

Transplant Report



UMassMemorial
Medical Center
A Member of UMass Memorial Health Care



University of
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A Message from the Chief



Dear Colleague:

In recent years, UMass Memorial Medical Center has made significant strides in its Transplantation Program. Last year, we saw our efforts bear extraordinary fruit as UMass Memorial emerged as the fastest-growing transplantation program in New England. UMass Memorial manages what is now the largest liver transplant program in Massachusetts.

This breakthrough is based on a confluence of milestones that we have worked diligently to achieve:

- Adding outstanding medical and surgical talent along with doubling the number of transplant coordinators, for an exceptional depth and breadth of dedicated transplant expertise
- Launching a comprehensive living donor liver transplant program, expanding the number of available organs and dramatically decreasing wait time for eligible patients
- Performing more liver transplants than any other center in New England
- Performing the second-highest number of deceased-donor kidney transplants in the state
- Placing patients on the UNOS (United Network of Organ Sharing) waiting list very quickly, thanks to a streamlined, highly efficient evaluation process
- Attaining mean times to transplant — how long patients remain on the waiting list — that are highly competitive
- Documenting outcomes (patient and graft survival) that meet or exceed national benchmarks

While we are proud of our program's growth and success, its real significance lies in the hope and promise it offers to patients and their families. As we grow, we are able to help save and enhance even more lives.

As a referring physician, you play an integral role in this mission because you are on the frontlines, the trusted caregiver who first identifies a patient who is a possible candidate for organ transplantation.

We are here to help. We offer an exceptional level of transplant care with outcomes that are among the best in the nation. We provide compassionate support throughout the entire journey, including the decision-making process, evaluation, waiting period, surgery and hospitalization, and post-surgical follow-up care. We welcome the opportunity to partner with you in this care to give your patients the gift of life.

I invite you to take a moment to learn more about the UMass Memorial Organ Transplantation program in this report. Please let us know how we can be of service to you and your patients.

Sincerely,

A handwritten signature in black ink, appearing to read "Adel Bozorgzadeh".

Adel Bozorgzadeh, MD, FACS
Chief, Organ Transplantation, UMass Memorial Medical Center
Professor of Surgery, University of Massachusetts Medical School

An Exemplary Transplant Team ...

The power of the UMass Memorial Medical Center Organ Transplantation Program lies in its phenomenal staff. Our integrated, multidisciplinary team of dedicated transplant specialists all work together to address the complex medical, psychosocial and logistical needs of each transplant patient, their families and living donors. To successfully serve the volume of patients and achieve the superior outcomes that we do is a testament to our team's clinical strength, effective collaboration and exceptional continuity of care.

Transplant Surgeons

Fellowship-trained in transplant surgery at some of North America's most renowned institutions, our transplant surgeons provide a depth of experience and expertise that is unparalleled in New England — and rivals that of any transplant center in the nation.

Transplant Hepatologists

Our transplant hepatologists bring a wealth of state-of-the-art knowledge to our transplant program, fueling our ability to launch a comprehensive living donor liver transplant program and grow to be the largest liver transplantation program in New England.

Transplant Nephrologists

With dedicated transplant nephrologists, UMass Memorial has the specialty expertise to not only perform the most kidney transplants in its history in 2011, but also perform more deceased-donor kidney transplants than any other program in Massachusetts except one.

Transplant Infectious Disease Specialists

Since transplant patients require immunosuppressive medications to prevent organ rejection, these specialists provide essential pre- and post-transplant evaluation and individualized treatment plans for preventing infections in this high-risk population.

Transplant Anesthesiologists

The pathophysiology of end-stage organ disease requires specialized experience and understanding, as do the unique technical aspects of the transplant procedure, which is why highly trained transplant anesthesiologists are integral members of our team.

Transplant Psychiatrist

To optimize outcomes, our program has a dedicated psychiatrist who understands the myriad psychosocial issues involved in organ transplantation and plays a critical role in pre-transplant assessment and selection of appropriate recipients as well as living-donor candidates.

Transplant Coordinators

From the moment a patient is referred for transplant, one of our nationally certified transplant coordinators — all registered nurses with advanced training — is by his or her side every step of the way, managing the numerous clinical and logistical details involved in the transplant process with efficiency and compassion. To ensure the most comprehensive, patient-focused care, our coordinators' responsibilities are divided into organ-specific pre- and post-operative phases:

- **Liver and Kidney/Pancreas Pre-Transplant Coordinators** guide patients through the process to be placed on the waiting list, including evaluation, diagnostic testing, presentation to the transplant selection committee, listing on the national transplant list after committee approval, and education about the transplant process.

