=35-49)	-0.0644	0.3486	0.8534
Donor age: 50+	0.2881	0.4375	0.5102
Donor race: Asian (ref=White)	0.4378	0.5296	0.4084
Donor race: Black (ref=White)	0.4413	0.2121	0.0375
Donor race: Multi-racial, other, unknown or missing (ref=White)	-0.7374	1.0337	0.4756
Donor: cadaveric COD CNS tumor (ref=COD Head trauma)	0.3348	1.0235	0.7436
Donor: cadaveric COD anoxia (ref=COD Head trauma)	0.4221	0.2248	0.0605
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma)	0.6461	0.2636	0.0142
Donor: cadaveric COD other (ref=COD Head trauma)	0.3508	0.3932	0.3722
Recipient age: 0-1 (ref=2-10)	0.6825	0.2536	0.0071
Recipient age: 11-17 (ref=2-10)	0.1332	0.2957	0.6525
Recipient any previous transfusions: Yes (ref=no, unknown, missing)	0.5415	0.1797	0.0026
Recipient ascites: missing (ref=no)	-1.0467	0.4791	0.0289
Recipient ascites: yes (ref=no)	-0.2137	0.1811	0.2379
Recipient creatinine (ln) (ref=ln of avg creatinine**)	0.2920	0.1179	0.0133
Recipient creatinine: missing (ref=ln of avg creatinine**)	0.3730	0.3772	0.3228
Recipient height (ln cm) (ref=ln of avg height**)	-0.5389	0.3111	0.0832
Recipient height: missing (ref=ln of avg height**)	-2.5465	1.6423	0.1210
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	1.0685	0.6544	0.1025
Recipient on life support	0.8406	0.2176	0.0001
Recipient race: Asian (ref=White)	0.0751	0.4741	0.8741
Recipient race: Black (ref=White)	0.3699	0.1963	0.0595
Recipient race: Multi-racial, other, unknown or missing (ref=White)	0.5593	0.4775	0.2414
Recipient symptomatic cerebrovascular disease: Yes (ref=no, unknown, missing)	1.7366	1.0578	0.1007
Recipient uncontrollable variceal bleeding (ref=no, unknown, missing)	0.5992	0.3375	0.0758
Split or partial liver (ref=whole liver)	0.4636	0.2263	0.0405

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 40.28 kg.

Living Donor Patient Survival Model Description
3 Years after First Transplant
Organ: Liver
Pediatric (Age 0-17)

73.2% alive at 3 Years when all covariates=0.
The index of concordance is 79.9%.

Patient Characteristic Covariates	beta	standard error	p-value
ABO compatibility: compatible (ref=equal)	2.0061	0.4563	<0.0001
ABO compatibility: incompatible (ref=equal)	3.1414	0.8844	0.0004
Diagnosis: AHN*	-0.8006	0.5936	0.1774
Diagnosis: Cholestatic Liver Disease/Cirrhosis*	-14.3939	1034.9180	0.9889
Diagnosis: Malignant Neoplasms*	-0.5671	0.8050	0.4812
Diagnosis: Metabolic Diseases*	-2.3210	0.9560	0.0152
Diagnosis: Non-Cholestatic Cirrhosis*	-1.9067	0.9208	0.0384
Diagnosis: Other/Missing*	-0.9314	0.5475	0.0889
Donor age: 18-34 (ref=35-49)	0.1490	0.4102	0.7163
Donor age: 50+	1.7716	1.1200	0.1137
Donor weight (ln kg) (ref=ln of avg weight**)	-2.5361	1.3241	0.0554
Donor weight: missing (ref=ln of avg weight**)	-12.1989	6.5226	0.0615
Recipient age: 0-1 (ref=2-10)	-1.0627	0.4481	0.0177
Recipient age: 11-17 (ref=2-10)	-0.4667	0.9493	0.6230
Recipient creatinine (ln) (ref=ln of avg creatinine**)	1.3272	0.4025	0.0010
Recipient creatinine: missing (ref=ln of avg creatinine**)	-0.2997	0.6498	0.6447
Recipient insulin dependent diabetes: Yes (ref=no, unknown, missing)	3.7558	1.2646	0.0030
Recipient on inotropes for blood pressure support: Yes (ref=no, unknown, missing)	2.2971	1.1957	0.0547
Recipient on life support	1.3486	0.4651	0.0037
Recipient race: Asian (ref=White)	-0.2184	1.0678	0.8379
Recipient race: Black (ref=White)	0.9749	0.4931	0.0480
Recipient race: Multi-racial, other, unknown or missing (ref=White)	1.0980	1.0149	0.2793
Recipient uncontrollable variceal bleeding (ref=no, unknown, missing)	1.1122	0.8204	0.1752

