Montefiore EinsteinCenter for Transplantation



Kidney & Pancreas Transplantation Program





Dear Patients and Colleagues,

It is expected that the number of Americans with kidney disease will rise dramatically over the next several years. The Montefiore Einstein Center for Transplantation offers patients with kidney disease new developments, innovations and hope.

The Montefiore Einstein Center for Transplantation is one of the most active and successful programs in the country. Our kidney program was established in 1967, which makes it one of the longest continuously active programs in the nation, as well as one of the busiest: to date, we have performed more than 3,000 kidney transplants in adults and children.

Our approach unites the outstanding clinical staff at Montefiore Medical Center with the world-renowned basic science faculty at Albert Einstein College of Medicine. This enables us to offer innovative treatments and access to advanced clinical research trials for patients with a wide range of end-stage kidney conditions. Some of these innovative treatments—such as aggressive selection of donor organs to minimize wait times and customization of post-transplant medications to reduce complications—permit transplantation that may not be possible at other centers.

It is a sincere privilege to care for those with diseases of the kidney and pancreas and to be able to offer them a second chance at life. Whether you're a transplant candidate in need of a kidney or pancreas or a doctor seeking to refer a transplant candidate, this brochure will provide you with all the information you need to understand the extensive services we offer.

Sincerely,

Milan M. Kinkhabwala, MDChief, Division of Transplantation
Department of Surgery

Milan Kinkhabwafa

Professor of Surgery, Albert Einstein College of Medicine

Everything You Need, Close to Home

Since 1967, patients in the metropolitan New York area have chosen Montefiore Medical Center for kidney transplantation. Over the years, the transplant programs at Montefiore have expanded to include heart, liver and pancreas transplantation in adults and children. We are now one of only a few centers nationwide to offer this breadth of services and expertise.

Our Kidney & Pancreas Program combines exceptional medical care delivered by an outstanding transplant team that is focused on personalized attention, with the goal of making the experience as comfortable as possible.

Our techniques are state-of-the-art, and our approach to each patient is holistic: Every aspect of treatment —from testing to surgery to postsurgical care—is designed specifically to improve your overall health and function.

The Kidney & Pancreas Program helps patients with end-stage kidney disease avoid the need for long-term dialysis. For most patients with kidney failure who are already on dialysis, transplantation has been shown to improve survival and quality of life. For patients with long-standing type 1 diabetes, pancreas transplantation can end dependence on insulin by restoring normal insulin production.

Some patients with kidney disease caused by long-standing insulin-dependent diabetes may be candidates for a pancreas transplant along with a kidney transplant. In these patients, a new pancreas potentially protects the new kidney from the damage caused by diabetes.

After transplantation, our goal is to provide comprehensive medical care to patients for the rest of their lives. Patients continue to see our specialists and they continue to work with their primary doctors at home.

Collaboration **Ensures Quality** Patient Care

Montefiore is the University Hospital of Albert Einstein College of Medicine, a major research institute dedicated to basic investigations in transplant science and the translation of fundamental discoveries into new approaches for treatment and care. The integration of clinical care with research sets the Kidney & Pancreas Program apart from many other transplant programs nationwide. Clinical trials are conducted at the Montefiore Einstein Center for Transplantation, in partnership with Einstein, offering patients access to the most advanced treatments under the care of a highly specialized cadre of academic physicians. All transplant physician faculty members at the medical school participate in the design and implementation of innovative techniques for transplant care and research. Many of the physicians have gained national and international reputations for elevating the standards and practices of transplantation. This guarantees that transplant patients benefit from the best possible medical and surgical care available.

Research Leads to Better Care and Better Outcomes

Active research programs at the Montefiore Einstein Center for Transplantation improve patient care by advancing the science of transplantation. Over the past four decades, Montefiore transplant researchers have made substantial contributions to the field. These

- Kidney transplantation in highly sensitized patients with donor-specific antibodies using desensitization
- Risk assessment for development of rejection before transplantation using novel tissue-typing methods
- Use of cutting-edge genomics technology to understand the mechanisms of rejection and kidney injury
- Use of special markers to identify signs of rejection without the need for biopsy
- Investigation of ways to perform kidney transplants in patients with HIV
- Investigation of mechanisms of kidney disease in liver



A New Level of Personalized Care

The partnership between Montefiore and Einstein distinguishes itself through its commitment to research and community outreach, as well as patient and physician education. Our philosophy of patient care is fundamentally holistic in nature, with our primary goal to restore patients' overall functional health.