... Delivers Superior Results



- **Liver and Kidney/Pancreas Post-Transplant Coordinators** take up the journey with patients as soon as they are notified that an organ is available and the preparation for surgery begins, working closely with their pre-transplant counterparts to ensure a smooth transition as well as ongoing patient education and monitoring.
- **Living Donor Transplant Coordinator** — As more patients and families explore the option of living kidney and liver donation, we have a separate transplant coordinator to handle the unique concerns of living donors with the same level of attentive care, support and advocacy that recipients receive.
- **Hepatocellular Carcinoma Program Coordinator** Focused on the unique and complex needs of patients with primary liver cancer (through a new program highlighted in this report), this coordinator oversees the pre- and post-transplant medical management of patients in collaboration with their many on-site and referring care providers.

Our transplant coordinators are supported by experienced administrative assistants with exceptional communication, interpersonal and organizational skills.

Social Workers

Our licensed social workers — all with extensive, organ-specific transplant experience — work with patients throughout the transplant process to ensure that they have a strong support network. They interview candidates and families as part of our comprehensive psychosocial assessment, provide supportive counseling, and help plan the patient's discharge after transplant.

Transplant Pharmacist

Managing the many and complex medications transplant patients must take is a vital component of post-transplant care, which is why a pharmacist specializing in transplantation helps to design, implement and individualize drug regimens and therapeutic plans.

Financial Coordinators

Essential members of the UMass Memorial transplantation team, our financial coordinators verify patients' insurance coverage and eligibility, help patients evaluate insurance benefits, obtain authorizations, and help those in need identify possible financial resources.

To learn more about the individual members of our transplant team, scan this code with your smart phone.



Success by the Numbers

National Data Affirm UMass Memorial Medical Center's Leadership in Organ Transplantation

To be a designated transplant center with access to donated organs and the system that matches donors and recipients, UMass Memorial Medical Center has met rigorous clinical and operational standards established by the United Network Organ Sharing (UNOS), the not-for-profit entity that runs the Organ Procurement and Transplantation Network (OPTN) for the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS).

OPTN maintains a database on the number and type of transplants performed at the nearly 250 transplant centers across the country — giving clinicians, patients and families an objective measure of volume, an important indicator of a transplant center's experience and expertise. In addition, the Scientific Registry of Transplant Recipients (SRTR) uses OPTN-collected data about the full continuum of transplant activity, from organ donation and waiting list candidates to transplant recipients and survival statistics.

These data tell a compelling story about the growth of UMass Memorial Medical Center's Transplantation Program. Notably, in 2011, we performed a total of 65 liver transplants* — more than at any other transplant center in all of New England.

Among these, three were living donor liver transplants, the third-highest volume for this procedure in Massachusetts.* This is notable because our program was only launched last year.

Further, UMass Memorial Medical Center performed 54 kidney transplants* — the second-highest volume in the state after Massachusetts General Hospital.

Fourteen of those transplants were from living donors.

In addition, while only nine pancreas transplants were performed in the entire state last year, we performed nearly one quarter of them — on par with two Boston hospitals.*

These numbers provide credible affirmation of the emergence of UMass Memorial as having one of the region's — and nation's — leading transplant programs,

demonstrating that a growing number of patients, families and physicians entrust us with their care.

Most important, however, are the data showing that this trust is warranted because transplant patient and graft outcomes at UMass Memorial are excellent and compare favorably with local, regional and national benchmarks.

For example, among our kidney transplant patients, one-year patient survival and one-year graft survival rates are 96.89% and 94.62%, respectively, slightly above our expected rates for this procedure.**

