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Pioneering Transplant Care:
Lahey's Integrated Approach
Delivers Strong Results



Dr. Pomfret discusses liver transplantation with a patient. Lahey Hospital & Medical Center was the first in New England to perform a successful liver transplant.

Pioneering Transplant Care: Lahey's Integrated Approach Delivers Strong Results

By Maggie Behringer

AN INNOVATIVE MODEL PUTS THE PATIENT FIRST.

THE LAHEY HOSPITAL & Medical Center (LHMC) Department of Transplantation pioneered liver transplantation in the region more than 30 years ago, and today the talented team of surgeons and medical physicians remains at the forefront of the field with an integrated care model. This novel approach to care ensures improved communication and collaboration, reduces wait times for patients, and fosters lifelong partnerships between patients and their healthcare providers.

“We have a unique set-up that is not present in many transplant programs, and that is complete integration between the medical and the surgical sides of care,” says Elizabeth Pomfret, MD, PhD, FACS, Chair of the Department of Transplantation and Hepatobiliary Diseases. “There are

about 40 people within the department who focus on patients with end-stage organ disease, whether of the liver or the kidney.”

Lahey Hospital & Medical Center is a renowned leader in transplantation. Its program supports kidney and liver transplant patients who receive organs from both live and deceased donors.

The Lahey team has a long string of “firsts,” including performing the first liver transplant in New England in 1983, the first live donor adult liver transplant (LDALT) in New England in 1988 and the nation’s first combined live donor liver, live donor kidney transplant in 1999. In the fall of 2005, the Lahey LDALT program became one of the first in the country to receive accreditation from the United Network for Organ Sharing.

Since 1983, the program has performed transplantations for more than 1,500 patients, more than any other hospital in New England. Under Dr. Pomfret’s direction, the LDALT program is the largest in the United States, with more than 270 surgeries performed to date.

In addition to providing liver and kidney transplant services, the program treats patients with a variety of benign and malignant conditions of the liver, bile ducts, gallbladder and pancreas using state-of-the-art modalities including laparoscopic and robot-assisted procedures. The surgeons — many of whom are ranked among the best in the Boston area — are well-versed in modern surgical technology used for whole and partial organ replacement, folding their less invasive surgical approach into an

integrated pre- and post-operative care plan, ultimately leading to better outcomes for patients.

Regardless of the diagnosis or treatment, LHMC's exemplary record offers patients reassurance and hope.

Integration Benefits Patients

Inherent in LHMC's approach to care is offering all services in one location. Typically, transplantation programs are pieced together with members of the departments of surgery and medicine who collaborate on transplant cases as a portion of their practices. At LHMC's Department of Transplantation, the team is one cohesive unit.

A patient can expect to meet with the necessary specialists quickly — often on the same day — and frequently thereafter. The integrated structure allows physicians to perform a transplant evaluation without sending the patient to various offices or hospital locations. Each evaluation includes time with a hepatologist or nephrologist and a surgeon, as well as any other subspecialty physician relevant to the patient's individual care plan.

"The patient sits in one room, and the specialists — not the patient — change rooms," says James Pomposelli, MD, PhD, FACS, Surgical Director of Transplantation.

The proximity also promotes communication between all four branches of the department: the kidney transplant program, liver cancer center, liver transplant program and the live donor transplant program.

Whether a patient is self-referred or referred by a primary care physician or specialist, each appointment is scheduled promptly. The Department of Transplantation never uses automated scheduling, but instead relies on care coordinators to provide another point of contact for patients and help ensure appointments are made expeditiously and the schedule remains flexible.

Dr. Pomposelli and Dr. Kung review a patient's information.

ON THE TEAM

FOR PATIENTS PREPARING for a transplant, treatment questions and concerns often cross the boundaries of the operating room. As such, the Department of Transplantation at Lahey Hospital & Medical Center pairs its medical and surgical treatments with a more holistic approach to care, addressing everything from scheduling and finances to dietary and pharmaceutical issues. The team of providers includes:

- + Donor advocates
- + Financial coordinators
- + Nutritionists
- + Partners in anesthesia, cardiology, infectious disease, pathology and radiology
- + Psychiatrists
- + Social workers

"We have integrated care under one roof," says Shiang-Cheng Kung, MD, Medical Director of the Kidney Transplantation Program. "Our day-to-day focus is on transplant patients. That is a much better model for patient care."