Our kidney and pancreas transplant evaluation process is not unlike the personalized feel of a family doctor's office. Each patient is assigned a specific team that includes a dedicated transplant surgeon, transplant nephrologist, social worker, financial counselor, nurse coordinator and nutritionist. The patient's primary physician is also considered a member of the care team and will be involved in the entire transplant process to ensure continuity of care after transplantation.

This team stays with the patient through the evaluation process, transplant procedure and after transplantation. This enables patients to know their doctors and team members personally, which enhances communication. Our personalized care approach embraces patients' families and close friends. Our goal is that each patient has a support system that will nurture him or her before, during and after transplantation. When you come for an evaluation, we encourage you to bring a family member or friend who will be your partner in the process.

Because we serve a diverse population, we have staff members who speak many languages, including Spanish. We offer patient education and consultation sessions in Spanish and have a dedicated day on which Spanish-speaking patients are evaluated for transplantation.

The evaluation process can be lengthy. We work with patients' personal schedules to make the process as efficient and convenient as possible. In most cases, a multidisciplinary evaluation can be completed in one or two visits to the Center for Transplantation, with additional testing as needed. Patient education is a major focus of these visits. We want patients and their family members to be thoroughly familiar and comfortable with the transplant process, risks, what to expect during and after surgery, long-term success and follows up care requirements.





Diverse Capabilities

Finding the Perfect Organ

Because organ selection is a complex process that must be tailored to each patient's medical condition, we meticulously evaluate every donor organ, in many cases performing additional tests to determine whether it is suitable for transplantation. In some cases, we may be very aggressive about using organs that may not be used at other centers in order to shorten the waiting time for a recipient. In other cases, we take a more conservative approach and defer organs we feel are not the best choice to meet the recipient's needs. The decision regarding the desired type and quality of organ is always discussed with the patient before transplantation, ensuring the patient is part of the decision-making process.

Ultimately, a multidisciplinary team, usually composed of your nephrologist and surgeon, will determine which donor organ is right for you.

As soon as a donor organ is chosen, our in-house, state-of-the-art immunology lab is called in to confirm that the organ is the best match. After the organ is transplanted, the lab continues to assist by providing immune surveillance to minimize the risk of rejection.

Pediatric Transplant Specialists

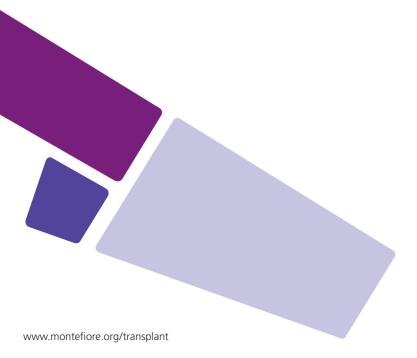
The Children's Hospital at Montefiore (CHAM) was one of the first children's hospitals to perform organ transplants and was the first to have a formal dialysis unit dedicated to children. Many top pediatric kidney specialists in the nation have been trained at CHAM. Today, CHAM has kidney, liver and heart transplantation programs run by transplant physicians and surgeons with outstanding national and international reputations.

In 2011, for the fourth consecutive year, *U.S. News* & *World Report* ranked CHAM among the top pediatric specialty hospitals in the country. In kidney care, CHAM ranked eighth in the United States and first in the tri-state area—distinctions that give us tremendous pride.

The CHAM faculty include a dedicated pediatric transplant surgeon—a specialist unique in this area—as well as dedicated pediatric transplant medical specialists, pediatric transplant social workers and nurse coordinators. We also offer a full-time pediatric renal nutritionist as part of the transplant team.

