

# Transplant Update

A Report from Baylor Annette C. and Harold C. Simmons Transplant Institute Volume 5 • Number 1



## Practice Guidelines Set for Long Term Management of Liver Transplant Patients

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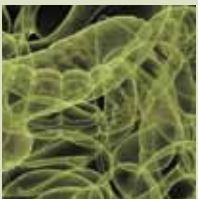
In the last 20 years, survival rates for liver transplant patients have dramatically improved. Now, recently published practice guidelines were released to improve patient outcomes.



## Baylor Fort Worth Kidney Transplant Program Continues to Expand

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## Indications for Pancreas Transplant Alone

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The options for pancreas transplantation include a simultaneous pancreas-kidney (SPK) transplant and a solitary pancreas transplant. A solitary pancreas transplant can be performed after a kidney transplant (PAK—pancreas after kidney) or as a pancreas transplant alone (PTA).



## Baylor Dallas Performs 50th Auto Islet Cell Transplant

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## Baylor Offers Expertise in Diagnosis and Treatment of Advanced Lung Disease

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The Advanced Lung Disease Program provides sophisticated diagnostic testing and therapies for patients with suppurative lung diseases, such as cystic fibrosis and bronchiectasis, interstitial lung diseases, pulmonary hypertension, and obstructive lung diseases such as asthma, chronic bronchitis, and emphysema.



# Practice Guidelines Set for Long Term Management of Liver Transplant Patients

In the last 20 years, survival rates for liver transplant patients have dramatically improved. One-year survival after liver transplantation in 1991 was 70 to 75 percent; it is now closer to 85 to 90 percent. The three-year survival rates have improved from 60 to 65 percent to almost 80 percent. A large part of these excellent results are driven by improvements in medications and an increased awareness among physicians of anticipating and preventing complications.

To improve outcomes long-term as transplant patients live longer, the American Association for the Study of Liver Diseases (AASLD) and the American Society of Transplantation have established practice guidelines, which were recently published in *Liver Transplantation*.

“The biggest issues most patients face long term are cardiovascular and metabolic diseases, de novo cancers, kidney problems and possible recurrence of the underlying liver disease,” said Sumeet Asrani, MD, a hepatologist on the medical staff at Baylor University Medical Center at Dallas who served on the AASLD Practice Guidelines Committee. “A panel of experts was assembled who conducted an extensive systematic review of the literature and came up with numerous guidelines on how to help patients.”

While the complete set of practice guidelines is quite extensive, the table above offers a general overview.

In addition, patients who received a transplant for certain types of liver disease need surveillance for specific kinds of cancer. For example, a patient who is transplanted for primary sclerosing cholangitis may need to be screened annually for colon cancer if they have inflammatory bowel disease. Patients transplanted for liver malignancies need

| Common Risk Factor                    | Recommendation   |
|---------------------------------------|--|
| <b>Cancer Surveillance</b>            |  |
| Skin cancer                           | Emphasis on use of sunscreen and protective clothing; annual visit with dermatologist for skin check                   |
| Lung, head and neck cancers           | Smoking cessation counseling for patients who smoke  |
| <b>Metabolic Disease</b>              |  |
| Osteoporosis                          | All patients should get 1,000 to 1,200 mg of calcium daily; vitamin D supplementation between 400 and 1,000 IU per day |
| Obesity                               | Dietary counseling   |
| Routine vaccines                      | Patients should receive annual influenza vaccine, pneumococcal vaccination every 5 years; avoid live virus vaccines    |
| <b>Cardiovascular Risk Management</b> |  |
| Hypertension                          | Goal: blood pressure less than 130/80  |
| Diabetes, metabolic syndrome          | Goal: Hba1c less than 7  |
| Hyperlipidemia                        | Goal: LDL less than 100  |
| Kidney function                       | Regular monitoring with changes in immunosuppression as needed and aggressive treatment of risk factors                |

surveillance for recurrence at pre-specified intervals.

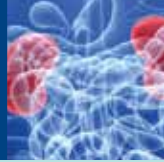
Women especially need to plan a pregnancy in conjunction with their transplant team because of the risk that certain medications could affect the pregnancy.

“The care of the liver transplant patient doesn’t end immediately after the procedure,” Dr. Asrani said. “A patient’s transplant surgeon, transplant hepatologist and primary care physician work together for the rest of the patient’s life to manage all these issues and help a patient maintain his or her health.”

### 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 3,620 liver transplants.\*
- Baylor’s expertise in the areas of hepatitis B and C is internationally renowned.

