

A photograph of two surgeons in an operating room, illuminated by a large overhead surgical light. The surgeons are wearing blue scrubs, masks, and hairnets, and are focused on a surgical procedure. The background shows various medical equipment and the sterile environment of an operating room.

Advanced treatments for liver transplant

East Jefferson
General Hospital
LCMC Health





The liver affects every aspect of life

With more than 400 identified functions, the liver's primary duties include conversion of food into nutrients, breakdown of fats and disposal of waste products. The liver is the body's storehouse for carbohydrates, fats, sugars, iron and vitamins; the production center for proteins, including those for blood clotting; and the detoxification site for bacteria, alcohol and other harmful substances.

Cirrhosis, biliary atresia, hepatitis, metabolic diseases, cancers and tumors may all interfere with or prevent the liver from performing one or more of its vital functions. At Tulane Transplant Institute at East Jefferson General Hospital, our expertise allows us to treat and manage liver disease with the most appropriate therapy. Treatment plans are specifically developed for each patient. We have treated thousands of patients with liver disease. We know what it takes to make a patient's transplant a success.

We are one of the most comprehensive disease management facilities in the Gulf South, offering:

- Specialized medical therapies
- State-of-the-art surgical techniques
- Lifelong education and support program
- A multi-disciplinary clinic
- Dedicated inpatient transplant unit
- Access to clinical trials
- 24/7 telephone triage service
- An experienced transplant team performing hundreds of organ transplants annually

Unfortunately, not everyone eligible for a transplant will receive one. The number of donor organs available limits the number of liver transplants performed in the United States. Significantly fewer organs are donated than number of people needing liver transplants. In any given year, 4,500 livers are procured through donation, but more than 19,000 patients wait on the list. Living donor liver transplants do help make up the shortfall, but this procedure is only possible in a small number of patients.

Determining if patients are suitable for transplantation is a complicated process. This process attempts to match organs with recipients. It is based on need, medical urgency, potential life span after transplantation, likelihood for survival and active participation in his/her own health. A patient with liver disease considering a transplant by Tulane Transplant Institute should become familiar with the stages of care related: evaluation, management, surgery and post-transplant care.

Patient evaluation

The transplant evaluation (or the “work-up” as it’s commonly called) consists of a series of tests to determine overall health status and liver function. Done over a period of one or two days at Tulane Transplant Institute at East Jefferson General Hospital, the work-up can usually be done on an outpatient basis. Where possible and more convenient, tests are sometimes scheduled at the patient’s regional hospital or lab.

The transplant team will determine which tests are needed, and the transplant nurse coordinator will discuss each test in detail before it is scheduled. The transplant evaluation is designed to:

- Determine whether a transplant is the best option
- Detect problems which might complicate the transplant
- Determine whether other conditions make transplantation impossible

At Tulane Transplant Institute, the evaluation can be broken into three phases. The first phase determines through physical examination and testing whether a transplant is truly needed. Blood, urine and stool samples are taken, and if necessary, the liver, heart, blood vessels, lungs, bones, kidneys, esophagus, stomach and colon are evaluated. Once the team decides that the patient might need a transplant, the second phase of testing begins. For those patients who obviously need a transplant, the first and second phases are simultaneous.

The second phase includes testing for varicose veins of the esophagus, liver tumors, blood clots in the major blood vessels, cancer, hidden infections, heart disease, lung disease, kidney disease and neurologic or psychiatric problems. Apart from the liver disease, if serious problems are identified elsewhere in the body, the patient may not be considered as a transplant candidate. If a transplant is not possible, the patient will be given other treatment options that can include medical management, clinical trials offering the newest therapies, or liver surgery.

At some point during the evaluation process, the patient will have the opportunity to meet with the key members of the transplantation team, including the transplant surgeon, hepatologist, nurse coordinator, social worker and financial coordinator.

The third phase is reserved for patients who require special testing such as CT scans, MRI, angiography, cardiac catheterization, nuclear medicine scans or tissue biopsy. This phase extends also to patients who need to see other consultants, such as heart, kidney, diabetes, infectious disease or blood specialists. Third-phase testing is usually scheduled several weeks after completing of the second phase, which gives the treatment team time to review test results and determine if additional tests or consultations are needed.

One to two weeks after the final tests are completed, the transplant selection committee reviews the patient’s case.

Transplant selection process

Based on test results and evaluations, the transplant selection committee determines appropriate candidates for transplantation. The committee may make any of the following recommendations:

- 1) A transplant is not required, as there are other treatment modalities available
- 2) A transplant cannot be performed because of co-existing problems
- 3) More information is needed before a decision is reached
- 4) The patient is close to needing a transplant, but does not yet qualify to be placed on the waiting list
- 5) A transplant is needed, and the patient is placed on the transplant waiting list

The transplant waiting list is a national list of all patients awaiting any type of organ transplant. The list is maintained and updated by the United Network for Organ Sharing (UNOS). Since patients can only be added to the UNOS list by the transplant center, we will notify patients of their addition to the UNOS list, which confirms their status on it.



Case management while on the waiting list

During a patient's wait for a donated liver, Tulane Transplant Institute will continue to manage the case. However, a patient's day-to-day progress and health is followed by the primary referring physician. This physician confers with the Center's team as necessary. In addition, patients are seen at our hospital for periodic check-ups, about every three to six months.

