A New Era in LIVER
EXPANDED TRANSPLANT OPTIONS AND OTHER ADVANCED TREATMENTS ARE NOW AVAILABLE FOR LIVER DISEASE.

BY MATT WINDSOR
JOHN DAVIDSON HAS BECOME AN OUTSPOKEN ADVOCATE FOR ORGAN DONATION AND HE REGULARLY SPEAKS WITH PATIENTS ON THE TRANSPLANT LIST.

LIVER MATCH FOUND

ANY MEDICAL TEXTBOOK CAN TELL YOU how important the liver is. John Davidson of Terrell, Texas, offers living proof.

Twenty years ago, Davidson was diagnosed with primary biliary cirrhosis, a rare disorder that slowly scars and destroys the liver. The damage interfered with his liver’s ability to convert food into energy, fight infections and perform hundreds of other vital functions – and it showed. “Walking up stairs became difficult,” he says. “I had less and less energy.”

In 2006, Davidson’s name was added to the national transplant registry, but it would be three more years before his turn came. In 2009, Davidson received a new liver at the Baylor Annette C. and Harold C. Simmons Transplant Institute, and that has made a world of difference. “I was pretty active before I got sick, and now I can continue that,” he says. “I went skiing last winter, for the first time in years. I have much more appreciation for the smaller things in life.”

Davidson has become an outspoken advocate for organ donation and he regularly speaks with patients on the transplant list. “There’s a lot of anxiety because of the unknown,” he says. “I hope they find it helpful to see somebody who actually had a transplant and is living a normal life.”

Living Hope

The crowded transplant list is ranked by the severity of a patient’s condition. But a new program at Baylor Dallas could offer some patients the chance for a new liver almost immediately.

“There’s always a huge gap between the number of patients who need a liver transplant and the number of organs available,” says Giuliano Testa, M.D., FACS, M.B.A., surgical director of Living Donor Liver Transplantation and physician on the medical staff at Baylor University Medical Center at Dallas. “Patients added to the transplant registry are very sick. Since critically ill patients receive organs first, it’s not uncommon for a patient who is sick – but not in dire need – to wait years for a cadaveric liver. For them, the option of receiving a partial liver from a living donor is very real.”

Living donor transplants, which are only offered at a few medical centers in the United States, are a great option for many patients, Dr. Testa emphasizes.

They allow volunteers to donate part of their livers to help a friend or family member who needs a transplant. Any patient on the transplant list is eligible for the living donor program, especially patients with complications from liver disease such as ascites and encephalopathy, and those diagnosed with liver cancer.

Donors must have a blood type that is compatible with the recipient, be in good health, and be between 18 and 60 years of age, Dr. Testa says. The other essential component is that the donor “must have an emotional relationship with the recipient – that is, be a friend or family member.” Donors must initiate the process by contacting the transplant center at Baylor University Medical Center at Dallas.

The procedure is not without some risk, however, as
the donor must undergo a major abdominal surgery. In all aspects of donor care, from evaluation through surgery and the hospital stay, the donor is cared for by a select team of experienced transplant staff to ensure safety and advanced care.

The average hospital stay for donors is four days, and they can expect to spend a month off work. “It takes about three months for liver function to return to normal,” Dr. Testa says, “but in both the donor and the recipient, it only takes about two weeks for the liver to grow back to normal size.”

The Dangers of Fatty Liver

“Although many people associate liver disease with alcohol, the top two causes of chronic liver disease are actually nonalcoholic fatty liver disease (NAFLD) and hepatitis C,” says Carmen Landaverde, M.D., transplant hepatologist and physician on the medical staff at Baylor University Medical Center at Dallas.

When fatty molecules accumulate in liver cells, they can cause permanent damage that prevents the liver from functioning properly. Instead of alcohol, “the most common association with fatty liver disease now is metabolic syndrome, which includes abdominal obesity, low HDL cholesterol levels and elevated levels of triglycerides and fasting blood glucose,” says Dr. Landaverde. “Those problems create a predisposition for fat to be deposited in the liver.”

There is a very strong link between obesity and metabolic syndrome, and the sharp rise in NAFLD “is mirroring the obesity epidemic in the United States,” says Dr. Landaverde.

