

ANNUAL REPORT • 2010

Dear Colleagues:

We are pleased to provide you with this 2010 Annual Report of the Liver Transplant Program at Vanderbilt University Medical Center. Enclosed you will find information about our latest program volumes and outcomes. In 2010, we performed 93 liver transplants for 87 adult and 6 pediatric patients. Our risk-adjusted survival outcomes remain excellent.

Highlights for 2010 include:

- **New milestones:** The Vanderbilt Liver Transplant Program has performed over 1120 liver transplants since its inception in 1991. The program was recognized nationally in 2010 with a bronze award from HHS/HRSA/HSB/Division of Transplantation through The Donation and Transplantation Community of Practice as an outstanding transplant program. Vanderbilt ranked in the top quartile of all liver transplant programs in the United States for transplant, survival and deaths on the waitlist rates.
- **Improved access:** The program continues to strive to facilitate access and communication for our patients and referring clinicians. As part of these efforts, members of our clinical team personally review each liver transplant referral and strive to offer initial consultation within two weeks of a referral contact. Our team has traveled throughout Vanderbilt's service area to visit with referring physicians to hear concerns and implement suggestions for improving the delivery of care. To this end, we have rolled out a new referring physician communication portal to help us communicate about patient progress, treatment plans, and coordinate longitudinal follow-up with the use of our electronic medical record (EMR).
- **Recruitment of new faculty and return of former faculty:** Dr. Chan Chung arrived in the summer of 2010 as a Vanderbilt hepatologist having trained at UCSF. Dr. Chung's areas of clinical interests span the spectrum of topics related to transplant hepatology including immunosuppression, HCC treatment and HBV/HCV therapies. Dr. Lee Gorden, transplant surgeon at Vanderbilt University Medical Center since 2001, returned from a sabbatical year as a Fulbright Scholar at the Paul Brousse Hospital in Paris, France. Dr. Gorden brought back several insights into the management of complex liver tumors and complex issues of donor organ allocation.
- **Research activities:** Ongoing clinical and translational research efforts through the Vanderbilt Transplant Center Clinical Trials Office include: Neurocognitive dysfunction assessment after liver transplantation using formal neuropsychological and functional MRI studies; proteomic and lipidomic analysis of donor liver tissue to identify biomarkers predictive of post transplant liver function; a multicenter, open-label, randomized, controlled study to evaluate the efficacy and safety of everolimus to reduce calcineurin-induced side effects of tacrolimus in de novo liver transplant recipients. We continue to have ongoing trials with a variety of new antiviral medications to treat chronic hepatitis C prior to liver transplantation in an effort to stabilize liver disease and avoid the need for surgery. Also, we have a new protocol aimed at treating patients with hepatitis C during surgery to prevent recurrent infection after transplantation. We are actively engaged in investigational protocols focused on treating HCC, hepatic encephalopathy and hepatorenal syndrome. We remain focused on basic science investigation of molecular determinants of tumor progression in the setting of fatty liver disease.

Our experienced team of surgeons, physicians, nurses, and administrative staff are dedicated to utilizing the latest medical and technical advances in transplantation with timely, compassionate, and personalized approach to patient care. As always, we welcome any suggestions or comments you may have so that we may continue to provide the best possible service to you and your patients.

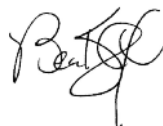
Sincerely,



J. Kelly Wright, Jr., MD
Surgical Director-Adult



Michael K. Porayko, MD
Medical Director-Adult



Beau S. Kelly, MD
Surgical Director-Pediatric



Lynette A. Gillis, MD
Medical Director-Pediatric

Vanderbilt Adult & Pediatric Liver Transplantation

The criteria for the selection of potential liver transplantation candidates include the following:

- Presence of end-stage liver disease with objective evidence of advanced physical incapacitation causing deterioration of the quality of life to an unacceptable level due to documented, isolated liver disease
- A limited life expectancy due to liver dysfunction
- Previous medical therapy has been optimized and no other therapy other than transplantation offers realistic expectation of functional improvement and extension of life
- Expected compliance with medical regimens
- Adequate psychosocial support system to aid the patient prior to and during the surgery and to promote adherence to required post-transplant treatment regimens
- Acceptable surgical risks

