MAIMO MEDNEWS IS THE PROVIDER E-NEWSLETTER OF MAIMONIDES HEALTH

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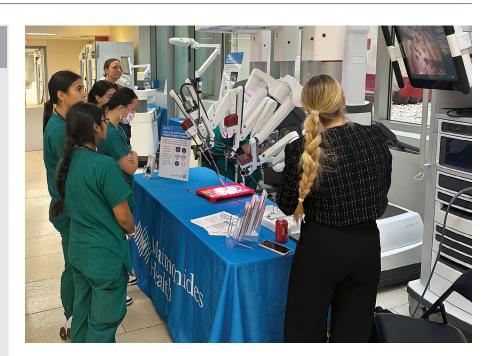
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◆ December 2024

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Expanding Brooklyn's Largest Robotic Surgery Program

Robotic-assisted surgery represents the future of precision surgery, transforming the surgical landscape with unparalleled accuracy and outcomes. At Maimonides Medical Center, we've integrated cutting-edge robotic platforms, including the latest da Vinci Robotic Surgical System and Ion navigational bronchoscopy, to deliver unmatched care. More than 35 surgeons comprise Maimonides' Robotic Surgery Program, performing more than 1,300 robot-assisted minimally invasive procedures every year and providing convenient access to leading-edge services that significantly enhance safety, accuracy, and recovery.

As Brooklyn's robotic surgery leader, we launched the area's first robotic surgery program in 2001. Within the past year, we've invested in three new, state-of-the-art da Vinci robotic surgery machines that have enhanced and expanded our robotics program. Today, in addition to other surgical areas, our experts incorporate these tools across urologic, abdominal, lung, and thoracic specialties, ensuring our patients benefit from the most advanced surgical options without leaving the borough.

"At Maimonides, we've always been early adopters of technology, and these robotic tools fit into that pattern," says <u>David A. Silver, MD</u>, FACS, Director of the Maimonides Division of Urology and Chief of Urologic Oncology in the Department of Surgery. "We have the oldest, most established, most well-developed robotic surgery program in the borough. And it has worked its way into every corner of surgery at Maimonides."

Now, Maimonides is designated as a Robotic Center of Excellence by the Surgical Review Corporation (SRC), highlighting our commitment to excellence in robotic surgery and high-quality patient care.

Maimonides offers robotic surgery across multiple specialties, including general surgery, minimally invasive gynecologic surgery, bariatric surgery, colorectal surgery, orthopedic surgery, pediatric surgery, thoracic surgery, and urological surgery. The benefits of robotic technology in surgery are numerous, including shortened recovery times and hospital stays, reduced pain and need for pain medications, reduced blood loss and scarring, and lower risk of infection, as well as improved visibility and higher precision for surgeons.

Urologic Robotic Surgery

According to Dr. Silver, Maimonides was one of the first hospitals nationwide to use robotic surgery for laparoscopic prostatectomy. With decades of experience, using this technique to remove the prostate is now considered routine at Maimonides.

Our surgeons also offer a wide range of other urologic procedures, including:

- Nephrectomy (kidney removal): Robotic systems provide precise control, minimizing damage to surrounding structures during kidney removal.
- Prostate enucleation (removal of prostate tissue blocking the urethra): Robotic assistance enables precise removal of obstructive prostate tissue, leading to improved urinary function and a faster recovery.
- **Ureteral surgery:** Robotic systems enhance precision in complex upper urinary tract reconstructions, reducing tissue damage and complications.
- Urologic cancer surgery: Robotic-assisted techniques allow for meticulous dissections and preservation of vital structures.

Blood loss is one of the biggest challenges with many urologic procedures. The robotic systems help surgeons avoid this problem, Dr. Silver says.

"In the old days of open, radical prostatectomy, or open nephrectomy, patients would routinely lose multiple units of blood and require a transfusion," he says. "Now, with the robotic tools, we are so confident that we expect patients will have minimal blood loss and we don't worry about transfusions."

