

The 2008 Annual Report of the OPTN and SRTR

Kidney and Pancreas Transplantation in the U.S., 1998-2007

Overview

- Although the number of candidates on the kidney transplant waiting list at year-end rose from 40,825 to 76,070 (86%) between 1998 and 2007, recent growth principally reflects increases in the number of patients in inactive status. The number of active patients increased by “only” 4,510 between 2002 and 2007, from 44,263 to 48,773.
- There were 6,037 living donor and 10,082 deceased donor kidney transplants in 2007. Patient and allograft survival was best for recipients of living donor kidneys, least for expanded criteria donor (ECD) deceased donor kidneys, and intermediate for non-ECD kidneys.
- The total number of pancreas transplants peaked at 1,484 in 2004 and has since declined to 1,331. Among pancreas recipients, those with simultaneous pancreas-kidney (SPK) transplants experienced the best pancreas graft survival rates: 86% at one year and 53% at 10 years.
- Between 1998 and 2006, among diabetic patients with end-stage renal (ESRD) who were under the age of 50 years, 23% of all and 62% of those wait-listed received a kidney-alone or SPK transplant. In contrast, 6% of diabetic patients aged 50-75 years with ESRD were transplanted, representing 46% of those wait-listed from this cohort. Access to kidney-alone or SPK transplantation varies widely by state.

Summary Figures

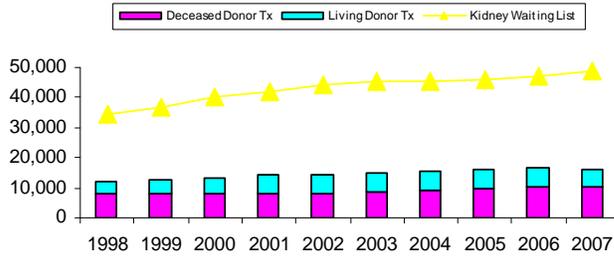
The figures on the following page are “dashboard” views of the state of heart transplantation. Details on the implications of these figures, and explanations of the methods used in creating them, are included in Chapter V of this year’s report.

The 2008 OPTN/SRTR Annual Report

The data and analyses reported in the 2008 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients have been supplied by the United Network for Organ Sharing and the Arbor Research Collaborative for Health under contract with the Department of Health and Human Services. The authors alone are responsible for reporting and interpreting these data; the views expressed herein are those of the authors and not necessarily those of the U.S. Government.

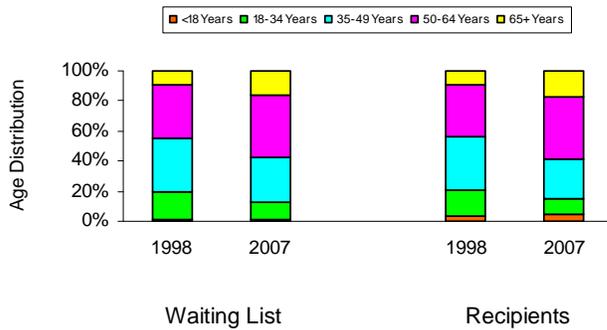
This Annual Report is a publication of the Department of Health and Human Services. It was developed by contract for the Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation. Suggested Citation: 2008 OPTN/SRTR Annual Report 1998-2007. HHS/HRSA/HSB/DOT; UNOS; Arbor Research Collaborative for Health. This is a U.S. government-sponsored work. There are no restrictions on its use.

Kidney Transplantation at a Glance



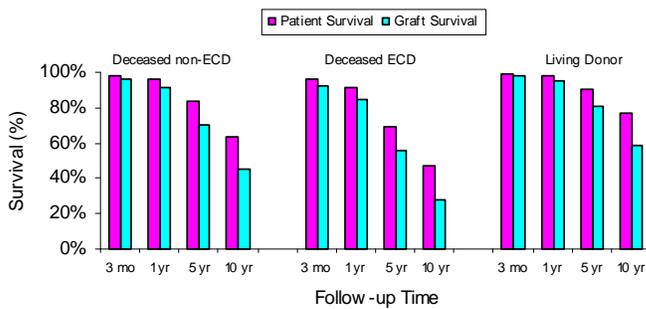
Number of Transplants and Size of Active Waiting List.

There was a very large gap between the number of patients waiting for a transplant and the number receiving a transplant. This gap widened over the decade, meaning that the waiting times from listing to transplant continued to increase. The number of living donor transplants grew until 2004, while the number of deceased donor transplants continued to rise gradually. Source: 2008 OPTN/SRTR Annual Report, Tables 1.7, 5.1a.



Age Distribution of Recipients and Active Waiting List.