Dr. Pomposelli and Dr. Pomfret are two members of the transplant team at Lahey Hospital & Medical Center, which is home to the country's largest live liver transplant program.

“We are aware that patients on dialysis don't have much extra time,” says Shiang-Cheng Kung, MD, Medical Director of the Kidney Transplantation Program. “They have multiple appointments a week, and sometimes they don't feel well. We try to help them by consolidating visits as much as possible.”

This hands-on approach can improve a patient's quality of life.

Excellent Time-to-Transplant Rates

The Department of Transplantation's efficiency also applies to their efforts to decrease the amount of time a patient stays on the transplant list. Due to the program's size and the expertise of its physicians, opportunities to match a patient with the appropriate liver or kidney are vastly increased, whether the organ comes from a living or deceased donor, or from another region.

“Our goal is to get the patients in and taken care of as quickly as possible,” Dr. Pomposelli says. “Our patients often do not have to wait until they get extremely sick to receive a transplant.”

The Department of Transplantation also calibrates its search for donor organs to include organs considered to be in expanded criteria zones. Those categories can consist of donors who have been exposed to hepatitis B or C, for example. In both cases, Dr. Pomfret explains, the department is able to safely transplant the organ to the

appropriate patient, and prevent the transfer of disease with the necessary vaccines.

If such an organ becomes available, the medical team provides the patient with a detailed explanation of the donor's history and the reason the organ is categorized within the expanded criteria.

Since the department is well-versed in complex liver surgery, partial or split liver organ donations are also within reach for its patients. For example, in a case in which an organ is allocated to an infant who only needs a small piece of liver for transplant, the remainder of the organ can be transplanted into an adult.

Patients with renal failure who are found to be highly “sensitized” to a new kidney because of high levels of preexisting antibodies in their system, or those with living donors of incompatible blood-type, typically wait longer to receive an organ. These patients benefit from LHMC's participation in the National Kidney Registry paired-exchange program to find a compatible organ.

Strong Outcomes

The Department of Transplantation utilizes less invasive laparoscopic assistance for both living donor nephrectomy for kidney transplantation and living donor hepatectomy for liver transplantation procedures. These approaches offer donors the benefit of a smaller surgical wound with minimal muscle division, a quicker discharge from the hospital and a shorter

recovery. According to Dr. Kung, donors undergoing living donor nephrectomy can expect to be home within two to three days and return to normal activity typically within four weeks.

In addition to decreasing stress for patients who are waiting for an organ match, the department's approach has proven to yield superior outcomes. Data from the Scientific Registry of Transplant Recipients shows that the program is performing at a statistically appropriate level for observed- to-expected patient and graft survival outcomes. In many categories, the program is performing better than expected, with a higher than expected rate of transplant for both liver and kidney and a lower rate of mortality for patients on the waiting list.

“What this demonstrates is that we are very aggressive in taking organ offers that might be turned down by other centers, and yet, in doing so, we're not compromising patient outcomes,” Dr. Pomfret says.

Supporting Continued Health

To ensure a patient's long-term health, the department developed the Transplant Wellness Program, which offers comprehensive medical support pre- and post-transplant. Patients are followed closely in the immediate weeks and months after transplantation and visits continue annually after that. Living donors are followed closely for two years and then each year after that. Each appointment includes a complete evaluation of the patient's health by a variety of medical specialists. Physicians may also recommend consultations with other specialists, such as a cardiologist, endocrinologist or dermatologist, to monitor for evidence of heart disease, diabetes or skin cancer, which can develop as a result of side effects from some of the anti-rejection medications.

Patients return to their primary care physicians with a wellness report card detailing information about blood pressure, lipids, follow-ups with other specialists and general transplant concerns. Importantly, referring physicians continue as an integral part of the circle of care for patients of LHMC's Department of Transplantation.

For more information, please visit Lahey.org/Transplantation. ■