

# Transplant Update

A Report From Baylor Regional Transplant Institute Volume 1 • Number 1



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The Liver and Pancreas Disease Center at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth provides a multidisciplinary approach for patients with liver, bile duct and pancreatic tumors, both benign and malignant.



## Kidney and Pancreas Transplantation for Diabetes Mellitus

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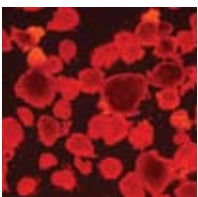
Over the last 10 years, the rate of pancreas transplants has increased significantly. Technical expertise and immunosuppression are much improved, and selection criteria for candidates are more refined.



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## The Liver and Pancreas Disease Center

The Liver and Pancreas Disease Center at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth provides a multidisciplinary approach for patients with liver, bile duct and pancreatic tumors, both benign and malignant. The center draws on the expertise of numerous physicians, including surgeons, radiologists and pathologists, who have significant experience in problems of the liver and pancreas as a result of performing transplants.

Baylor's Liver and Pancreas Disease Center offers a full array of treatment options, ranging from surgery, to medical oncology and radiation oncology, or a combination of the three. With all these options in one center, physicians can tailor a personalized treatment plan for each patient.

While most patients with liver or pancreatic tumors are not candidates for transplant, those with hepatocellular carcinoma—primary cancer of the liver—may go on to transplant if certain criteria are met. Because of the transplant program for patients with primary cancer of the liver, Baylor is one of few centers in the United States that offers a full gamut of treatment modalities. “Through the Liver and Pancreas Disease Center, Baylor strives to put the patient and family first. With one phone call, patients can have all their cancer care coordinated by a dedicated team of physicians and nurses,” said Robert M. Goldstein, MD, FACS, assistant director of transplant services at Baylor Dallas. A nurse is available to assist patients in obtaining records, and scheduling necessary consults and testing. The staff of the Liver and Pancreas Disease Center tries to coordinate as many appointments



and tests as possible in a single day, making the process more efficient for patients, which is especially important for those traveling long distances.

The Liver and Pancreas Disease Center also provides treatment for patients with chronic pancreatitis who choose to have a total pancreatectomy. Surgical removal of the pancreas results in a patient with diabetes that is difficult to control. Baylor is the only program in the Southwest to offer autotransplantation of pancreatic islet cells after total pancreatectomy, a procedure possible because of Baylor's FDA-approved islet cell lab. *(See related article on page 4).*

### Quick Facts

- Over 25 years ago, Baylor pioneered the first liver transplant program in the Southwest.
- One of three programs in the nation to perform more than 3,100 liver transplants.\*
- Baylor's expertise in the areas of hepatitis B and C is internationally renowned.

\*Volumes based on liver transplants at Baylor University Medical Center and Baylor All Saints Medical Center.

# Kidney and Pancreas Transplantation for Diabetes Mellitus

Over the last 10 years, the rate of pancreas transplants has increased significantly. Technical expertise and immunosuppression are much improved, and selection criteria for candidates are more refined.

Patients with Type 1 diabetes and end-stage renal disease and selected patients with Type 2 diabetes may benefit most from a combined kidney/pancreas transplant. In both cases, patients must have been insulin-dependent for at least five years.

Many patients with a diagnosis of diabetes have had a kidney transplant in the past, usually from a living donor kidney. Because of the impact of diabetes on renal function, a pancreas transplant is necessary to protect the new kidney. “In patients with diabetes, a kidney transplant alone does not have the functionality of a combined kidney/pancreas transplant. The pancreas provides a protective effect for the kidney, as well as helps with the patient’s diabetes,” said Edmund Sanchez, MD, a physician on the medical staff at Baylor University Medical Center at Dallas.

Studies now show a successful pancreas transplant improves nerve conduction velocity and slows the progression of vascular disease, which could lower the incidence of coronary artery disease, amputation and myocardial infarction—all conditions that plague the diabetic long term.

“Previously, a pancreas transplant was not considered a lifesaving transplant,” Dr. Sanchez said. Today, we know that, while not as immediate as a heart or liver transplant, three to five years down

the line a pancreas transplant can result in major improvement in a patient’s health.”

## Quick Facts

- With more than 2,500 kidney transplants performed, our kidney and kidney/pancreas program is one of the largest in Texas.\*
- According to the United Network for Organ Sharing (UNOS), survival rates for Baylor kidney recipients exceed the national and state averages.

\*Volumes based on kidney transplants at Baylor University Medical Center and Baylor All Saints Medical Center.



# Kidney

## Transplantation for Chronic Pancreatitis

Patients with chronic pancreatitis often experience intractable pain. These patients can be very difficult to treat when all therapeutic options have failed. Many of these patients are dependent upon narcotics for pain control.