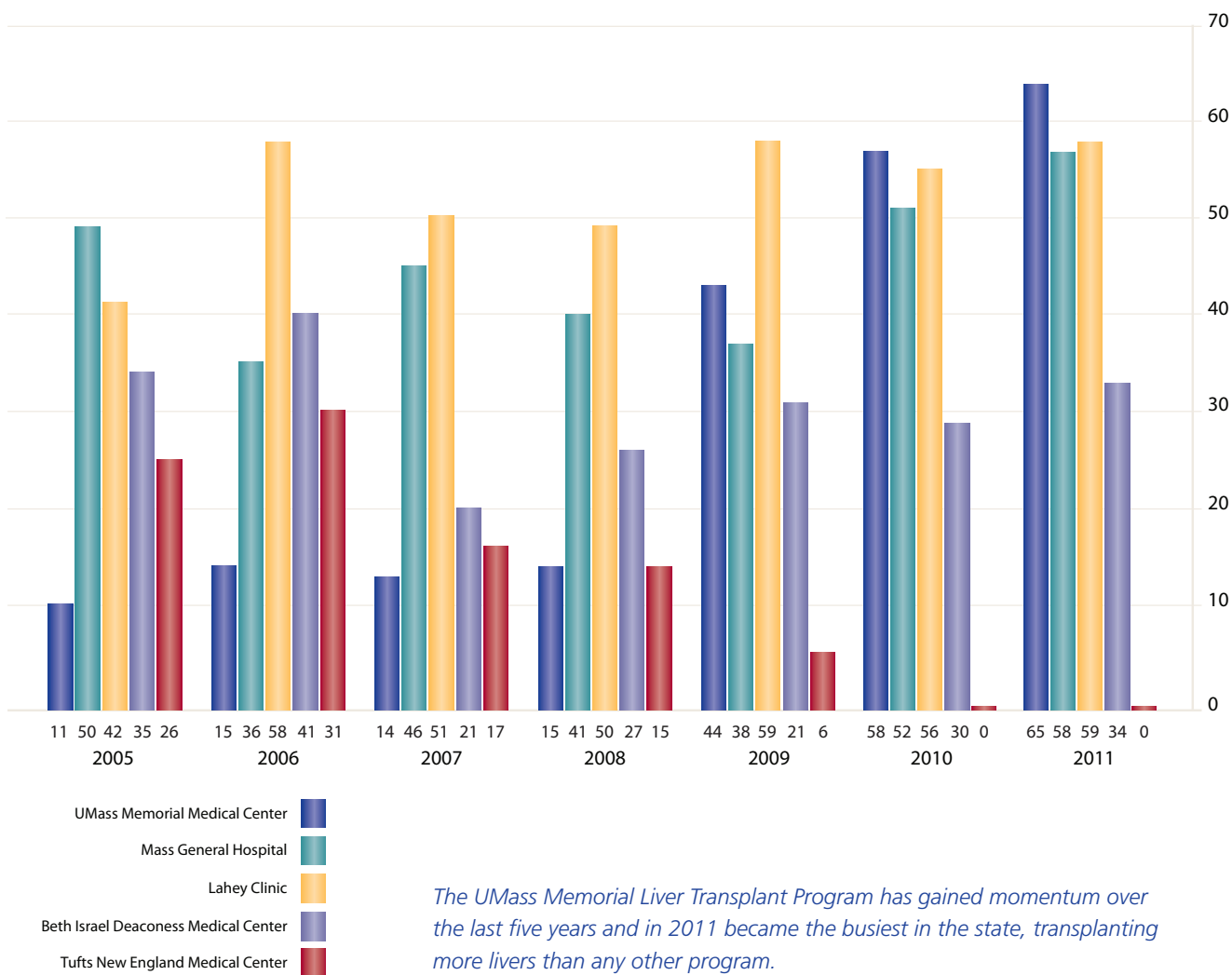
Similarly, among our liver transplant patients, one-year patient survival and one-year graft survival rates are 87.39% and 84.18%, respectively — also slightly above our expected rates for this procedure.**

The bottom line is this: here at UMass Memorial, transplant patients from throughout New England and beyond have access to high-quality care from a multi-disciplinary team with a wealth of knowledge, extensive experience, and a track record of superior outcomes.

*Source: <http://optn.transplant.hrsa.gov>. Based on OPTN data as of February 6, 2012. U.S. Transplants Performed January 1 – December 31, 2011.

**Source: <http://www.srtr.org>. Based on SRTR data as of February 6, 2012, covering the period from July 1, 2008 – December 31, 2010.