* Reference for diagnosis group is biliary atresia.

** Recipient serum creatinine is centered on 0.50 mg/dl; Recipient height 99.38 cm; donor weight is centered on 71.53 kg.

Patient Survival Model Description
1 Month after First Transplant
Organ: Lung
Adult (Age 12+)

98.1% alive at 1 Month when all covariates=0.
The index of concordance is 76.2%.

Patient Characteristic Covariates	beta	standard error	p-value
Cardiac Index (=cardiac output/BSA in sq. m) (ref=mean cardiac index*)	-0.2567	0.1399	0.0665
Cardiac Index: missing (ref=mean cardiac index*)	0.1309	0.2942	0.6562
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.6279	0.3870	0.1047
Diagnosis Group C: includes Cystic Fibrosis	-0.0933	0.3867	0.8094
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.4913	0.2180	0.0242
Diagnosis: Eisenmengers	0.6621	0.5829	0.2560
Diagnosis: lymphangioliomyomatosis	-0.0668	1.0262	0.9481
Diagnosis: obliterative bronchiolitis (not retransplanted)	-0.2471	1.0408	0.8123
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.8328	0.4505	0.0645
Diagnosis: pulmonary fibrosis other	-0.2256	0.4817	0.6396
Donor age: 50+	-0.0701	0.2583	0.7860
Donor body surface area (m ²): linear (ref=mean BSA*)	-0.7819	0.3642	0.0318
Donor body surface area: missing (ref=mean BSA*)	-8.7430	313.1473	0.9777
Donor race: Asian	-0.0037	0.7268	0.9959
Donor race: Black	-0.1079	0.2314	0.6411
Donor race: Multi-racial, other, unknown or missing	-0.2182	1.0307	0.8323
Donor used cocaine, IV drugs or other drugs in last six months: missing (no to all)	0.5614	0.3952	0.1555
Donor used cocaine, IV drugs or other drugs in last six months: yes to any	0.5909	0.4389	0.1781
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	-0.3966	0.4676	0.3964
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.1058	0.1927	0.5832
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	0.3097	0.4706	0.5105
FVC (% predicted): linear (ref=mean FVC*)	-0.0065	0.0055	0.2444
FVC (% predicted): missing (ref=mean FVC*)	0.1864	0.2568	0.4679
Hemodynamics PA systolic (mm/Hg): linear (ref=mean*)	0.0092	0.0056	0.0978
Hemodynamics PA systolic (mm/Hg): missing (ref=mean*)	0.0447	0.3104	0.8855
Ischemia time: linear (ref=average time*)	0.0891	0.0583	0.1260
Ischemia time: missing (ref=average time*)	0.3958	0.2059	0.0546
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	0.9818	0.1841	<0.0001
O2 required at rest (L/min): linear (ref=mean*)	0.1088	0.0358	0.0024
Oxygen required at rest: missing (ref=mean*)	-0.0754	0.2485	0.7614
Recipient age: years (ref=mean age*)	0.0059	0.0091	0.5174
Recipient creatinine: linear (ref=mean creatinine*)	0.0944	0.0617	0.1262
Recipient creatinine: missing (ref=mean creatinine*)	1.1030	0.3438	0.0013
Recipient female	-0.0799	0.1858	0.6672
Recipient on ventilator	0.6811	0.3687	0.0647
Recipient race: Asian	0.9262	0.7408	0.2112
Recipient race: Black	-0.0055	0.3122	0.9859
Recipient race: Multi-racial, other, unknown or missing	1.0333	0.5350	0.0534
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	-0.1631	1.0558	0.8772
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.6259	0.7651	0.4133

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.