Pancreatectomy—surgical removal of the pancreas—is an effective but radical step because it leaves a patient with brittle diabetes. However, because of Baylor’s islet cell laboratory and research capability, physicians on the medical staff can now offer treatment for patients with the unrelenting pain of chronic pancreatitis.

After surgical removal, the pancreas is taken to the lab where the islet cells are extracted from the diseased pancreas. These cells are then re-infused into the patient’s liver in what is known as an auto-transplant. Baylor is the only institution in the Southwest that has a cellular laboratory approved by the FDA to produce islet cells for therapy.

**“This is a very attractive alternative because we’re able to treat a patient population that has run out of options and has little hope for improvement.”**

**Marlon Levy, MD**

Left to right: Göran Klintmalm, MD, chairman and chief of Baylor Regional Transplant Institute and Marlon Levy, MD, medical director of the Pancreas and Islet Cell Laboratory and physician on the medical staff at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth.

“This is a very attractive alternative because we’re able to treat a patient population that has run out of options and has little hope for improvement,” said Marlon Levy, MD, medical director of the Pancreas and Islet Cell Laboratory and physician on the medical staff at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth. “About 85 percent of patients report substantial pain relief.”

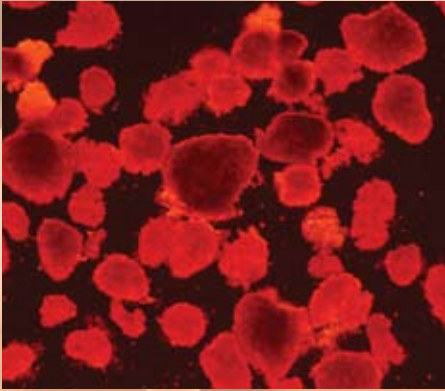
By infusing the islet cells back into the patient, the risk of brittle diabetes is greatly reduced. The vast majority of patients have no diabetes or very little at all. Approximately two thirds of patients who undergo pancreatectomy followed by islet cell infusion will require very little insulin, while about one third will require insulin to maintain blood sugar. “Because we’re giving patients back their own tissues, there is no need for immunosuppression,” Dr. Levy said. “Also, because this is not an experimental procedure, there is third-party reimbursement including Medicare and Medicaid. “We’re very excited to be able to offer this option to patients.”



### Quick Facts

- First facility in the Southwest to be approved by the American Society of Transplant Surgeons as a surgical training program in pancreas transplantation.
- Pancreas graft survival rates at Baylor University Medical Center exceeded the national average for one year and three year survival.

## Islet Cell Transplantation Report



Baylor continues to be very strongly committed to its research program in islet cell transplantation. This experimental protocol is aimed at Type 1 (juvenile) diabetes, specifically patients with long-term disease who have difficulty controlling their blood sugar, either manifested by hypoglycemic unawareness (no symptoms) or no hypoglycemia but high hemoglobin A1c despite intensive medical therapy.

“We have significantly enhanced our scientific team with the recruitment of Professor Shinichi Matsumoto from Japan, who has brought many talented researchers with him,” said Marlon Levy, MD, surgical director for kidney and liver transplantation on the medical staff at Baylor All Saints Medical Center at Fort Worth. “Through this, we have ramped up our scientific production efforts and are getting some very exciting results in the lab.”

Baylor now offers islet cell transplants at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth. Baylor Fort Worth recently received approval from the United Network for Organ Sharing

and the Food and Drug Administration to perform islet cell transplants, and the first transplant was performed in late September. Baylor has the only islet cell transplant program for diabetes in the Southwest.

“We have a strong, vibrant program that’s growing in terms of breadth and depth of the science, as well as in geography,” Dr. Levy said.

The team also has been successful in obtaining grants from the Juvenile Diabetes Research Foundation and was invited to submit an application for a recent National Institutes of Health research trial for islet cell transplant.

The Baylor team also recently launched a second protocol that looks at islet cell transplant in patients who have previously received a kidney transplant and have stable kidney function.

### Quick Facts

- North Texas’ first islet cell transplant; Texas’ first successful intestinal transplant.
- Baylor’s islet cell laboratory, one of only a few in the country and the only one in the southwest, processed cells for transplantation.

# Islet

## Left Ventricular Assist Device

For patients with advanced heart failure, mechanical left ventricular assist support accomplished with the use of a left ventricular assist device (LVAD) has substantially improved outcomes and quality of life for patients who require mechanical support for the failing heart. There are two modes for left ventricular assist support: either as a bridge to transplantation or as destination therapy for those who are not candidates for transplant.