Liver Transplant Volume

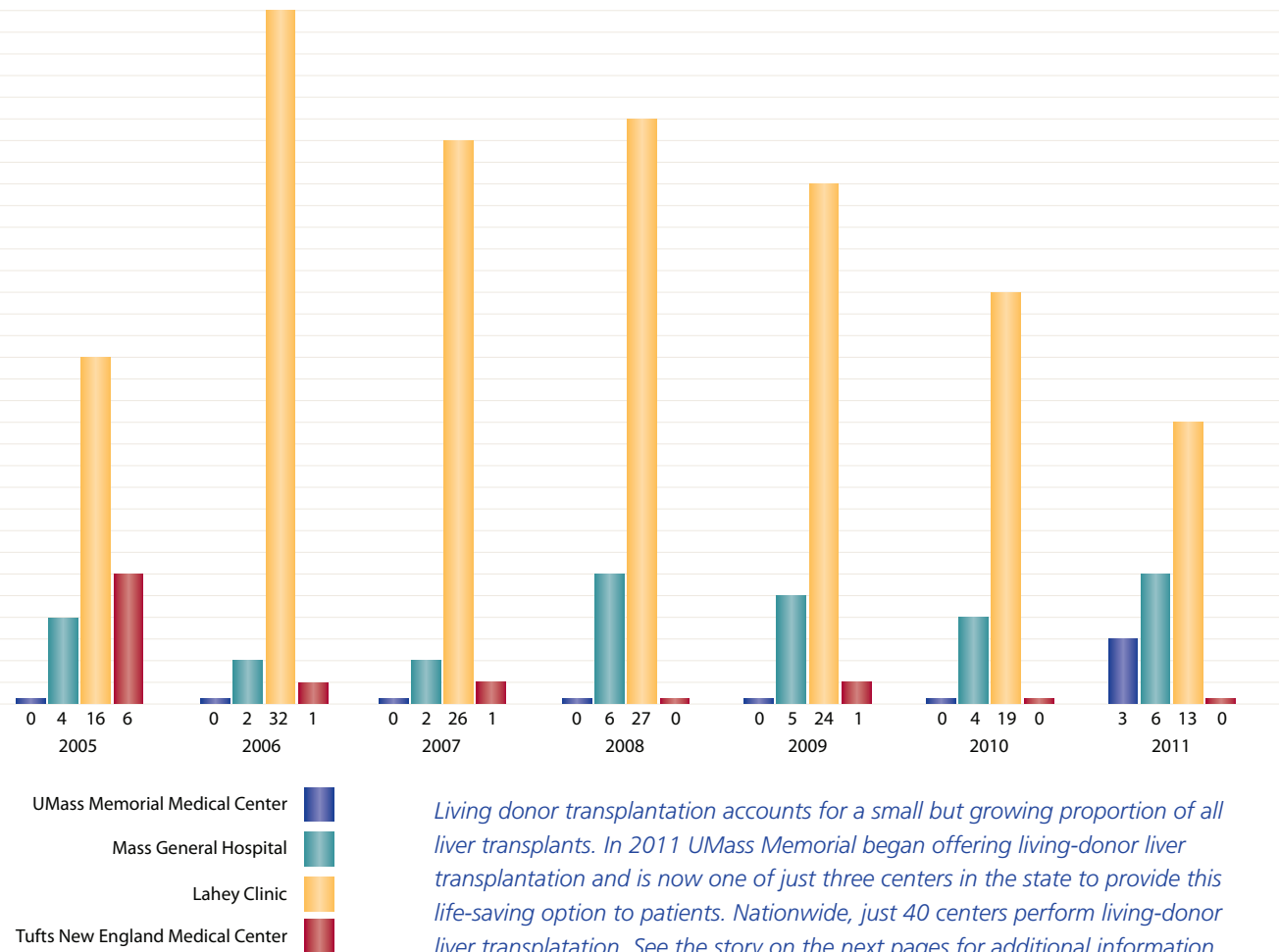


Firsts

- Surgeons at UMass Memorial performed the first simultaneous live-donor kidney and deceased-donor pancreas transplant in New England.
- The first pancreas transplant was performed at UMass Memorial in July 1993. Since then, 80 pancreas transplants have been performed, making ours one of the longest-running and busiest programs in the region.
- UMass Memorial surgeons performed the first liver transplant at the Medical Center in 1998 and, since that time, have performed more than 320 deceased- and living-donor transplants.