The CHAM transplant staff works closely with parents and community pediatricians for children with advanced kidney disease. We are specialists in rare kidney disorders, urologic disorders in children, dialysis in children, and complex conditions such as focal segmental glomerulosclerosis.

Montefiore also runs the internationally famous summer kidney and dialysis program at Frost Valley YMCA, which was established in 1974 as the first camp in the world to mainstream children with transplants and end-stage kidney disease.





Minimizing Medications. Reducing Complications.

After any organ transplant, patients must take daily medications to prevent their immune system from rejecting the organ. We customize the medication regimen for each patient to minimize unnecessary side effects. For example, we may not use steroids in low-risk patients. In patients who are highly sensitized due to previous transplants or transfusions, we use advanced techniques such as plasmapheresis to filter blood in order to reduce sensitization and allow lower doses of medications to be effective.

By the end of the first year after a kidney or pancreas transplant, most patients lead healthy, active lives with few restrictions and are on stable doses of only two or three medications.

Quick Facts About Kidney and Pancreas Transplantation at Montefiore

- It is one of the oldest programs in the country.
- Our outcomes exceed national standards.
- Virtually all living donor surgery is performed using minimally invasive techniques.
- Innovative desensitization programs for patients with high antibody levels improve chances of transplant success.
- Our in-house immunology lab offers state-ofthe-art immune monitoring capabilities.
- Full-time transplant nephrology faculty are dedicated to kidney transplantation care.
- Full-time transplant surgical faculty are all fellowship-trained in advanced transplantation techniques.
- We provide in-house vascular access services for patients needing dialysis access surgery.
- Our dedicated transplant inpatient floor has specialized nursing and transplant physician assistant services available around the clock.
- Our staff includes physical therapists, a fulltime nutritionist for transplant recipients, and a full-time transplant psychosocial team to assist patients and families.
- Our dedicated pediatric transplant staff includes a full-time pediatric transplant surgeon and nephrologists.
- We offer Spanish-language clinics.
- We offer pancreas transplants for selected patients with diabetes.

Options for Kidney Transplantation

We perform both deceased and living donor kidney transplants. (All transplanted pancreases come from deceased donors.) Patients do not have to be on dialysis to be evaluated or to receive a kidney transplant, but they do need to have advanced kidney failure (chronic kidney disease, stage IV). Your primary care physician can discuss the timing of transplantation, or you can call us directly for information at any time if you'd like to speak with one of our doctors.

Thanks to sophisticated techniques, Montefiore can transplant kidneys into patients otherwise considered ineligible due to circulating antibodies or incompatible blood types. We take advantage of our advanced immunology laboratory with flow cytometry and other technology to find the best kidney match and to diagnose and treat organ rejection before injury to the transplanted kidney occurs.

The Living Donor Center at the Montefiore Einstein Center for Transplantation

We offer a dedicated live donor team organized around the health and safety of all potential living donors for transplant. The Live Donor Center includes a full-time donor advocate, who counsels the donor on options, sees the donor pre- and postoperatively, and participates in a multidisciplinary committee to discuss living donation.

Our full-time living donor coordinator is available to expedite evaluations for all potential live donors. This living donor coordinator can provide counseling over the phone and coordinate visits around the donor's specific needs. For example, some testing can be performed locally for donors coming from a long distance.

Benefits of Living Donor Transplantation

Due to the long waiting time for deceased donor organs, living donors are recommended whenever possible. Living donors can be blood relatives, spouses or friends. Finding a live donor can mean having the transplant at your convenience based on your medical condition, often avoiding years of dialysis that can impair health and function. With a living donor, we can verify the quality of the donated kidney before it is removed more easily than with a deceased donor. Finally, living donor kidneys have been shown to function better in the short and long terms than deceased donor kidneys.

Removal of a single kidney from a healthy living donor is safe and poses very little risk to the donor. Here at Montefiore, our transplant surgeons remove the donor kidney using a minimally invasive laparoscopic technique that causes less scarring and discomfort and requires only a day or two in the hospital. Donors can return to normal activities in two to four weeks. There is no cost to the donor related to the hospitalization or immediate follow-up care. We provide follow-up medical care for the donor for two years after donation, at no expense to the donor.