Colorectal Robotic Surgery

Maimonides' investment in robotic surgery makes abdominal procedures less invasive and decreases patient recovery time, according to Rebecca Rhee, MD, Chief of Colon and Rectal Surgery. These tools also make it easier for our surgeons to complete complex rectal cancer surgeries such as low and ultra-low anterior resections to maximize sphincter preservation, allowing patients to avoid a permanent ostomy.

"It can be very difficult to do these procedures minimally invasively," she says. "But with the robotic system, we are well positioned to tackle these surgeries."

Dr. Rhee and her general and colorectal surgery colleagues complete hundreds of robotic surgeries every year. Their focus on these advanced techniques places Maimonides at the forefront of care for patients who require surgery to treat cancer or other abdominal conditions.

"Robotic surgery is where the field is going," Dr. Rhee says. "As Brooklyn's leading tertiary care center, we're staying on top of the cutting-edge, advanced techniques."

Lung and Thoracic Surgery

For over a decade, Maimonides has offered minimally invasive robotic surgery for treating lung cancer. More recently, the thoracic and pulmonary team has added robotic navigational bronchoscopy to its state-of-the art diagnostic capabilities. The ION robotic navigational bronchoscopy platform is a minimally invasive method for lung biopsies. The robotic system navigates into the lung with real-time three-dimensional imaging, allowing biopsy of lung nodules previously inaccessible. This could lead to earlier diagnosis and improved cure rates for lung cancer. This system strengthens Maimonides Lung Cancer Screening program, which is the largest lung screening

program in Brooklyn, utilizing low-dose CT scans to find lung cancers in an earlier, more curable stage before a tumor spreads.

"This state-of-the-art platform complements our existing lung cancer program," says <u>Jason Shaw, MD</u>, who serves as the Director of General Thoracic Surgery and the <u>Maimonides Lung Cancer Screening Program</u>. "It's an amazing diagnostic tool that will allow us to be more precise with procedures and biopsies. It also holds the potential to deliver treatments in the future."

In addition to its diagnostic capabilities, the robotic navigational bronchoscopy can be utilized to mark smaller tumors using a fluorescent dye tracer that facilitates precise surgical planning. With its steerable catheter, our surgeons can make sharp, accurate turns to reach smaller tumors deep in the lung: a small amount of a fluorescent dye can improve localization and more limited minimally invasive lung resections. This means less normal lung is removed and patients breathing is less affected by their surgery.

"This tool lets us see parts of the lungs beyond the parts of the bronchial trees that we can usually visualize with standard bronchoscopy," Dr. Shaw says. "This way, we're seeing tumors that are more peripherally located — not just the ones in the central part of the lungs."

This robotic system reduces risks associated with needle lung biopsies that traverse the chest wall, including

pneumothorax. Our doctors can use the system to biopsy several lung nodules simultaneously, even if on opposite sides of the body or different lobes of the lung, eliminating the need for multiple procedures.

"The ION meshes very well with our existing screening program by allowing us to more easily sort through a patient's pulmonary nodules to identify potential cancers," he says. "It's a tool that fully supports our goal of diagnosing earlier-stage cancers to save more lives."

Overall, expanding robotic surgery services at Maimonides underscores the hospital's mission to make the highest-quality care easily accessible to all patients in the Brooklyn area, according to Dr. Rhee.

"At Maimonides, we strive to always rely on the most advanced techniques, ensuring we deliver the highest standard of care to our patients," says Dr. Rhee. "Expanding robotic surgery services reinforces our commitment to advancing healthcare equity, ensuring every patient receives world-class surgical care close to home. With the wide variety of robotic surgeries we provide, patients can stay right here in Brooklyn and get the high-quality care they deserve."

For more information about robotic surgery at Maimonides, visit https://maimo.org/roboticsurgery/.