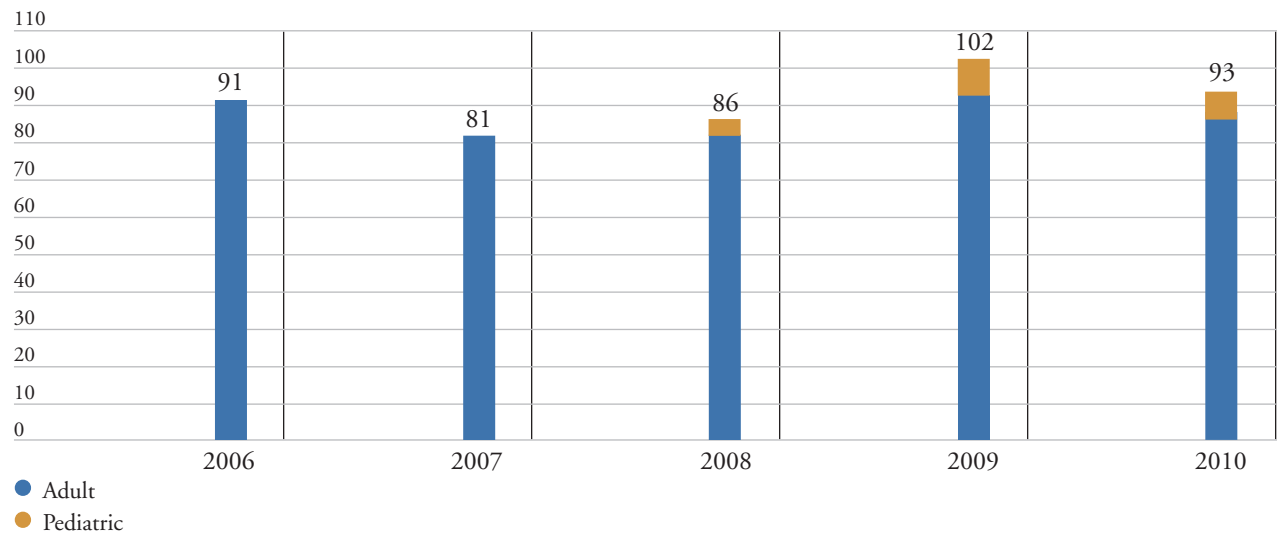
Specific manifestations include:

- Malnutrition with progressive protein-calorie deficiency; wasting and fatigue (albumin <3.1)
- Uncorrectable coagulopathy (INR>1.5), fibrinogen <150 mg/dl)
- Recurrent or uncontrollable hepatic encephalopathy
- Refractory ascites
- Spontaneous bacterial peritonitis
- Development of hepatorenal syndrome
- Development of fulminant hepatic failure
- Refractory, life-threatening variceal hemorrhage
- Severe progressive metabolic bone disease, especially with spontaneous fractures
- Recurrent episodes of biliary sepsis
- <5 cm but unresectable primary hepatic tumors confined to the liver

The following factors exert an adverse influence on the outcome of liver transplantation and therefore constitute CONTRAINDICATIONS to surgery:

- Extrahepatic malignancy
- Uncontrollable sepsis
- Active alcoholism or drug abuse; previous alcohol or drug abuse with less than 6 months of abstinence
- Irreversible advanced cardiac, pulmonary or other organ disease

Liver Transplant Volumes by Calendar Year 2006 – 2010



- Symptomatic coronary, peripheral, or cerebral vascular disease
- Irreversible terminal state
- Severe pulmonary hypertension (mean arterial pressure >35 mmHg)
- Uncontrolled/untreated acquired immunodeficiency syndrome (HIV/AIDS infection)

Relative contraindications include:

- Advanced age (>65 years)
- History of behavior pattern psychiatric illness considered likely to interfere significantly with compliance
- Inadequate social support system
- Stage IV coma
- Active peptic ulcer disease
- Severe renal dysfunction not explained by underlying hepatic failure
- Persistent use of tobacco products
- Resistant, insulin-requiring diabetes mellitus with evidence of target organ disease (retinopathy, nephropathy, or neuropathy)
- Asymptomatic, but severe peripheral or cerebral vascular disease
- Current or recent history of diverticulitis
- Previous malignancy with potential for recurrence (there must be a disease-free interval of five (5) years)
- Prior extensive right upper quadrant abdominal surgery
- Severe portal venous thrombosis
- Systemic amyloidosis
- Morbid obesity

Patient selection in the presence of alcoholism or drug abuse:

Vanderbilt Liver Transplant Program's policy states that in the case of patients in whom the etiology of the liver disease is related to alcohol or drug abuse, the following criteria of substance abuse rehabilitation must be met. The patient needs to have been abstinent for at least six months. The patient is required to have been through a rehabilitation program and to be participating in an ongoing support program. An adequate social support system must be present in the patient's life. Ideally, we prefer that the patient has a professional activity to return to with plans to return to that activity within six months of transplantation. All patients with a history of alcohol and drug abuse are carefully evaluated by a psychiatry consultation, the liver transplant social worker, and the transplant coordinator.