Patient Survival Model Description
1 Year after First Transplant
Organ: Lung
Adult (Age 12+)

85.0% alive at 1 Year when all covariates=0.
The index of concordance is 65.0%.

Patient Characteristic Covariates	beta	standard error	p-value
Cardiac Index (=cardiac output/BSA in sq. m) (ref=mean cardiac index*)	-0.1727	0.0750	0.0213
Cardiac Index: missing (ref=mean cardiac index*)	0.1022	0.1012	0.3125
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.6502	0.2189	0.0030
Diagnosis Group C: includes Cystic Fibrosis	-0.0644	0.2047	0.7532
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.3615	0.1152	0.0017
Diagnosis: Eisenmengers	0.2148	0.4910	0.6617
Diagnosis: lymphangioliomyomatosis	-0.2985	0.5912	0.6136
Diagnosis: obliterative bronchiolitis (not retransplanted)	-0.2600	0.5994	0.6645
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.4067	0.2934	0.1658
Diagnosis: pulmonary fibrosis other	0.0658	0.2666	0.8052
Donor age: 50+	0.3740	0.1304	0.0041
Donor body surface area (m^2): linear (ref=mean BSA*)	-0.4939	0.2038	0.0154
Donor body surface area: missing (ref=mean BSA*)	-9.4743	224.3965	0.9663
Donor history of diabetes: Missing (ref=no)	-0.1407	1.0099	0.8892
Donor history of diabetes: Yes (ref=no)	0.6721	0.2115	0.0015
Donor race: Asian	0.2126	0.3321	0.5219
Donor race: Black	0.0189	0.1246	0.8796
Donor race: Multi-racial, other, unknown or missing	0.1735	0.5087	0.7331
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	-0.0195	0.2066	0.9248
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.1776	0.1067	0.0961
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	0.1474	0.2499	0.5553
FVC (% predicted): linear (ref=mean FVC*)	-0.0036	0.0030	0.2280
FVC (% predicted): missing (ref=mean FVC*)	0.2057	0.1476	0.1635
Ischemia time: linear (ref=average time*)	-0.0091	0.0339	0.7872
Ischemia time: quadratic (ref=average time*)	0.0237	0.0098	0.0152
Ischemia time: missing (ref=average time*)	0.1722	0.1221	0.1587
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	0.4886	0.1112	<0.0001
O2 required at rest (L/min): linear (ref=mean*)	0.0746	0.0235	0.0015
Oxygen required at rest: missing (ref=mean*)	0.0540	0.1332	0.6854
Recipient age: years (ref=mean age*)	0.0039	0.0053	0.4594
Recipient creatinine: linear (ref=mean creatinine*)	0.0582	0.0368	0.1143
Recipient creatinine: missing (ref=mean creatinine*)	0.8317	0.2253	0.0002
Recipient female	-0.2225	0.1003	0.0265
Recipient on ventilator	0.4533	0.2683	0.0912
Recipient race: Asian	0.0274	0.7194	0.9696
Recipient race: Black	-0.2585	0.1981	0.1919
Recipient race: Multi-racial, other, unknown or missing	0.6760	0.3896	0.0827
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	0.4996	0.4827	0.3007
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.0327	0.4061	0.9359

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.

Patient Survival Model Description
3 Years after First Transplant
Organ: Lung
Adult (Age 12+)

68.3% alive at 3 Years when all covariates=0.
The index of concordance is 61.5%.