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



## A Decade of Extraordinary Work Baylor Fort Worth Kidney Transplant Program Continues to Expand

In 2002, Baylor All Saints Medical Center at Fort Worth performed its first kidney transplant with a surgical team led by Marlon Levy, MD, surgical director of transplantation at Baylor Fort Worth. Since then, the Baylor Fort Worth transplant team has performed 837 kidney transplants. According to the Scientific Registry of Transplant Recipients, Baylor Fort Worth is above the national average for both one- and three-year patient survival rates.

“We have very senior people involved in all decisions made with respect to patient care, donor evaluation and selection and recipient selection,” Dr. Levy said. “The surgeons on our medical staff have tremendous experience. The breadth and depth of the transplant surgery team at Baylor is simply unparalleled in North Texas.”

Dr. Levy said Baylor’s heavy research focus is also partly responsible for excellent patient outcomes. Baylor continually takes part in clinical trials to develop new immunosuppressant medications, giving patients access to investigational drugs in the controlled setting of a clinical trial years ahead of when they are generally available.

The vast majority of living kidney donations are performed laparoscopically, usually allowing donors to recover faster, with most leaving the hospital in two to four days and returning to work in two weeks. In conjunction with Baylor University Medical Center at Dallas, Baylor Fort Worth will begin performing robotic donor nephrectomies.

The robotic surgical system gives transplant surgeons the ability to navigate complicated anatomy with 360-degree precision. This three-dimensional capability allows for better handling of delicate tissue than a normal laparoscope. A sophisticated camera offers

improved visualization. The increased surgical precision also decreases blood loss.

“This new technology will give our donors a better option for a fast recovery, which should make the decision to donate much easier,” Dr. Levy said.

For many patients outside the Dallas/Fort Worth area, it’s not feasible financially or operationally for them to routinely travel to Baylor Fort Worth for their care. In 2012, a weekly Kidney Transplant Outreach Clinic was established in Lubbock to offer both pre-transplant evaluations and post-transplant care to patients in the area.

Nephrologists and transplant surgeons on the medical staff at Baylor Fort Worth, as well as transplant nurse coordinators and social workers, regularly travel to Lubbock to meet with patients.

“In 2002, I remarked that one of the most exciting results for kidney transplant recipients is that their quality of life improves,” Dr. Levy said. “Today, it’s gratifying to see the growth in our program and know that for ten years the medical team at Baylor Fort Worth has been giving people a better life after transplantation.” ■

**Surgeons extract a living donor kidney using laparoscopic techniques.**



## Indications for Pancreas Transplant Alone

The options for pancreas transplantation include a simultaneous pancreas-kidney (SPK) transplant and a solitary pancreas transplant. A solitary pancreas transplant can be performed after a kidney transplant (PAK—pancreas after kidney) or as a pancreas transplant alone (PTA).

Pancreas transplantation is most commonly indicated for patients with type 1 diabetes who are unable to control their blood sugars with exogenous insulin therapy. These patients experience frequent episodes of hypoglycemia or ketoacidosis (severe acute complications from elevated blood sugars). In the longer term, patients may experience the sequelae of diabetic complications such as retinopathy, nephropathy, gastroparesis or peripheral neuropathy.

Other indications for a solitary pancreas transplant include loss of endocrine and exocrine function of the native pancreas due to a previous resection, whether from a traumatic episode or elective operation.

In most cases, pancreas transplants are done in combination with a kidney transplant (SPK). Of all pancreas transplants performed in this country, about 5 percent are pancreas transplant alone.

“The ideal candidate for a pancreas transplant alone is a diabetic patient who has yet to develop nephropathy or renal failure,” said Richard Ruiz, MD, a transplant surgeon on the medical staff at Baylor University Medical Center at Dallas. “Because most of our immunosuppressive medications are nephrotoxic, candidates for a pancreas transplant alone must have a creatinine clearance greater than 60.”

Patient survival rates for pancreas transplant alone recipients have been noted to be slightly higher than for other types of pancreas transplants. This may be due in part to the

fact that pancreas transplant alone recipients are usually younger. In addition, one-year graft survival in pancreas transplant alone is comparable to one-year graft survival in those receiving dual organs.