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Advancing Targeted Radiation Therapy with Ethos

By the end of 2024, healthcare providers will detect over 2 million new cancer cases¹ across the United States. More than half of patients diagnosed will require weeks of radiation therapy² as part of their cancer care plan. Now, with the Ethos therapy system, there's a new approach to standard radiation therapy that can shorten treatment duration, increase precision, and boost efficacy.

Ethos is an adaptive radiation therapy system that includes a linear accelerator (LINAC), says <u>David Berlach, MD</u>, Chair of Radiation Oncology at Maimonides. Providers can use it to adjust a patient's cancer treatment plan as often

as needed. By incorporating Ethos into its existing LINAC program in 2025, <u>Maimonides Cancer Center</u> is poised to become Brooklyn's leader in delivering this advanced form of radiation therapy.

"The Ethos system represents a brand-new paradigm shift in delivering radiation oncology. This approach marks a key advancement in improving the efficacy and future of radiation therapy in cancer care," he says. "With an adaptive radiation therapy system, we are set to streamline and simplify cancer treatments, benefiting hundreds of patients each year."

Adapting to Tumor Changes

For traditional LINAC therapy, providers rely on CT scans done before treatment that capture the size, shape, and location of a patient's tumor. Based on these parameters, the care team builds a treatment plan to deliver targeted radiation. However, this plan often spans several weeks, during which time a tumor's position or volume can change, affecting treatment accuracy. As a result, traditional LINAC may lose accuracy, Dr. Berlach says.



Ethos, which resembles an openbore CT scanner, offers a responsive solution to this challenge. Ethos enables clinicians to perform frequent imaging, sometimes daily, to detect changes in the tumor's structure.

"Tumors can change over the treatment period needed for radiation therapy,"
Dr. Berlach says. "With Ethos, we can scan patients more often — adjusting their care plan in real time.
This adaptability allows us to deliver precisely targeted radiation based on the tumor's current state, rather than relying on a static image from weeks prior."

Creating a Better Patient Treatment Experience

The Ethos system pairs high-quality, rapid CT imaging with artificial intelligence (AI). This combination makes it easier for care teams, which comprise up to eight providers, to create the most up-to-date, tailored treatment plans before each radiation therapy session, Dr. Berlach says.

"With this system, treatment planning is done in a matter of minutes," he says. "The plans are checked by a radiation

technologist and a physician. From start to finish — capturing the scan, creating the plan, and delivering treatment — the entire process can be completed in a 30-minute session."

The treatment process is simple and straightforward.

After capturing a new CT scan, providers run the image through AI algorithms to analyze the imaging data and differentiate between healthy and cancerous tissue. The software, with the guidance of the clinician, suggests the radiation dose to be delivered and accurately pinpoint the most effective target areas. As a result, the team of doctors, nurses, physicists, and radiation therapists, develops a personalized approach with higher, more precise doses of radiation, which can potentially necessitate fewer required treatment sessions.

In addition to online adaptive radiotherapy that Ethos is specialized with, Ethos can also support a variety of procedures, including stereotactic radiosurgery and image-guided radiation therapy. Dr. Berlach says. Ethos is versatile, and providers can use the system to treat almost any type of cancer. At Maimonides, the initial focus is treating gynecologic, head and neck, and prostate cancers.

Advancing Cancer Care at Maimonides

Maimonides has used LINAC-based radiation therapy for years. Adding the Ethos therapy system strengthens the program in two impactful ways, Dr. Berlach says. First, it positions Maimonides at the forefront of radiation therapy.

"The entire field is moving toward delivering fewer treatments with higher doses of radiation," he says. "This capability enables us to deliver these powerful doses while maintaining safety and efficacy."

In addition, the Ethos system strengthens Maimonides' ability to care for patients with the most complicated cancers.

"Our patient population includes many individuals with late-stage cancers, and some face social and financial challenges that complicate treatment adherence," he says. "Having the ability to adjust the radiation dose and target it as a patient goes through therapy enables us to tailor the treatment and prevent greater toxicity going forward."