Patient Characteristic Covariates	beta	standard error	p-value
Diagnosis Group B: includes Primary Pulmonary Hypertension and Eisenmengers	0.5656	0.1848	0.0022
Diagnosis Group C: includes Cystic Fibrosis	0.2108	0.1496	0.1590
Diagnosis Group D: includes Idiopathic Pulmonary Fibrosis and not classified	0.1849	0.0932	0.0472
Diagnosis: Eisenmengers	-0.5383	0.4773	0.2593
Diagnosis: lymphangioleiomyomatosis	-0.9238	0.7140	0.1958
Diagnosis: obliterative bronchiolitis (not retransplanted)	0.4388	0.4621	0.3423
Diagnosis: obliterative bronchiolitis or bronchiectasis	0.1929	0.2403	0.4221
Diagnosis: pulmonary fibrosis other	0.3672	0.1928	0.0569
Donor BMI (kg/m ²): linear (ref=avg BMI*)	0.0003	0.0109	0.9783
Donor BMI: missing (ref=avg BMI*)	-0.2318	0.5106	0.6498
Donor age: 50+	0.0754	0.1195	0.5283
Donor body surface area (m ²): linear (ref=mean BSA*)	-0.2944	0.2187	0.1782
Donor coronary angiogram: Missing (ref=No/Yes, normal)	-0.0349	0.0974	0.7206
Donor coronary angiogram: Yes, not normal (ref=No/Yes, normal)	0.7335	0.4201	0.0808
Donor history of diabetes: Missing (ref=no)	0.3507	0.4537	0.4395
Donor history of diabetes: Yes (ref=no)	0.5518	0.1982	0.0054
Donor race: Asian	-0.2379	0.3170	0.4529
Donor race: Black	0.3000	0.0958	0.0017
Donor race: Multi-racial, other, unknown or missing	-0.2436	0.3842	0.5261
Donor: cadaveric COD anoxia (ref=COD Head trauma or CNS tumor)	-0.3483	0.1850	0.0597
Donor: cadaveric COD cerebrovascular/stroke (ref=COD Head trauma or CNS tumor)	-0.0788	0.0819	0.3357
Donor: cadaveric COD other (ref=COD Head trauma or CNS tumor)	-0.3743	0.2210	0.0904
FVC (% predicted): linear (ref=mean FVC*)	-0.0034	0.0023	0.1419
FVC (% predicted): missing (ref=mean FVC*)	0.2360	0.1083	0.0293
Hemodynamics PCW pressure for Group D: 20+ mm/Hg (ref=PCW pressure<20)	0.5490	0.2443	0.0246
NYHA class: IV/n.a./unk/msg (ref=I/II/III i.e. no or some limitations)	0.3982	0.0885	<0.0001
Recipient age: years (ref=mean age*)	0.0150	0.0042	0.0003
Recipient female	-0.0570	0.0787	0.4688
Recipient on ventilator	0.2758	0.2019	0.1720
Recipient race: Asian	0.3787	0.4631	0.4135
Recipient race: Black	0.1639	0.1477	0.2672
Recipient race: Multi-racial, other, unknown or missing	0.8041	0.3123	0.0100
Recipient six minute walk distance < 150 ft at listing: unknown or missing	0.2563	0.1026	0.0125
Recipient six minute walk distance < 150 ft at listing: yes	0.2247	0.1224	0.0665
Hemodynamics PA mean by diagnosis interaction: mean PA 30 mm/Hg or less and sarcoidosis	0.0544	0.3995	0.8918
Hemodynamics PA mean by diagnosis interaction: mean PA >30 mm/Hg and sarcoidosis	-0.9392	0.4639	0.0429

* Ischemia time is centered on 4.58 hours; recipient age is centered on 49.61 ; recipient serum creatinine is centered on 0.91 mg/dl; FVC is centered on 50.98 percent; cardiac index is centered on 2.95 L/min/sq m; PA systolic is centered on 40.75 mm/Hg; oxygen requirement is centered on 2.56 L/min; BSA is centered on 1.83 sq m; BMI is centered on 24.17 kg/sq m.