Gradual, monitored weight loss is the most effective treatment for NAFLD, she says. “We initially advise patients to lose 10 percent of their weight in six to eight months.” If after three months patients have not made progress toward that goal, they are referred to a dietitian for further counseling.

“We’re learning that fatty liver disease is not as benign as was once thought,” says Dr. Landaverde. “There’s a new urgency. In the near future, it will be the number one indication for liver transplantation. We’re now using a multidisciplinary approach to help our patients lose weight for better outcomes.”

Help for Hepatitis C

Doctors now have a more direct method to attack hepatitis C, which remains the leading cause of liver transplantation in the United States.

In 2011, two new drugs became available, and a host
of other medicines are soon to follow, says Gary Davis, M.D., director of
general and transplant hepatology and physician on the medical staff at Baylor
University Medical Center at Dallas. Currently, nine different experimental
drugs are being studied at Baylor Dallas, Dr. Davis notes, and researchers
are also working on a vaccine.

The hepatitis C virus (HCV) causes inflammation and swelling in the liver,
and if it remains untreated it can bring scarring and a dramatic rise in a patient’s
risk of liver cancer. But the two new drugs, when combined with current medicines,
could completely cure 70 percent or more of those patients, according to the results
of recent studies.

At the moment, the new medicines will not work for all patients, but newer
compounds being studied could overcome many of these limitations, Dr. Davis says.
“If we can clear the virus, we can reduce a patient’s chance of liver failure to almost
zero and their chance of getting liver cancer by almost two-thirds,” says Dr. Davis.

Surgical Strikes
Against Liver Cancer
In addition to the complications of the cancer itself, having liver cancer
can remove a patient for consideration for a transplant, which is the only
long-term solution for end-stage liver disease. That’s why Baylor’s Liver
and Pancreas Disease Center takes a team approach to aggressively manage
each patient’s condition, says Robert
Goldstein, M.D., medical director of the Liver and Pancreas Disease Center,
assistant director of the Baylor Annette C. and Harold C. Simmons Transplant Institute, and physician on the medical staff at Baylor University Medical Center at Dallas.

“Whether a patient has hepatitis C, fatty liver disease or one of the many
other types of liver conditions, once their liver becomes cirrhotic they have
a high risk of cancer and need to be closely monitored,” says Dr. Goldstein.
The gold standard for treating liver
cancer is to remove it surgically, but many patients with liver disease cannot tolerate an operation, he notes.

There are several innovative treatment options now available for liver cancer at Baylor Dallas, says Dr. Goldstein. The size of a tumor and its placement in the liver plays a major role in deciding which choice is best, he explains.

Radiofrequency ablation (RFA) uses focused energy to destroy tumor tissue while leaving surrounding tissue unharmed. Baylor University Medical Center is one of the first institutions to use the NanoKnife™, a specialized type of RF ablation therapy that can be used on patients whose tumors are lodged up against blood vessels, who were previously not candidates for RFA therapy.

Another common procedure is chemoembolization, which delivers chemotherapy drugs directly to a tumor through the hepatic artery. Baylor University Medical Center offers microscopic beads coated with the drugs or radiation, which kill tumors with fewer side effects than traditional embolization. The beads kill the tumor by releasing chemotherapy or radiation directly into the tumor as well as cutting off the blood supply, effectively using two techniques with one treatment.

With CyberKnife™ treatment, physicians use robotically directed, high-dose beams of radiation to destroy cancer cells. The equivalent of eight weeks of traditional radiation is given over the course of three to five days.

Baylor physicians were one of the first in the United States to perform irreversible electroporation (IRE) using NanoKnife. This minimally invasive treatment also kills cancer cells by creating tiny openings in their outer membranes using high voltage electric current. IRE is another option for patients who have cancerous tumors that may otherwise be damaged using other techniques.

“Our goal with these therapies is to preserve as much of the liver as we can while treating the patient’s cancer,” says Dr. Goldstein. “That’s why it is so important for someone with liver disease to maintain regular follow-up appointments. The sooner we can catch a problem, the more treatment options we can explore.”

POINTS OF CONTACT

For more information about the liver transplant process at Baylor, visit BaylorHealth.com/Transplant or call 1-800-774-2487.

To see more of John Davidson’s story, and watch videos of other Baylor transplant patients, visit BaylorHealth.com/Transplant and search for “Real Patients. Real Stories.”