Providing the same level of care in a shorter timeframe is also more convenient and cost effective.

Patients will spend less time and money traveling to Maimonides for radiation therapy.

With the Ethos therapy system, Dr. Berlach says, Maimonides becomes an even stronger destination for cancer care, and this investment in cutting-edge technology reinforces its commitment to offering the highest standard of care in Brooklyn.

"We believe that our patients in Brooklyn and the surrounding communities deserve the same high-quality healthcare that's available elsewhere across the country," he says. "Being able to limit the number of treatments and help patients return to their families and their jobs sooner will make a huge impact on their quality of life."

Learn more about radiation therapy at Maimonides
Cancer Center at https://maimo.org/treatments-care/cancer-center/radiation-therapy/ or call (718) 765-2500 to make a referral.

- https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2024/2024-cancer-facts-and-figures-acs.pdf
- ² https://www.who.int/news/item/05-03-2021-new-who-iaeapublication-provides-guidance-on-radiotherapy-equipment-tofight-cancer

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Brooklyn's First Comprehensive Menopause Center

The newly launched Menopause Center at Maimonides Women's Health Institute offers centralized, comprehensive care for women experiencing perimenopause and menopause symptoms.

Maimonides OB/GYN specialists and women's health providers bring together extensive training and a patient-centered focus on menopause care. Brooklyn's first and only hospital-based menopause center combines evidence-based treatments with a holistic philosophy to help women achieve long-term wellness.

While all OB/GYN specialists are able to care for menopausal women, the majority of practices are largely centered around care for women of reproductive age. At Maimonides Menopause Center, providers who are certified in menopause medicine have created an environment geared specifically toward caring for women in midlife and after.

"Sometimes when women are facing menopause-related issues, they aren't sure where to access care or even get their questions answered," said <u>Sarah Zuercher, MS, MSN</u>, Director of OB/GYN Clinical Programs at Maimonides. "When people come to our center, they should feel confident



that they're going to get very specific attention from providers who are both genuinely interested in menopause care and knowledgeable about it."

"We take a holistic approach to menopause care," added Poroshat Shekarloo, MD, a Maimonides OB/GYN physician who was instrumental in creating the new center.

"Much of what we're offering is about supporting overall wellness and longevity, with individualized plans prioritizing each patient's needs."

Patient-Driven, Tailored Treatment Plans

Staffed by top gynecologic and women's health specialists. the new Menopause Center provides a convenient, one-stop source of care for any menopause-related concern, from common symptoms to more complex cases. Women can self-refer or be referred by their primary care provider, OB/GYN, or other specialist and receive tailored treatments to address specific challenges.

Comprehensive Services and Specialized Care

At the center, patients can access individualized counseling and treatments tailored to their needs. They can also access support to optimize their midlife health. Available services and treatments include:

- Patient education: One-on-one counseling about perimenopause and menopause helps women understand what to expect during these final phases of the female reproductive cycle.
- Symptom management: Providers offer hormone therapy and other evidence-based treatments to help manage common concerns, such as hot flashes, night sweats, irregular bleeding, vaginal dryness, sleep issues, urinary incontinence, fatigue, and sexual health challenges.
- Mental health counseling: Patients can access counseling and, if needed, acquire prescriptions for antianxiety medications and/or antidepressants to help with perimenopause- or menopause-related mood shifts.
- Lifestyle counseling: Providers conduct a midlife health assessment to support women in identifying new exercise and dietary practices to improve perimenopause or menopause symptoms and enhance their overall quality of life.
- Women's health services: Preventive services like bone mineral density scans, pelvic exams, pap smears, and comprehensive breast cancer screening are also available and support patients' overall health.

Convenient and Accessible

The Menopause Center is conveniently co-located with the other Maimonides Health OB/GYN and Women's Health subspecialty programs at our Women's Health Institute. This brings patients a seamless referral process and crosscollaboration among different specialties. Patients benefit from easy access to specialists such as urogynecologists, simplified appointment scheduling, and an environment that fosters coordinated care.