Success by the Numbers

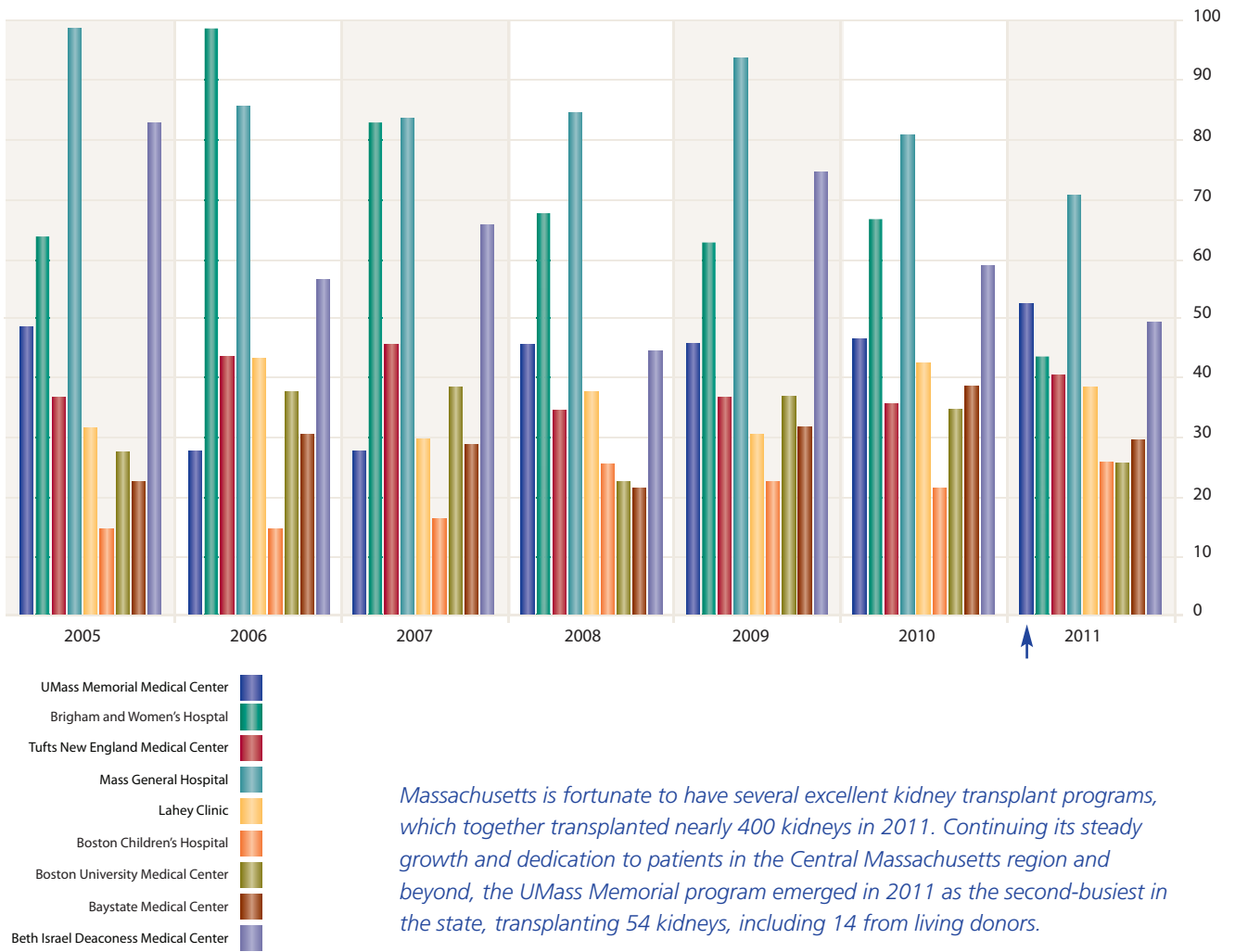
Living Donor Liver Transplant Volume



Five Times

- The UMass Memorial Transplantation Program has been awarded the distinguished Gold Medal of Honor five times by the U.S. Department of Health and Human Services for our success in increasing organ donation rates.

Kidney Transplant Volume



Massachusetts is fortunate to have several excellent kidney transplant programs, which together transplanted nearly 400 kidneys in 2011. Continuing its steady growth and dedication to patients in the Central Massachusetts region and beyond, the UMass Memorial program emerged in 2011 as the second-busiest in the state, transplanting 54 kidneys, including 14 from living donors.

