

Transplant Center 2009 Year-End Report

A Message From the New Chief of Transplantation

Dear Colleagues,

At the Transplant Center, our goal is to help you provide the best care possible for your patients who have organ failure. As the new chief of transplantation at the University of Minnesota, that goal — above all else — is what I want the Transplant Center to represent for you, our referring providers. We want to partner with you to provide unsurpassed care to your patients with end-stage organ disease, and to be the most trusted source of organ failure- and transplant-related education for both you and your patients.

In 2009, University of Minnesota Medical Center, Fairview and University of Minnesota Amplatz Children's Hospital were again among the nation's leading programs in solid organ transplantation. (See our volumes and outcomes on page 2.)

As we begin 2010, I am leading the charge to expand on our robust tradition of bench-to-practice patient care as well as our clinical and surgical excellence. Transplantation is an ever-changing field and I consider it our responsibility to continuously address the challenges and issues related to end-stage organ failure and transplant. Towards this end, the NIH Program Project Grant to help us understand organ-specific problems — such as chronic allograft failure — was recently renewed. This grant has received continuous funding for the past 40 years.

We are embarking on a new era for **kidney transplantation** at the medical center. To help augment our already higher-than-expected kidney transplant outcomes, in 2009 the program recruited transplant surgeon Erik Finger, M.D., Ph.D. His expertise in immune modulation and regulatory T-cells will build on the University's significant stem-cell strengths. There is real hope that manipulation of the recipient's own immune system will help maintain superb transplant outcomes with less-toxic chemotherapeutic agents. The work we are doing in the areas of immune globulin donor-specific antibodies and vascular access, led by Ty Dunn, M.D., also holds significant promise for improving transplant outcomes.

We continue to expand our hallmark **living donor kidney program**, recognizing that living donation provides the best option for those in need of a kidney transplant. The launch last November of our Living Donor Web site blog has resulted in an informative and transparent discussion of the pros and cons of living donation and has furthered our goal of being a go-to resource for transplant education.

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Timothy L. Pruett, M.D.
Chief of Transplantation

To make a referral, or to consult with one of our physicians, please contact our Transplant Center office at the following numbers:

612-625-9922 or 800-478-5864
(heart and lung)

612-625-5115 or 800-328-5465
(abdominal organs)

An area of renewed focus for our University of Minnesota Physicians staff is the care of patients with end-stage liver disease who are not quite ready for transplant — including those with hepatocellular carcinoma and viral hepatitis. For patients who get to transplant, our **living donor liver program** offers opportunities to obtain a liver before the patient becomes sick enough to qualify for a deceased donor liver. Recent research has shown that living-liver donation is linked to a greater likelihood of life extension than waiting for a liver from a deceased donor.

Our **cardiothoracic transplant programs** continue to provide exceptional care with an emphasis on caring for those with advanced heart, lung or heart-lung failure. In addition to having heart and lung transplant survival rates well above the national norm, we are a national leader in the successful implantation of ventricular assist devices (VADs) in patients experiencing severe end-stage heart disease. Our advanced lung disease management program focuses on preventing or delaying the need for transplantation, while our NIH funded researchers are finding new ways to identify the earliest proteomic and genomic biomarkers of chronic lung allograft dysfunction.

Our **pancreas and pancreatotomy and islet auto-transplant programs** continue to be the largest programs of their kind in the country. We are currently expanding our pancreatotomy program so that more patients can benefit from the relief of pain caused by chronic or relapsing pancreatitis. In addition, our **allo islet transplant program** for people with type 1 diabetes continues to offer patients unparalleled expertise and experience in a field that was pioneered at University of Minnesota.

Finally, but by no means least, we are embarking upon a new day in pediatric transplantation, building on our long legacy of pioneering successful kidney transplantation in infants and children. We are currently growing our capacity in anticipation of the opening of the new University of Minnesota Amplatz Children's Hospital in 2011. The facility will provide dedicated space as well as the institutional resources necessary to support our expanding expertise in **pediatric abdominal transplant** as well as **heart failure and heart transplant**.