"Being able to personally introduce a patient to another specialist on our team, like a pelvic floor therapist or our urogynecologist, makes the process smoother and enhances continuity of care," Zuercher said. "The ability to make those introductions with ease is a really nice aspect of the program."

Comprehensive Care Team Dedicated to Midlife Wellness

Staff at the Menopause Center include physicians and nurse practitioners, a women's health psychiatrist, a clinical social worker, and other specialists whose services support women's midlife health. This model addresses physical symptoms and fosters a comprehensive approach to well-being.

Rapid Growth and New Programs

Having just launched, the Menopause Center is currently in a phase of rapid growth and new patient onboarding. Zuercher said that staff are exploring additional service opportunities, including plans to launch a women's metabolic health program within the center in January.

"We hope our comprehensive, holistic approach to menopause care helps women feel heard and understood. We want patients to come away feeling as though they have found, in our staff, a set of advocates who will support them in feeling their best during this significant stage of their life," Shekarloo said.

For more information on OB/GYN and women's health services at Maimonides, visit https://maimo.org/mdp/ob- gyn-specialty-services-and-womens-health/. To refer a patient, call (718) 283-7979.

Bone & Joint Center Expands Sports Medicine Team

Millions of Americans undergo some type of orthopedic procedure each year, including hundreds of thousands of people who live in New York City. The majority of patients seek the most advanced, innovative procedures that address their concerns and offer the fastest recovery. At Maimonides Bone & Joint Center, our orthopedic surgery specialists are uniquely positioned to deliver leading-edge treatment options. For the past four years (2022-2025), Healthgrades has ranked our providers among the top 5 percent nationwide. And this year, Healthgrades named Maimonides the No. 2 hospital in New York state for orthopedic surgery.



Our specialty-trained providers contribute significantly to these honors and rankings. Recently, we expanded our team, adding two sports medicine doctors who bring additional research-based expertise to patient care.

Ultrasound-Guided Treatments for Musculoskeletal Disorders

Philip Montana, MD, MFA, brings a distinctive background to his role as a Maimonides sports medicine physician. After working for several years as a professional dancer and fitness instructor, he pivoted to a career in medicine, where he pairs his expertise in movement with his commitment to healing injuries. He recently worked as one of the team physicians for the Boston Ballet, as well as several collegiate teams and performing arts schools throughout the greater

Boston area. Today, he uses ultrasound-guided techniques to diagnose musculoskeletal conditions and perform nonsurgical procedures.

"I love using ultrasound in my practice because it gives me the opportunity to see pathology that cannot be identified with physical exam alone. In real-time, I can identify a patient's problem and deliver selective injections that can help control their pain while they rebuild their strength and stability," he says. "It's also nice to be able to show people their anatomy, explain their problems, and deliver treatments in the least invasive way."

Dr. Montana specializes in treating patients with conditions like hip micro-instability, hypermobility, arthritis, and overuse injuries. He also provides concussion management and return-to-play care. To address these conditions and help patients avoid surgery, Dr. Montana offers several advanced, leading-edge, ultrasound-guided treatments, including:

- Nerve blocks and hydrodissections minimally invasive injections that relieve pressure around nerves, targeted to alleviate pain and inflammation.
- Orthobiologics therapies that use the patient's own cells, including platelet-rich plasma (PRP), to encourage healing.
- Prolotherapy a nonsurgical regenerative therapy that can be used to trigger healing or create joint stability.
- Tenex a minimally invasive procedure using a small needle to remove damaged tissue and treat chronic tendon pain.
- Viscosupplementation a minimally invasive procedure that injects hyaluronic acid into a joint to treat osteoarthritis.