Deceased Donor Transplants

If patients do not know someone who can donate a kidney, we will place them on the waiting list for a deceased donor kidney after completion of the evaluation.

In kidney transplantation, rank on the list is based on the waiting time and degree of match between donor and recipient. Recipients with longer waiting time and better match with any deceased donor will be higher on the list to receive that organ.

All deceased donor organs are carefully screened by an organ procurement agency for any transmissible diseases and infections. If donors are considered higher risk for transmission of disease, we will discuss this with you before transplantation and let you make the decision whether to proceed or remain on the list. In addition to the assessment by the organ procurement agency, our surgeons independently verify many aspects of the donor kidney to ensure suitability for transplant, including the anatomy of the kidney, biopsy results and parameters related to machine perfusion of the kidneys prior to transplant.

Transplantation in Sensitized Patients

The Montefiore Einstein Center for Transplantation performs kidney transplants on patients who normally would be ineligible due to circulating antibodies that developed through pregnancy, blood transfusion or previous transplantation. We evaluate the patient's degree of sensitization and the strength of antibodies using novel tissue-typing methods before transplantation. Candidate recipients undergo a special process called desensitization that utilizes plasmapheresis (blood filtration), intravenous infusion of a blood product called immune globulin, and a medication called rituximab to remove antibodies that are likely to attack a donated kidney and cause it to be rejected. We have utilized this desensitization procedure successfully to increase the number of patients eligible for transplants.

Transplantation in Blood Group-Incompatible Patients

If a person receives a kidney from someone with an incompatible blood type, antibodies will cause the immune system to reject the kidney immediately. The Montefiore Einstein Center for Transplantation offers two options for these patients, who normally would be ineligible for transplant.

The first option is participation in a paired kidney exchange. This innovative program assists incompatible donor/recipient pairs to find matched donor/recipient pairs who are willing to exchange donor kidneys (see sidebar, "12 Kidneys, 24 Operations, 1 Historic Moment"). The second option is to undergo desensitization.

12 Kidneys, 24 Operations, 1 Historic Moment

The Montefiore Einstein Center for Transplantation was one of nine medical centers that participated in the nation's first multi-state paired kidney exchange. In the transplant marathon, which took place over two months starting in February 2010, 12 patients received kidneys from 12 living donors they did not know. This was the first time a paired exchange of this magnitude had been attempted.

Of approximately 80,000 patients in the United States listed for kidney transplantation, only about 16,000 or so receive a donor organ every year. The average wait for a cadaver kidney is four years. Patients who identify a friend or family member willing to donate a kidney can be transplanted more quickly. But sometimes, tissue matching determines the donor kidney is incompatible. In these cases, the donor can be matched with another recipient and the recipient with a different donor for a paired kidney exchange.

For the transplant marathon, donors and recipients were located in California, Utah, Maryland, New Jersey, Virginia and New York.

"This was a successful solution to an ongoing problem and an excellent example of our dedication to getting patients the organs they need," says Milan Kinkhabwala, MD, Chief, Division of Transplantation.



Comfortable, Convenient Facilities

If you are coming to Montefiore from a distance for your transplant evaluation, you and your family can stay on our campus in attractive, inexpensive housing. Your family can also take advantage of this option while you are recovering from your transplant in the hospital. Just ask your doctor's office for information.

After your transplant, you will be admitted to a newly renovated inpatient transplant unit. If you have received a new kidney, you will likely stay five to seven days: pancreas transplant patients stay longer. The new unit is immaculate, attractive, comfortable and staffed with dedicated transplant nurses who will anticipate your every need.

After discharge, you will return periodically to our convenient outpatient facility designed specifically for transplant patients. Here, you will be able to see all members of your transplant team, have your blood work performed and have access to a broad range of support services, including family medicine, social work and nutrition services. This patient-centric approach helps ensure that your post-transplant care is comprehensive and well coordinated.