Baylor University Medical Center at Dallas was the nation's first hospital to receive the Gold Seal of Approval™ from The Joint Commission for the Ventricular Assist Device (VAD) program. The heart transplant program also has the highest survival rates in Texas, according to the United Network for Organ Sharing.

Currently, the Baylor University Medical Center at Dallas Heart and Lung Transplant Program, a collaboration with UT Southwestern Medical Center, is actively implanting these systems, providing substantial benefit to those patients that are most ill with heart failure. The earlier applications of LVADs used a vented electrical system that involved the intra-abdominal insertion of a fairly large electrically activated pump that assisted the left ventricle in generating cardiac performance. The LVAD program at Baylor Dallas is under

the direction of Dan M. Meyer, MD, surgical director of the Heart and Lung Transplant Program and director of the Left Ventricular Assist Device Program at Baylor Dallas.

The LVAD relies on a totally different mechanism for propulsion i.e. axial flow device. This has resulted in the development of much smaller devices. The most recently FDA-approved LVAD weighs less than two pounds, is no larger than the thickness of three finger breadths, and is expected to last three to five years.

Though the smaller system is only suitable currently as a bridge to transplant, it is hoped that it may become available and appropriate as a definitive therapy for patients with advanced heart failure. Thus the opportunity exists for more patients to receive mechanical support when no other treatment options appear to be suitable.

“Our yearly volumes are steadily increasing both for heart transplantation and LVADs, and the support staff that facilitates implantation of the LVAD for both physicians and patients is quite well trained and robust,” said Clyde Yancy, MD, a cardiologist on the medical staff of Baylor Dallas, medical director of the Baylor Heart and Vascular Institute and chief of Cardiothoracic Transplantation at Baylor Dallas.

“When combined with our advanced disease management program that focuses on end-stage heart failure, our highly regarded heart transplant program and our growing LVAD program, I believe patients who present to Baylor Dallas with advanced heart disease have access to the entire gamut of currently available treatment options,” Dr. Yancy said.

### Quick Facts

- The VAD program at Baylor Dallas was the nation's first to receive the Gold Seal of Approval from the Joint Commission.
- The Baylor/UTSW heart transplant program held the highest one year patient survival statistics in the state of Texas and exceeded the national average.



# Pulmonary Hypertension Clinic

In the last five to eight years, the number of patients requiring a lung transplant for the treatment of pulmonary hypertension has decreased significantly due to improvements in vasodilator therapy.

The pulmonary hypertension clinic at Baylor University Medical Center at Dallas helps patients control symptoms while improving their quality of life. A multidisciplinary team of physicians on the medical staff, including specialists in cardiology, pulmonary disease and rheumatology, evaluate the patient to determine the cause of the pulmonary hypertension, as well as other variables that may affect breathing.

“The advantage of having a patient seen in a PH clinic is our familiarity with the drugs, with the disease process itself, and the various causes and contributing factors,” said Kenneth Ausloos, MD, medical director of lung transplantation and pulmonary hypertension program on the medical staff of Baylor Dallas. “We strive to communicate effectively with referring physicians so they know what is happening with their patients.”

Once evaluated in the PH clinic, patients are placed on some form of vasodilator therapy and then assessed as to how they respond.

“A much smaller percentage of patients go on to transplant because medical therapy has gotten so much better,” Dr. Ausloos said. “We only consider a lung transplant if they fail to respond to the medications. “It does vary according to when we see a patient. Generally, the earlier we can see them in the disease process, the better they will do.”

For patients with pulmonary hypertension, Baylor Dallas offers ancillary care, including dietary, physical therapy and

social work. Because the medications used to treat PH are quite expensive, social workers can put patients in touch with organizations that often can help defer some of the costs. In addition, coordinators are available 24/7 to help patients who may be having difficulties with their breathing or medications.

## Quick Facts

- The Baylor Dallas lung transplant program has a one year lung graft survival and patient survival that exceeded the national average. In addition, the three year patient survival exceeded the national average.
- Dallas' first single and double lung transplant.



# Lung

## Baylor Regional Transplant Institute

The Baylor Regional Transplant Institute is the integration of transplant services at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center. Together, Baylor Dallas and Baylor All Saints are one of the largest multi-specialty transplant centers in the country.

**For More Information Please Call 1-800-774-2487.**

With one phone call, a physician can request additional information, an appointment for a patient, or a consult. Call 1-800-774-2487 and a Baylor Regional Transplant Institute representative will assist you.



**Baylor University Medical Center at Dallas  
Baylor All Saints Medical Center at Fort Worth**

## Hepatology Round-up

April 25, 2009 • 7:30 a.m. – 3:00 p.m. • Dallas Aboretum • CME Credit Available

To register or for more information call (888)764-0400.



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