“While it is uncommon for a brittle, type 1 diabetic patient without chronic kidney disease or renal failure to present for transplantation,” remarked Dr. Ruiz, “it may prove beneficial for those patients who have not yet reached renal failure since a successful pancreas transplant can reverse or abate the pathologic complications of diabetes.” ■

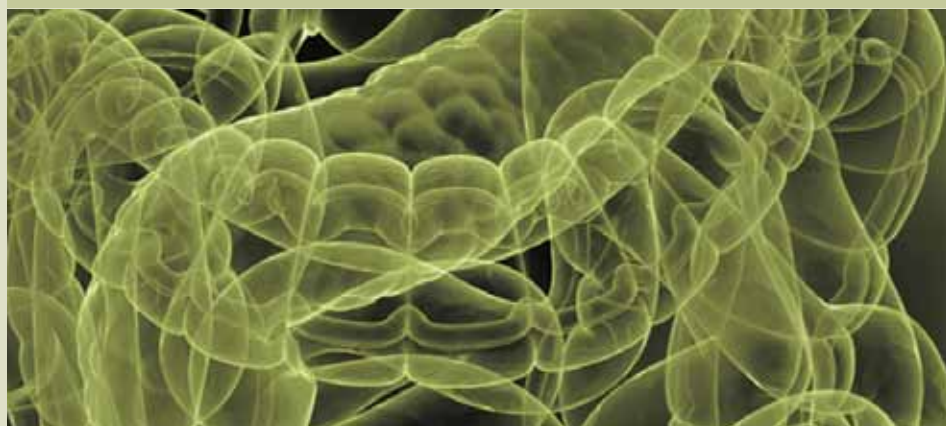
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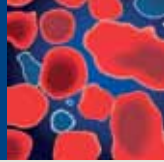
Richard Ruiz, MD

### 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 patient survival rates at Baylor University Medical Center and Baylor All Saints Medical Center exceeded the national average for one-year survival.
- The program\* has performed 226 pancreas transplants.

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





## Baylor Dallas Performs 50th Auto Islet Cell Transplant

Baylor University Medical Center at Dallas recently performed its 50th auto islet cell transplant, an innovative therapy for patients with chronic pancreatitis. Baylor Dallas is the preeminent center in the southwestern United States and one of the few medical centers in the world to offer this procedure.

The Pancreatic Islet Cell Transplant Program, a joint project of Baylor Dallas, Baylor All Saints Medical Center at Fort Worth and Baylor Research Institute, began in 2006 and is currently performing approximately 15 auto islet cell transplants each year.

“We think that our ability to both develop and grow this program is because of the strong scientific and technical team we’ve assembled in the pancreatic islet cell processing laboratory,” said Marlon Levy, MD, surgical director of transplantation at Baylor Fort Worth.

Auto islet cell transplant is designed for patients with refractory chronic pancreatitis who have preserved endogenous insulin production and who are in chronic pain. These patients are often dependent on narcotics and experience a markedly diminished quality of life.

After total pancreatectomy, the pancreas is taken to the lab where the patient’s own islet cells are extracted from the diseased pancreas. These cells are then infused into the patient’s liver through the portal vein, where they take hold and ideally begin to produce insulin again on their own. This reduces the risk of brittle diabetes and provides substantial pain relief. Patients may need insulin to regulate blood sugar, but in some cases, the patients remain insulin free.

“This is a very attractive option for patients who have run out of options and have little hope for improvement,” Dr. Levy said. “About 85 percent of patients report substantial pain relief. And because we’re giving patients back their own tissues, there is no need for immunosuppression.”

Baylor’s islet cell transplant team, funded by the National Institutes for Health and Juvenile Diabetes Research Foundation, has multiple active research programs, as well as many research programs in development. ■

**Marlon Levy, MD, (left) and surgical team performing a total pancreatectomy.**





## Baylor Dallas Expands Heart Transplant Program

Baylor University Medical Center at Dallas has significantly expanded its Cardiac Transplant Program, one of the largest programs in Texas in terms of volume. The center is also enhancing its acute mechanical circulatory support program for patients with heart or lung failure by introducing the use of extracorporeal membrane oxygenation.

In 2012, cardiothoracic surgeons on the medical staff at Baylor Dallas performed a record 43 heart transplants, 25 of which were performed in the last six weeks of the year with the arrival of a new cardiac transplant team, which took over heart transplantation in November. Currently, the median wait time for a heart transplant at Baylor Dallas is 18 days.

The highly trained team of cardiothoracic surgeons has almost 40 years of combined experience. Their areas of specialization include adult cardiac surgery, reoperations, bypass surgery and valve surgery, mechanical circulatory support, cardiopulmonary transplantation, aorta and root, adult congenital and general thoracic surgery.

“Heart transplantation is literally life-saving for some patients with end-stage heart failure. But the shortage of donor organs makes it imperative that we offer patients access to the innovative heart-assist devices that are now available,” said Gonzo Gonzalez-Stawinski, MD, chief of heart transplantation and mechanical circulatory support.

For patients with severe heart failure who are too unstable for a major intervention, such as open-heart surgery, Baylor Dallas offers extracorporeal membrane oxygenation (ECMO). ECMO is often needed on an emergency basis. Baylor Dallas has established a rapid response team with CareFlite® where patients throughout North Texas can be transported with ECMO to the tertiary medical center.