The addition of Nissa Erickson, M.D., as medical director of our pediatric liver transplant program embodies our commitment to providing leadership and strength in this area. Likewise, pediatric cardiothoracic surgeons James St. Louis, M.D. and Roosevelt Bryant, M.D., along with cardiologists Rebecca Ameduri, M.D., and Elizabeth Braulin, M.D., Ph.D., are bringing renewed energy and expertise to caring for children with heart failure. Their efforts include the growing success of our Berlin heart assist device program.

Even with the many advances that have been made over the decades in caring for patients with severe organ failure, there is still much work to be done. I hope that you will look to University of Minnesota Medical Center, Fairview and University of Minnesota Amplatz Children's Hospital as true partners along the way. Together, we can provide exceptional care to all those we serve.

Sincerely,
Timothy L. Pruett, M.D.
Chief of Transplantation

2009 Transplant Center Volumes and One-Year Outcomes*

Transplant Type	2009 Volumes	One-year patient survival (7/06 – 12/08)	One-year graft survival (7/06 – 12/08)
Heart, adult	31	94.90%	95.15%
Heart, pediatric	3	0.00% **	0.00%*
Islet, allogeneic	4	100%	75%
Kidney, adult	156	97.87% deceased donor 98.88% living donor	93.76% deceased donor 97.10% living donor
Kidney, pediatric	17	100% deceased donor 100% living donor	87.50% deceased donor 97.73% living donor
Kidney/Pancreas	19	91.48%	78.62 (pancreas) 91.11% (kidney)
Liver, adult	45	85.42% deceased donor 97.73% living donor	82.52% deceased donor liver 97.83% living donor liver
Liver, pediatric	5	93.33% deceased donor 100% living donor	87.5% deceased donor 100% living donor
Lung	20	86.84%	87.24%
Pancreas	33	96.43%	76.89%
Pancreatotomy/Islet, autologous	48	Not Applicable	Not Applicable

* Scientific Registry of Transplant Recipients data through December 2008

** No pediatric heart transplants were performed during the reported time period.

New Transplant Center Physicians in 2009



Timothy L. Pruett, M.D.
Chief of Transplantation, Transplant Surgeon
Fellowship: University of Minnesota Medical Center, Fairview (infectious disease, transplantation)
Clinical Interests: organ transplantation (specific interest in liver transplantation), critical care, infectious diseases (viral hepatitis)



Rebecca Ameduri, M.D.
Pediatric Cardiologist Fellowship: University of Minnesota Amplatz Children's Hospital (pediatric cardiology)
Clinical Interests: cardiac transplantation, congenital heart disease, heart failure



Roosevelt Bryant III, M.D.
Pediatric Cardiothoracic Surgeon
Fellowship: Texas Children's Hospital, Houston (pediatric cardiac surgery)
Clinical Interests: cardiac development, heart failure in infants and children, pediatric cardiopulmonary bypass, surgical management of congenital heart disease



Peter Eckman, M.D.
Cardiologist
Fellowships: University of Minnesota Medical Center, Fairview (cardiovascular medicine); Cleveland Clinic (heart failure and transplantation)
Clinical Interests: heart failure, mechanical circulatory support, ventricular assist device, cardiac resynchronization therapy, cell therapy, heart transplantation



Nissa Erickson, M.D.
Medical Director, Pediatric Liver Transplantation, Pediatric Gastroenterologist and Hepatologist
Fellowship: Cincinnati Children's Hospital Medical Center (pediatric gastroenterology, hepatology and nutrition)
Clinical Interests: pediatric liver disease, hepatopulmonary syndrome, pediatric liver transplantation



Ralph Fairchild, M.D.
Transplant Surgeon
Fellowships: Boston University (transplant surgery, dialysis access), Harvard University (transplant hepatobiliary and pancreatic surgery)
Clinical Interests: liver, kidney, pancreas and small bowel transplants, dialysis access, islet auto transplantation, living donor transplants, hepatobiliary and pancreatic surgery



Erik Finger, M.D., Ph.D.
Transplant Surgeon
Fellowship: University of California, San Francisco (transplant immunology and transplant surgery)
Clinical Interests: kidney, liver, pancreas transplantation, immune tolerance, islet transplantation, hepatobiliary surgery, regulatory T-cells