Dr. Montana's research focuses on utilizing dynamic ultrasonography to better understand hip micro-instability, an understudied cause of hip pain. Additionally, he has worked extensively on various treatments for patients with Ehlers-Danlos syndrome. This research has focused on developing interventions that utilize prolotherapy to provide stability for multi-directional shoulder and sacroiliac joint instability.

Performing arts medicine is a particular area of interest for Dr. Montana and he is currently working to develop relationships with dance and theater companies throughout Brooklyn. His experience as a professional dancer allows him to understand, treat, and connect with this unique population of athletes.

"Primary care providers should refer patients to a sports medicine specialist, like me, if someone isn't recovering the way they would expect after six to eight weeks of physical therapy," he says. "This failure to improve may indicate an underlying issue that hasn't been detected and requires further investigation."

Dr. Montana utilizes diagnostic and interventional ultrasound to treat these patients and help them on their path to recovery.

Advanced Sports Medicine and Orthopedic Surgery

Ron Gilat, MD, has also joined the Bone & Joint Center as a sports medicine orthopedic surgeon. With extensive experience treating professional athletes, including serving as a team physician for the NBA's Chicago Bulls and MLB's Chicago White Sox, he now serves patients in the Brooklyn area. Together with his Maimonides colleagues, he plans to build a practice that provides the most advanced treatments available.

"My goal is to deliver top-notch sports medicine and orthopedic care to all patients, whether they're professional athletes, semi-pro or recreational athletes, or those experiencing some type of orthopedic concern," Dr. Gilat says. "I believe in employing a shared-decision process with my patients and integrating research and innovation to create the best possible care solutions tailored to each patient to help them achieve their goals."

Dr. Gilat will always attempt least-invasive non-surgical management first whenever possible. If surgery is indicated, Dr. Gilat specializes in minimally invasive arthroscopic techniques to treat knee, shoulder, and hip problems. He also performs complex knee preservation procedures to repair and restore cartilage, meniscus, and ligamentous injuries, as well as osteotomies to realign bones. In addition, his expertise includes procedures to manage shoulder instability and pain including labral tears, rotator cuff tears, and bicep injuries.

Dr. Gilat is an avid researcher who uses his investigations to improve the clinical care he provides. He specializes in meniscus and cartilage restoration techniques that promote knee preservation and longevity. Now, he's looking to personalize that care.

"With my colleagues, we are looking into machine learning and artificial intelligence to try to customize cartilage restoration procedures, in an attempt to optimize treatment selection for each patient," he says. "We're striving to help providers choose the right treatment modality for the right patient taking all relevant patient-specific attributes into account."

In addition, he is expanding nonsurgical options for patients who prefer to avoid surgery. His approach includes exploring the benefits of multiple orthobiologic treatments, including BMAC, PRP, and cell therapies. Dr. Gilat is a renowned international expert in the field of orthobiologics and had published extensively on this topic including the recent NBA team physician consensus statement on orthobiologics.

"We can use these orthobiologic treatments to augment surgical outcomes or serve as a standalone option for patients who aren't ideal surgical candidates or simply prefer nonsurgical care," he says. "When indicated, orthobiologics may help patients manage pain, return to daily activities faster and improve their overall rehabilitation experience."

Ultimately, Dr. Montana and Dr. Gilat are enthusiastic about providing care at Maimonides Bone & Joint Center, joining a growing team of providers offering complete, compassionate care that providers and patients can trust.

"Maimonides offers the top facilities available in Brooklyn," Dr. Gilat says. "It's a place you want to go when you need care because the people who care for you are deeply rooted in the community."

Learn more about the orthopedic services available at Maimonides Bone & Joint Center at https://maimo.org/treatments-care/bone-and-joint-center/ or call (718) 283-7400 to make a referral.

Advanced Structural Heart Care: Maimonides TAVR Program

Maimonides Heart & Vascular Institute is Brooklyn's premier destination for advanced structural heart procedures, performing more than 1,000 transcatheter aortic valve replacement (TAVR) procedures since 2012. By providing this minimally invasive solution for severe aortic stenosis, Maimonides offers a vital treatment for patients who are at high or intermediate risk for traditional open-heart surgery.