Evaluation Process

We welcome the opportunity to evaluate your needs. Because the extensive evaluation process is time consuming, we will work with your schedule to make the process as convenient as possible.

Determination is made on an individual basis. Evaluation for kidney transplantation may include some or all of the following tests:

- Mandatory education program attended by the patient and a family member or companion
- Consultation with a transplant surgeon, nephrologist, transplant coordinator, social worker and financial counselor for medical, social and psychological evaluation
- Blood tests
- CXR
- Mammogram (Women age > 40)
- Pap smear (Women age >18)
- Colonoscopy (Age > 50)
- EKG, ECHO and cardiac stress test
- Other tests if medically indicated

After the evaluation is completed, your needs will be discussed at a selection meeting attended by all team members. There are three possible results: you will be considered suitable for transplantation, you will be considered possibly suitable but requiring additional testing, or we will recommend alternative treatments.



About the Center for Transplantation

Faculty and Staff

The Kidney & Pancreas Program has assembled a world-class team of transplantation specialists from leading institutions and offers a wide range of experience in the treatment of kidney and pancreas disease and research. This provides a unique combination of experience and innovation.

The transplant team is composed of nephrologists, transplant surgeons and transplant anesthesiologists, all of whom have earned a strong national reputation in abdominal organ failure and are fellowship-trained. The quality of immediate post-transplant care is ensured by a critical care team with extensive experience treating transplant patients under the guidance of a surgical intensive care unit director, who is also a transplant surgeon.

Information for Referring Physicians

We prefer to collaborate with you in the care of your patient. It is not necessary to determine the need for transplantation before referring a patient. We will evaluate the patient and determine whether transplantation is the best option. After our initial examination, we will contact you with our recommendations.

In most cases, we see patients within 48 hours of referral and can see patients the same day for urgent problems.

We offer angio-access surgery and advanced general surgical care for patients on dialysis.

We are flexible with regard to pre-transplant testing. The tests may be performed at your facility, the facility of your choice or at Montefiore.

Contact Information

- To make an appointment for a kidney or pancreas transplant evaluation, you or your physician should call 877-CURE-KDNY (877-287-3536) or 718-920-4459.
- If you would like to speak with a physician or nurse on the transplant team, you can reach us at any time through the same referral line. Simply ask to speak with any team member listed in this brochure or with the attending surgeon, nephrologist or coordinator on call



Montefiore Kidney Transplantation Patient Success Story

Kenneth B was newly married, working at a career and in renal failure. His wife, Tamara, wanted to donate a kidney to him but was not a match. Kenneth had high anti-HLA antibodies in his blood and had only a 1% chance of finding a match. The pair was entered into the National Kidney Registry and a year later still had not found a match.

Kenneth continued to have hemodialysis treatments three times a week while waiting for a match. Then came Hope Dacosta. Hope had recently started dialysis and came to Montefiore for a transplant but was also a sensitized patient with less than a 3% chance of finding a match. Her daughter, Violet, was tested but did not match her mother. However, it was soon realized that Violet was a match for Kenneth. Hope was successfully transplanted with a non-directed donor from New York, Kenneth received Violet's kidney, and Tamara's kidney went to a recipient in California.

This record-setting chain consisted of 21 transplants (meaning 42 operations) over the course of eight months at 11 different hospitals across the United States. All donors and recipients are doing well.



Survival Statistics

One of the most active and successful transplant programs in the nation, the Montefiore Einstein Center for Transplantation has exceptional 1-year patient and graft survival rates.

SURVIVAL STATISTICS: 1/1/08 - 6/30/10					
Survival (1 year)	Donors	Adult Kidney Transplants		Pediatric Kidney Transplants	
		Number	Percentage	Number	Percentage
Patient Survival	Deceased Donor	166	93.95	12	100
	Living Donor	77	98.36	7	100
Graft Survival	Deceased Donor	186	89.17	16	93.75
	Living Donor	84	98.48	8	97.5

Montefiore Kidney & Pancreas Transplantation Staff

SURGEONS



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Specialty Interest: transplantation Medical Degree: Cornell University Medical College, New York, NY Residency: Cornell Medical Center,

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