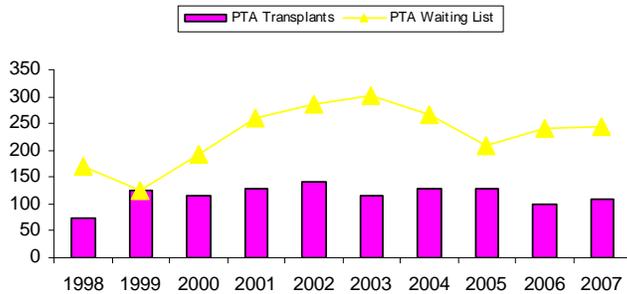
In 2007, older candidates (age >50 years) made up a much larger fraction of patients actively awaiting an organ than a decade earlier. The same pattern was observed for transplant recipients, except that young patients (age <35 years) showed a greater representation among recipients than on the waiting list. Source: 2008 OPTN/SRTR Annual Report, Tables 5.1a, 5.4a, 5.4b, 5.4c.



Unadjusted Patient and Graft Survival.

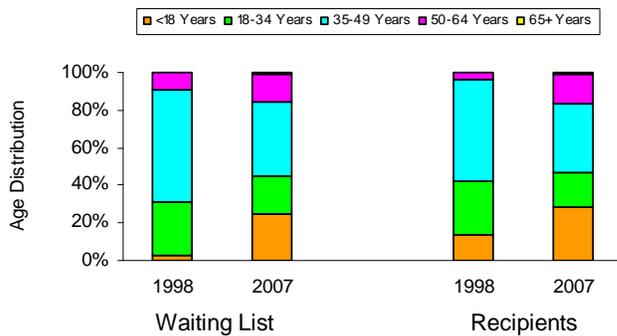
Five-year patient survival percentages (based on transplants during 2001-2006) and 10-year patient survival (based on transplants during 1996-2006) were clearly higher for recipients of living donor organs than for those of deceased donor organs. Similarly, living donor organs had the highest five- and 10-year graft survival. Source: 2008 OPTN/SRTR Annual Report, Tables 5.10a, 5.10b, 5.10d, 5.14a, 5.14b, 5.14d.

Pancreas Transplantation Alone (PTA) at a Glance



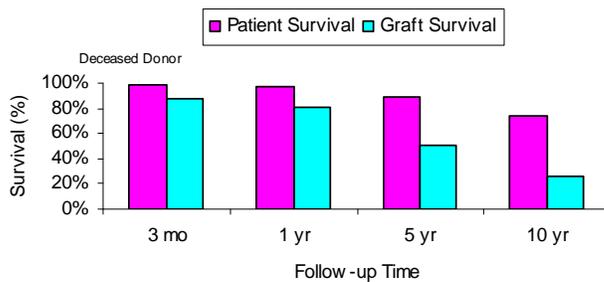
Number of Transplants and Size of Active Waiting List.

The number of patients on the waiting list for a pancreas transplant alone had been decreasing since 2003, but it rose slightly in 2006 and 2007. The number of PTA transplants per year was relatively stable. Source: *2008 OPTN/SRTR Annual Report*, Tables 1.7, 6.1a.



Age Distribution of Recipients and Active Waiting List.

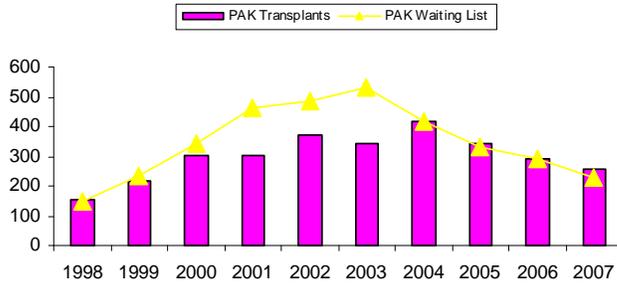
For PTA, more pediatric candidates were wait-listed and more received a transplant in 2007 than in 1998, although the absolute numbers are small. At the same time, the fraction of recipients over age 50 years grew. Pediatric diabetic patients rarely have kidney failure before age 18 years, but they are candidates for PTA. Source: *2008 OPTN/SRTR Annual Report*, Tables 6.1a, 6.4.



Unadjusted Patient and Graft Survival.

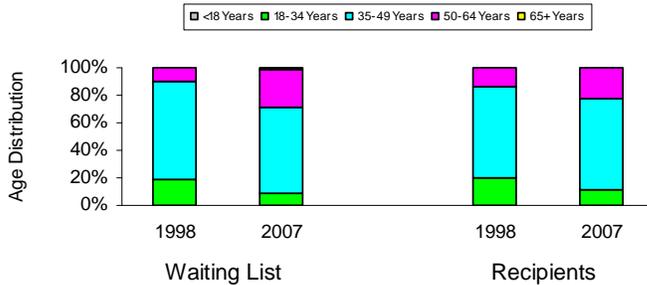
For PTA transplants, patient survival has been excellent. The five-year patient survival rate was 89%. Graft survival was considerably lower, especially at five and 10 years posttransplant. Source: *2008 OPTN/SRTR Annual Report*, Tables 6.10, 6.14.