Nearly 900

- The first kidney transplant was performed at UMass Memorial in February 1986. Since then, nearly 900 kidney transplants from live and deceased donors have been performed. In live donation, we routinely do laparoscopic donor nephrectomies for kidney retrieval.

UMass Memorial has streamlined its patient evaluation process, dramatically reducing the time from when a patient is first referred to when the patient's name is placed on the waitlist.

UMass Memorial Dramatically Shortens Patient Referral-to-Waitlist Time

When it comes to organ transplantation, if you can save time, you can save lives. That's why UMass Memorial Medical Center has streamlined its patient evaluation process, dramatically reducing the time from when a patient is first referred to when the patient's name is placed on the waitlist. In fact, this phase of the pre-transplantation process can now take as little as two or three visits in just two weeks.

"We understand that patients needing a transplant feel a tremendous sense of urgency, and we feel an obligation to be their advocate to get them on the waiting list as quickly as possible," said Adel Bozorgzadeh, MD, chief of organ transplantation.

How does it work? All new transplant candidates and their families first meet with a transplant coordinator for an educational session, and the patient undergoes lab work, X-rays, CT scans and other diagnostic tests, often in a single visit. The next week, the patient returns for one-on-one meetings with members of our multidisciplinary transplant evaluation team: the surgeon, hepatologist or nephrologist, infectious disease specialist, social worker, psychiatrist and dietician. The team then convenes to determine if the patient meets the criteria to be added to the waitlist.

We have also worked with officials from insurance carriers to streamline their authorization processes, and the Medical Center's financial coordinators now submit insurance paperwork electronically, further reducing delays.

Thanks to the support of hospital leadership, the innovation and creativity of our staff and the flexibility of our transplant partners, we can now put many of our patients onto the waiting lists in as little as two weeks.



Living Donor Liver Transplants: Providing More Options for More Patients

In the second half of 2011, UMass Memorial Medical Center became one of only 40 transplant centers in the nation to offer living donor liver transplants. Before the end of the calendar year, our multidisciplinary team successfully performed three living donor liver transplants — the third-highest volume for this procedure in Massachusetts, and a notable achievement given the newness of our program.

More importantly, it means that now, with United Network for Organ Sharing (UNOS) approval for both deceased and living donor transplantation, UMass Memorial can offer patients every option for this lifesaving surgery. And there is an urgent need for it.

In the United States today there are more than 17,500 patients waiting for a liver — more than 800 in New England alone — and more patients are added to the waiting list every day. But there are only enough donated livers to perform about 6,000 transplants per year. As a result, more than 1,700 patients die each year while on liver waiting lists.

Now, however, technological advances — along with the liver's unique ability to regenerate itself — have

enabled qualified transplant teams like ours to perform living donor liver transplants using a portion of the donor's liver. This means that a patient can receive a transplant before his or her liver failure worsens. It means a shorter wait time for a liver. It means that, because the surgery can be planned in advance, the chances of a successful transplant are better. Plus, the quality of the liver may be higher because living donors are usually young, healthy adults who have undergone a complete medical evaluation. And with a living donor transplant, the preservation time (how long the liver is without blood) is often minutes versus hours, resulting in a healthier donation.

We understand that there are unique medical and psychosocial considerations in living donor transplants, so we have added a dedicated living donor transplant coordinator to our multidisciplinary team. Her role is to counsel, support, educate and advocate for the donor throughout every phase of the evaluation and decision-making process.

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UMass Memorial Launches a Dedicated Kidney Transplantation Program for Kids



In 2010, 25 patients under age 18 underwent kidney transplantation in Massachusetts. Many of these families had to travel into Boston for the years leading up to and following transplantation. In 2011, the UMass Memorial Children's Medical Center formally launched a dedicated pediatric kidney transplantation program within the Pediatric Nephrology Division and the Division of Organ Transplantation to give these families an option.

While UMass Memorial Medical Center has in the past offered kidney transplants to children as part of its adult transplantation program, the Medical Center has taken a systematic approach to develop a program tailored to the pediatric population. Building upon the specialized expertise of the Children's Medical Center, the program integrates the resources of the hospital's very successful adult transplant program in a way that gives children an ideal transplant experience.

Surgery is provided by UMass Memorial Chief of Organ Transplantation Adel Bozorgzadeh, MD. Ann Salerno, MD, chief of pediatric nephrology, and Neena Gupta, MD, a pediatric transplant nephrologist, provide medical care pre- and post-operatively, along with a multidisciplinary team that includes a pediatric infectious disease specialist, transplant coordinators, pediatric psychologist, registered pediatric dietician and other experts.