“The expansion of our transplant program, along with the addition of ECMO, has moved Baylor into a position to provide more advanced care for heart failure. Management of these patients can be quite complex, and Baylor has the experience and expertise to care for them. Our goal for all our patients is improved outcomes and a better quality of life.”

Gonzo Gonzalez-Stawinski, MD

Like temporary left ventricular assist devices such as the Impella® or TandemHeart®, ECMO is implanted percutaneously, but unlike these temporary VADs, which support only the left ventricle, ECMO can support both ventricles, as well as the lungs. ECMO may be used to stabilize a patient, allowing physicians to determine if he or she is a candidate for a longer-term option, such as an implantable ventricular assist device, transplant or conventional open-heart surgery.

“The expansion of our transplant program, along with the addition of ECMO, has moved Baylor into a position to provide more advanced care for heart failure,” said Dr. Gonzalez-Stawinski. “Management of these patients can be quite complex, and Baylor has the experience and expertise to care for them. Our goal for all our patients is improved outcomes and a better quality of life.” ■

### Quick Facts

- Currently, the median wait time for a heart transplant at Baylor Dallas is 18 days.
- The LVAD program at Baylor Dallas was the nation’s first to receive the Gold Seal of Approval from the Joint Commission.
- The Baylor heart transplant program ranks above the national average for one-year and three-year patient survival statistics.
- In 2012, Baylor Dallas performed 43 heart transplants.





## Baylor Offers Expertise in Diagnosis and Treatment of Advanced Lung Disease

The Advanced Lung Disease Program provides sophisticated diagnostic testing and therapies for patients with suppurative lung diseases, such as cystic fibrosis and bronchiectasis, interstitial lung diseases, pulmonary hypertension, and obstructive lung diseases such as asthma, chronic bronchitis, and emphysema.

The advanced lung disease program consists of physicians on the medical staff who are recognized for their expertise in a specific realm of pulmonary medicine, nurse practitioners, nurse coordinators, respiratory therapists, dietitians, and social workers who work with a team concept to help coordinate care for these patients. Genetic counselors are available should the need arise.

Baylor also participates in various studies to test newer therapies so patients can be on the forefront of potential successful approaches to their disease.

Many patients with lung disease require lengthy office visits as a result of the need to explain the complexity of their medical regimens, coordinate insurance approval for their medications, and discuss certain safety issues and the need to follow certain dietary restrictions. The Advanced Lung Disease program offers these diagnostic and therapeutic options all under one umbrella, which is more efficient for the patient and referring physician.

“This team approach has been quite well received by patients and even more appreciated by referring physicians who, because of time constraints, have not had the ability to provide the complexity of the diagnostic and therapeutic options and education that these patients require,” said Randall L. Rosenblatt, MD, MACP, FACC, medical director of lung transplantation and chief of pulmonary and critical care at Baylor Dallas.

The program takes pride in its protocols for proper diagnostic testing. These protocols have resulted in the finding of tracheal stenosis or vocal cord dysfunction in patients previously thought to have asthma, hypersensitivity pneumonitis in patients thought to have pulmonary fibrosis, connective tissue diseases in patients found to have non-specific interstitial pneumonia (NSIP), and diaphragmatic paralysis secondary to the use of the biologics used to treat rheumatoid arthritis in a patient referred for dyspnea.

Diagnostic tools available include, but are not limited to, inhalation challenges for airway diseases, exercise testing to determine the etiology of dyspnea, standard body plethysmography, diffusion testing and nasolaryngoscopy. The full range of radiologic testing is available with individuals who are interested in chest radiology.

Pulmonary rehabilitation, which has been shown to improve quality of life and decrease hospitalizations in patients with COPD, is an essential component of this program.

The Advanced Lung Disease program also offers patients access to clinical trials to evaluate potential therapeutic agents.

“Baylor offers a comprehensive program of both standard and experimental treatments,” Dr. Rosenblatt said. ■

### Quick Facts

- **Dallas' first single and double lung transplant.**
- **Dedicated nurses on call 24 hours a day, seven days a week for the management of an advanced lung disease patient.**
- **In 2011, Baylor/UTSW performed 29 lung transplants.**



“Baylor offers a comprehensive program of both standard and experimental treatments.”

Randall L. Rosenblatt, MD, MACP, FACC

## Transfer Information

Baylor Annette C. and Harold C. Simmons Transplant Institute is the integration of transplant services at Baylor University Medical Center at Dallas and Baylor All Saints Medical Center at Fort Worth. Together, Baylor Dallas and Baylor Fort Worth are one of the largest multispecialty 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 Annette C. and Harold C. Simmons Transplant Institute representative will assist you.



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