2010 Survival Rate*

For transplants performed between 07/01/2007 and 12/31/2009

	Patient	Graft
Liver – Adult	1 Year (N=199)	1 Year (N=213)
Observed	89.59%	85.50%

Time Spent on Waitlist

Months to Transplant

Percentile	VUMC	OPO/DSA	Region	U.S.
50th (median time to transplant)	7	7.0	5.0	10.8

Waitlist Activity Summary*

As percent of registrants on waitlist

Removals from Waitlist	VUMC	OPTN Region	U.S.
Received deceased donor transplant*	62.5%	64.7%	37.1%
Deceased	7.4%	9.3%	9.2%

* Based on SRTR January 2011 Release

Adult Referrals/Appointments: (615) 936-5321

Adult Toll Free: (866) 748-1495

Pediatric Referrals/Appointments: (615) 343-BILI (2454)

Pediatric Toll Free: (866) 659-5930

Liver Transplant Team Directors

J. Kelly Wright, Jr., MD
Adult Surgical Director

Michael K. Porayko, MD
Adult Medical Director

Burnett "Beau" S. Kelly, MD
Pediatric Surgical Director

Lynette A. Gillis, MD
Pediatric Medical Director

Transplant Surgeons

Sunil K. Geevarghese, MD, MSCI
D. Lee Gorden, MD
Burnett "Beau" S. Kelly, Jr., MD
Derek E. Moore, MD, MPH
C. Wright Pinson, MBA, MD
J. Kelly Wright, Jr., MD

Transplant Hepatologists

Joseph A. Awad, MD
Raymond F. Burk, Jr. MD
Chan Y. Chung, MD
Lynette A. Gillis, MD
Roman E. Perri, MD
Michael K. Porayko, MD
David S. Raiford, MD
Andrew E. Scanga, MD

Transplant Infectious Disease

Stephen Dummer, MD
Geraldine Miller, MD
Lora Thomas, MD

Transplant Coordinators

Carly Bhaye, MS, CPNP, CCTC
(Pediatric)
Matt Bumbalough, FNP- BC
April DeMers, ACNP-BC
Brenna Evans, RN, BSN, CCTC
(Triage Nurse)
Pamela Hale, RN, BSN (VA)
Beth Martin, ACNP-BC
Janice Meyers, ACNP-BC
Ashley Singleton, ACNP- BC

Transplant Pharmacist

Christie B. Truscott, PharmD

Transplant Social Workers

Patricia M. Coffey, LCSW (VA)
Erik Lillie, LCSW
Erin Gaines, LMSW (Pediatric)

Child Life Specialist

Stacey Chambers, BS, CCLS

Clinical Research Coordinator

Carla Thomas, RN, BSN

Transplant Psychiatry

Karen Starr, MSN, RN, PMHNP, BC

Transplant Return-To-Work

Joanne C. Ball, MST, CVE, ABVE

Transplant Outcomes Research & Quality of Life

Irene D. Feurer, PhD
Hua Ye

Transplant Financial Counselors

Lisa Conyer
Linda Storey

Transplant Data Manager

Lindsey Simmons

Transplant Administrative Team

Angie Parman
Carmen Patterson
Dixie Williamson (Pediatric)

Vanderbilt Adult Liver Transplant Program

801 Oxford House, 1313 21st Avenue South
Nashville, TN 37232-4753

Referrals/Appointments: (615) 936-5321

Adult Toll Free: (866) 748-1495

Adult Fax: (615) 936-2787

www.vanderbilttransplantcenter.com

Vanderbilt Pediatric Liver Transplant Program

3209 Vanderbilt Children's Hospital
2200 Children's Way

Nashville, TN 37232-9625

Pediatric Referrals/Appointments: (615) 343-BILI (2454)

Pediatric Toll Free: (866) 659-5930

Pediatric Fax: (615) 936-7816

www.vanderbiltchildrenshospital.org/livertransplant