The comprehensive pediatric kidney transplant program now at UMass Memorial provides more convenient access, more local family support services, and easier follow-up and ongoing medical management for these patients, and allows for seamless transition from pediatric to adult care as they get older — all right here in Central Massachusetts.

UMass Memorial Medical Center has taken a systematic approach to develop a program tailored to the pediatric population.

Taking a New Approach to Primary Liver Cancer

As a leader in the care of patients with primary liver cancer, UMass Memorial Medical Center is proud to announce the creation of a new program to provide state-of-the-art treatment for patients with hepatocellular carcinoma, or HCC, the most common form of liver cancer. The HCC Program, formally launched in March 2012, draws on the unparalleled expertise of the UMass Memorial Cancer Center of Excellence and specialists from across the Medical Center.

Patients with HCC have historically been offered few options for treatment or cure, in part because their cancer is not often diagnosed until it has progressed considerably. Only 10 – 20 percent of tumors can be removed completely with surgery. In recent years, however, liver transplant has emerged as the best treatment option for appropriately selected patients with HCC.

Our coordinated program, one of just a few such dedicated programs in the Northeast, is focused on treating patients' cancer particularly while they wait for a transplant. We have integrated medical oncology,

transplant hepatology, surgical oncology, transplant surgery, interventional radiology, radiology, radiation oncology, nursing, palliative care, psychiatry, social work, and financial coordination, as well as a fully dedicated HCC program coordinator.

HCC is most commonly encountered in patients with cirrhosis, which can result from:

- Hepatitis B or C*
- Alcohol abuse
- Autoimmune diseases of the liver
- Chronic inflammation of the liver
- Hemochromatosis

*Patients with Hepatitis B or C are at higher risk for HCC, even if they have not developed cirrhosis.

The HCC Program is housed in the Transplant Clinic on the University Campus of UMass Memorial Medical Center. Patients with complex needs require dedicated care. If you have patients in whom you suspect primary liver cancer, we invite you to contact us for a consultation.



Clinical Trials Pave the Way to Improved Transplant Care

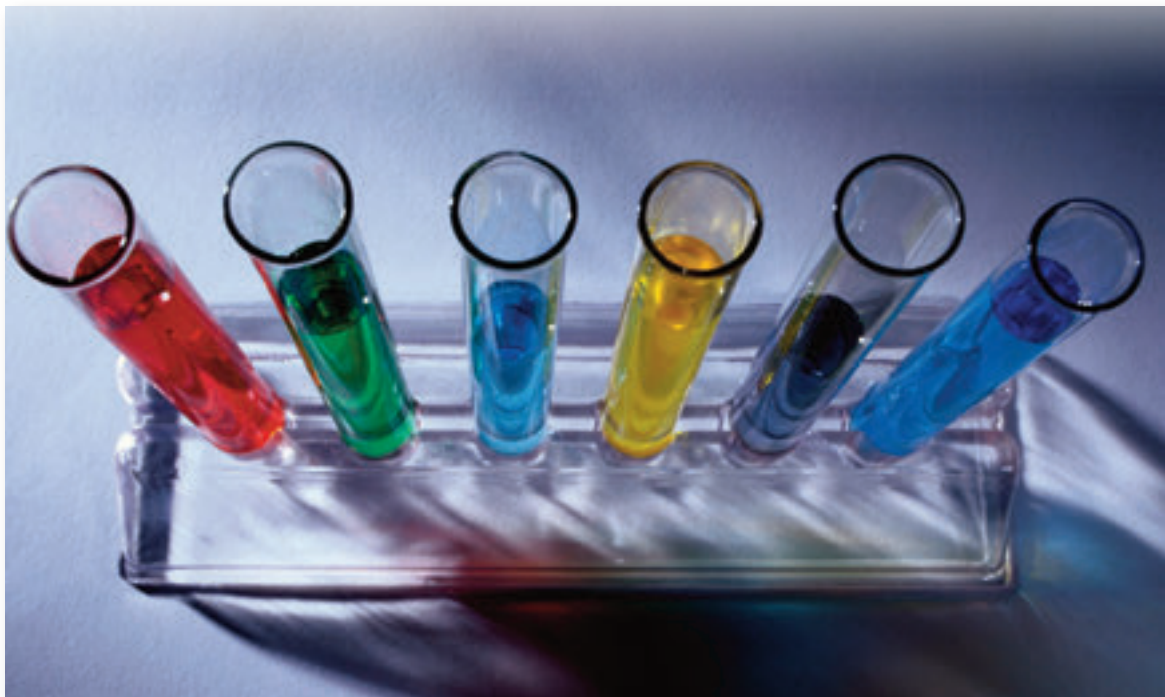
At UMass Memorial Medical Center, patients benefit from not only the best medical and surgical care but also from cutting-edge technology and innovation developed through our involvement in clinical trials. Not content to simply maintain the status quo in transplantation, UMass Memorial is continually seeking new developments to expand our knowledge and improve patient care.