A patient should keep our Center aware of his/her medical condition during the waiting period. If a patient becomes ill or is hospitalized for any reason, the Center should be notified, as this can change a patient's status on the list. We also advise patients not to take any medications (over-the-counter or prescribed) without checking with us first.

It is imperative that Tulane Transplant Institute be able to get in touch at all times with patients on the list. At the time of placement on the list, patients verify that we have a complete and accurate list of phone numbers, including cell phones. Thereafter, it is the patient's responsibility to notify the Center of any changes in contact information, not only for phone number changes, but also for contact information when taking vacations. When an appropriate organ becomes available, we must be able to reach the patient as quickly as possible.

When a donor liver becomes available, UNOS generates a list of potential recipients based on factors that include severity of liver disease, blood type, organ size and time on the waiting list. (The list does not take into account age, sex or race.) Unlike kidney transplants, specialized tests to determine whether the organ is a good match are not performed on livers. A "new" list is generated each time a liver becomes available, specific to the conditions surrounding that liver.

When an organ is matched to one of our patients, we expect the patient to travel to East Jefferson General Hospital as soon as possible. We urge patients to plan their travel arrangements in advance. As soon as a patient is placed on the list, the patient should make several transportation decisions: (1) what type of transportation is best--cab, bus, train, car or plane; (2) which family members will accompany the patient to the hospital; and (3) how transportation expenses will be covered. If East Jefferson General Hospital is nearby, the patient should plan to have a designated driver. If the patient will be flying to New Orleans, we suggest that the patient routinely call the airline to confirm the flight schedule.

Day of transplant surgery

When a patient is called for a possible match, we give important pre-operative instructions. First, the patient should not eat or drink anything. The patient's stomach must be empty when taken into the operating room. Second, the patient should prepare a bag with all the medications he/she takes. This bag should be brought to the hospital.

Upon arrival, patients are admitted to our transplant unit for a brief exam, blood and urine tests, x-rays and an EKG. In some cases, despite these preparations, the transplant will be called off. Calling off the transplant surgery is sometimes related to the donated liver's condition. Our physicians are very experienced in gauging the health of a donated liver through visual inspection. They may reject the organ if it has been in transport too long, or if the organ was damaged during recovery from the donor or during transit. And sometimes, final examination of the liver indicates previously unseen risks, such as badly formed blood vessels.

If surgery is postponed, the patient will continue on the UNOS list, and the transplant team will help the patient through the disappointment.

When the donated liver is accepted for a patient, the patient is put under general anesthesia. Once asleep, the transplant surgeon will make an incision on the upper part of the abdomen. The surgical team will then remove the patient's old liver, leaving portions of the major blood vessels in place. The new liver will then be attached to these blood vessels and to the bile ducts. The average surgery time runs four to six hours.

Post-transplant care

Patients usually spend 7 to 10 days on the transplant unit. While still on the transplant unit, patients will be educated on their medications, signs and symptoms that indicate a distressed liver, and other information. Patients receive a copy of Tulane Transplant After Your Transplant booklet, describing common medications, their side effects and reasons for use. Patients are also given a booklet to help track their medications and to help record their daily vital signs. Once discharged, patients will have frequent labs drawn and doctor appointments. Since patients are not strong enough to stay alone, a family member or friend must assist the patient during this period.

After transplantation, patients are monitored closely for signs of complications, including bleeding, infection and rejection.

- Bleeding from where the blood vessels were attached from donor to recipient is not uncommon; for signs of complications, including bleeding, infection and rejection some patients undergo a brief procedure after the transplant to correct this type of bleeding.
- Most infections occur during the first several months following transplantation, when the anti-rejection medication doses are highest. This is why prophylactic antibiotics (preventative antibiotics) are usually given during the first six months following transplantation.
- Blood tests help detect rejection, but to confirm this, a liver biopsy is required. Most patients undergo several liver biopsies after transplant. Mild episodes of rejection occur frequently and are usually easily treated. However, to prevent rejection, treatment with immunosuppressant medication must be lifelong, and patients must take the medications exactly as directed. The dosage of anti-rejection medication is highest immediately following the transplant procedure and after episodes of rejection. If there is no evidence of rejection, the dosage of the anti-rejection medication is gradually reduced.

Looking forward to the one-year anniversary

If good health continues after discharge, the patient comes back for weekly blood tests, then for monthly tests, then for tests every two to three months. After the one year anniversary evaluation, we will continue to do a physical exam on a yearly basis to follow up on lab values, and to be available for questions and support.

Aftercare for the rest of the patient's life includes:

- Telephone triage: Tulane Transplant Institute at East Jefferson General Hospital believes that communication is essential to a patient's continued success. By calling our toll free number at 504.988.5344 or 504.503.6897, transplant patients have access to our nurse coordinators 24/7, including holidays, weekends and nights.
- Thanking the donor's family: Transplant recipients often want to thank the donor's family for the liver they received. Our transplant social workers encourage patients to do this by writing an anonymous letter or card.



Tulane Transplant Institute
4320 Houma Blvd., 7th Floor
Metairie, LA 70006
504.988.5344 or 504.503.6897
[LCMcheath.org/Transplant](https://www.lcmcheath.org/Transplant)