Pancreas After Kidney (PAK) Transplantation at a Glance



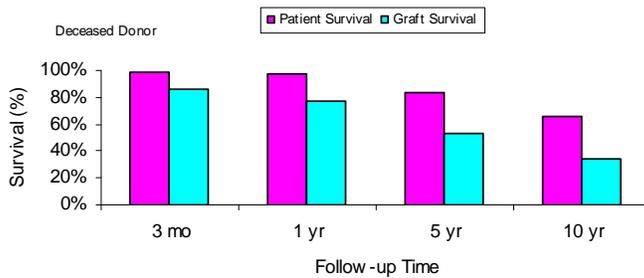
Number of Transplants and Size of Active Waiting List.

As with PTA, the number of patients on the waiting list for a PAK transplant has decreased since 2003. The number who received a transplant has matched the number of candidates each year since 2004. The number of PAK transplants has decreased from its highest level of the decade in 2004. Source: 2008 OPTN/SRTR Annual Report, Tables 1.7, 7.1a.



Age Distribution of Recipients and Active Waiting List.

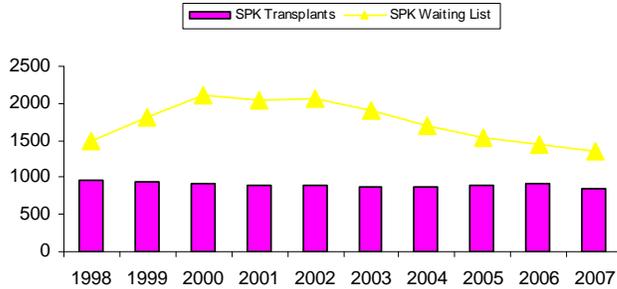
For PAK, a higher proportion of wait-listed and transplanted patients were over 50 years old in 2007 than in 1998. At the same time, a smaller proportion of candidates and recipients were in the 18-34 year age group. (Since recipients were mostly type 1 diabetics, the ages below 18 and above 65 years were virtually unrepresented.) Source: 2008 OPTN/SRTR Annual Report, Tables 7.1a, 7.4.



Unadjusted Patient and Graft Survival.

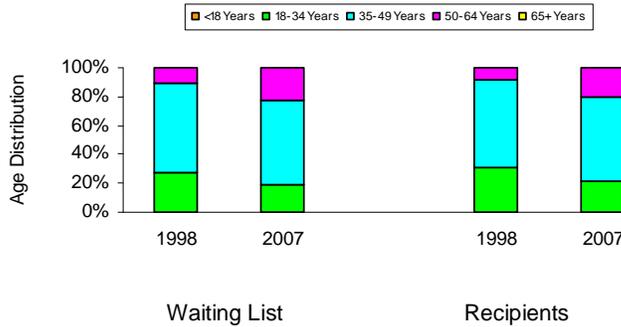
For PAK transplants, patient survival was similar to that seen for simultaneous kidney-pancreas transplant recipients. Five-year patient survival was 84%. Pancreas graft survival after PAK was considerably lower. Source: 2008 OPTN/SRTR Annual Report, Tables 7.10, 7.14.

Simultaneous Pancreas-Kidney (SPK) Transplantation at a Glance



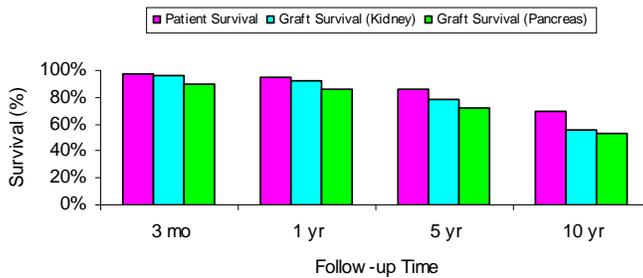
Number of Transplants and Size of Active Waiting List.

SPK accounts for the majority of all pancreas transplants. Numbers of this procedure were stable over the decade. The gap between the number of patients waiting for a transplant and the number receiving a transplant has dropped substantially since 2000. Source: 2008 OPTN/SRTR Annual Report, Tables 1.7, 8.1a.



Age Distribution of Recipients and Active Waiting List.

For SPK transplantation, patients over age 50 years made up greater fractions of both candidates and recipients in 2007 than in 1998. At the same time, smaller proportions of candidates and recipients were in the 18-34 year age group. (Since recipients were mostly type 1 diabetics, the ages below 18 and above 65 years were virtually unrepresented.) Source: 2008 OPTN/SRTR Annual Report, Tables 8.1a, 8.4.



Unadjusted Patient and Graft Survival.

Patient survival has improved for SPK recipients in recent years. Five- and 10-year patient survival was 87% and 70%, respectively. Graft survival is shown separately for the pancreas graft and the kidney graft of each SPK transplant. Source: 2008 OPTN/SRTR Annual Report, Tables 8.10, 8.14.