Sofia Carolina Masri, M.D.
Cardiologist
Fellowships: University of Minnesota Medical Center, Fairview (cardiology), Cleveland Clinic Foundation (heart failure and cardiac transplant), Brigham and Women's Hospital, Harvard University (non-invasive cardiac imaging)
Clinical Interests: heart failure, mechanical circulatory support, cardiac resynchronization therapy, heart transplantation, cardiac imaging



Julie Thompson, M.D., M.P.H.
Gastroenterologist
Fellowship: University of Minnesota Medical Center, Fairview (gastroenterology, advanced hepatology)
Clinical Interests: hepatology, liver transplantation



Priya Verghese, M.D., M.P.H.
Pediatric Nephrologist
Fellowship: University of Washington Medical Center, Seattle (pediatric nephrology, pediatric transplant nephrology)
Clinical Interests: pediatric kidney disease, kidney transplantation in children, long-term post-transplant outcomes

Key Articles for 2009

The following are selected articles and presentation abstracts authored by Transplant Center physicians during 2009. For a complete listing of published articles please visit our Web site at uofmtransplant.org.

Heart Failure and Transplantation

Crow S, John R, Boyle A, Shumway S, Liao K, Colvin-Adams M, et al. Gastrointestinal bleeding rates in recipients of nonpulsatile and pulsatile left ventricular assist devices. *Journal of Thoracic and Cardiovascular Surgery*. 2009; 137:208-15.

Kadmar F, Boyle A, Liao K, Colvin-Adams M, Joyce L, John R. Effect of pulsatile left ventricular assist device support on end-organ in heart failure patients. *Journal of Heart and Lung Transplantation* 2009; 28:352-9.

Kidney Transplantation

Rezcallah A, Humar A, Najarian J, Mauer M, Chavers B, Hill M, Jie T, Aerts J, Gillingham K, Matas A. What happens to children with renal allograft survival greater than ten years? *American Journal of Transplantation* 2009; 9(2):713.

Hassan I, Foley R, LiPing T, Rogers T, Bailey R, Guo H, Gross C, Matas A. Long-term consequences of kidney donation. *New England Journal of Medicine* 2009; 360:459-469

Liver Transplantation

Hill MJ, Hughes M, Jie T, Cohen M, Lake J, Payne WD, Humar A. Graft weight/recipient weight ratio: how well does it predict outcome after partial liver transplants? *Liver Transplantation* 2009; 15(9):1056-62.

Humar A, Beissel J, Crotteau S, Cohen M, Lake J, Payne WD. Delayed splenic artery occlusion for treatment of established small-for-size syndrome after partial liver transplantation. *Liver Transplantation* 2009; 15(2):163-8.

Lung Transplantation

Christie JD, Edwards LB, Aurora P, Dobbels F, Kirk R, Rahmel AO, Stehlik J, Taylor DO, Kucheryavaya AY, Hertz MI. The registry of the international society for heart and lung transplantation: twenty-sixth official adult lung and heart-lung transplantation report. *Journal of Heart and Lung Transplantation* 2009; 28(10):1031-49.

Pancreas Transplantation

Sutherland D, Kandaswamy R, Dunn T, Humar A, Gruessner R, Radosevich D, Gruessner A, Bland B, Najarian J. Outcomes in >2,000 pancreas transplants at a single institution. Abstract presented at the International Pancreas and Islet Transplant Association meeting in Venice, Italy, October 2009.

Total Pancreatectomy and Islet Auto-Transplantation

Sutherland D, Radosevich D, Gruessner A, Beilman G, Dunn T, Balamurugan A, Bellin M, Freeman M, Bland B, Hering B. Islet auto-transplant outcomes after total pancreatectomy in the modern era. Abstract presented at the International Pancreas and Islet Transplant Association meeting in Venice, Italy, October 2009.

We value our relationship with you and your patients. The staff at University of Minnesota Medical Center, Fairview and University of Minnesota Amplatz Children's Hospital along with our partners, University of Minnesota Physicians, is committed to providing exceptional clinical care based on leading-edge academic research.

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