As the transplant program has grown in volume, it has gained the notice of pharmaceutical companies seeking partners in clinical research. Staffed by a full-time research nurse coordinator, the division's clinical trials and research program is involved in a growing number of industry-sponsored and investigator-initiated clinical trials, one of which currently includes a major national study investigating a new combination of immunosuppressive drugs that is hoped will be less toxic to kidney transplant patients. The program is

looking to be involved in many more clinical trials, including those dealing with hepatitis C and liver transplantation as well as other kidney studies.

Another factor that makes UMass Memorial an attractive partner for industry-sponsored trials is the exceptional infrastructure that exists to support them. The UMass Center for Clinical and Translational Science (CCTS), created with a 2010 National Institutes of Health grant, offers a centralized resource for trial administration, regulatory oversight and compliance.

Perhaps even more importantly, the CCTS also provides tremendous support for UMass Memorial physician-scientists to bring their knowledge forward in the safest, most efficient and timely manner possible. The CCTS translates the passion of a physician or surgeon into a protocol and clinical trial that can lead to the next breakthrough in care.





Gift of Life Celebration Is an Inspirational Annual Event

Just as the number of transplant surgeries at UMass Memorial Medical Center has grown, so too has attendance at its annual Gift of Life Celebration. Now in its sixth year, this special event is a joyful gathering of recent liver, kidney and pancreas recipients, their families and living donors who come together in gratitude, reflection and celebration.

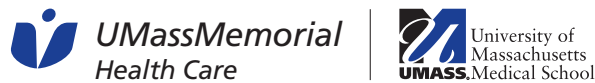
The event was created by the Transplant Services staff in response to a desire by the support group members to get together around the holidays. In its first year, 50 attendees gathered in a casual potluck-style celebration. This year, reflecting the growth of the entire transplant program, the event — now catered and more formal — attracted nearly 200 attendees and was held in the beautifully decorated pavilion of the Lazare Research Building on the Medical Center's University Campus. All the details, from invitations to decorations and speaking platform, were handled by the Transplant Services staff.

Recipients feel the Gift of Life celebration is an opportunity to stop and reflect on what they've been through and how they've been able to recover and thrive, and to express appreciation for the organ donors who made it possible. For staff of the Transplant Program, it's a chance to connect with their patients outside the clinics and exams rooms and see them with family and friends, living their lives.



Patients and families trust UMass Memorial Medical Center as the region's leading academic medical center, committed to improving the health of our communities in Central New England. With our partner, the University of Massachusetts Medical School, we are committed to excellence in primary and specialty care, community service, teaching and research. The Medical Center offers advanced technology and support services for patients and families, providing the region with specialists renowned for their expertise in caring for adults and children.

Contributions to UMass Memorial Medical Center are deeply appreciated. Call 508-856-5520 or email giving@umassmed.edu.



UMass Memorial Health Care is the largest not-for-profit health care system in Central New England with more than 13,000 employees and nearly 2,000 physicians, many of whom are members of UMass Memorial Medical Group. Our member hospitals and entities include Clinton Hospital, HealthAlliance Hospital, Marlborough Hospital, UMass Memorial Medical Center, Wing Memorial Hospital and Medical Centers and Community Healthlink, our behavioral health agency. With our teaching and research partner, the University of Massachusetts Medical School, our extensive primary care network and our Cancer, Diabetes, Heart and Vascular, and Musculoskeletal Centers of Excellence we deliver seamless programs of quality and compassionate care for patients across our health care system.

Like us on Facebook:
UMass Memorial Transplant Program



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