"We were among the first <u>Structural Heart Centers</u> to perform TAVR when it first received FDA approval and the very first in Brooklyn," says <u>Robert Frankel, MD</u>, Director of Interventional Cardiology at Maimonides. "Our team's longevity allows us to anticipate each step in the process, ensuring smooth, seamless care for those we serve."

The team's expertise in heart and vascular care, coupled with state-of-the-art facilities, is the foundation for Maimonides to deliver outstanding outcomes for complex valve conditions, making it a trusted partner for referring physicians throughout the region.

Comprehensive, Cutting-Edge Hybrid OR Facilities

At the heart of Maimonides Structural Heart Program are its two hybrid operating rooms (ORs), which integrate a cardiac catheterization lab with the capabilities of a full surgical suite. This advanced setup supports catheter-based and open-heart procedures, providing critical flexibility for high-risk and complex cases.

"Our hybrid ORs allow us to import previous scans and superimpose them over current, real-time images," says Dr. Frankel. "This precision ensures optimal outcomes during procedures like valve placements."

These capabilities are further enhanced by the expertise of a dedicated radiologist who has been with the program for over a decade. Dr. Frankel adds, "Her experience and consistency are invaluable, ensuring the highest quality imaging for every patient, every time."

Maimonides is one of the few centers in Brooklyn to feature such facilities, with a third hybrid OR currently under construction. The hospital is also expanding its catheterization lab facilities, with three new state-of-the-art cath labs slated to open in 2025. This ongoing investment reinforces our commitment to innovation and a seamless patient experience.

"The cath lab expansions and new imaging technologies at Maimonides enable unmatched flexibility for advanced cardiac care," says <u>Gregory Crooke, MD</u>, Surgical Director of the TAVR Program and Co-Director of the LVAD Program. "These innovations foster collaborative, multidisciplinary approaches, integrating interventional cardiology and cardiac surgery in hybrid environments.

"The hybrid OR's unique design combines the functionality of a full cardiac surgery operating room with a catheterization lab. This integration allows us to deliver safer, more precise cardiac care for complex procedures like TAVR and hybrid mechanical circulatory support, which may involve both percutaneous and open approaches."



A Seamless and Patient-Centric Approach to TAVR

One defining component of Maimonides' TAVR program is the approach to patient care. Patients begin with a comprehensive assessment conducted in one visit by a multidisciplinary team.

"When patients arrive, they see their specialized nurse practitioner, cardiac surgeon, and interventional cardiologist in a single visit," Dr. Frankel explains. "We've streamlined the preoperative testing process, so patients compete all essential diagnostics in one visit, minimizing trips and enhancing their understanding of their condition and treatment options."

This unified approach enables faster decision making and provides patients with confidence in their personalized care.

Advanced imaging, such as CT angiography, plays a pivotal role in the planning process, helping the team select the optimal procedure route and valve type. After the initial visit, the entire team—including interventional cardiologists,

cardiac surgeons, imaging experts, and care coordinators reviews the findings and finalizes a tailored plan.

"Our multidisciplinary valve clinic brings together a full team of experts in one visit to assess and plan care," says Dr. Crooke. "This collaborative approach saves patients time and ensures their care is seamlessly coordinated."

Patients often present with symptoms such as shortness of breath, chest pain, or dizziness, which can be signs of aortic stenosis. These indicators are critical for primary care providers and cardiologists to monitor, as patients experiencing these symptoms may benefit from an evaluation for TAVR.

Commitment to Innovation Through Research

Maimonides is deeply invested in advancing TAVR and other heart valve procedures through research and innovation. As a participant in numerous clinical trials, Maimonides has helped develop smaller, safer catheters and continues to play a role in the evolution of valve technology.

"We've been involved in clinical trials from the start, working with companies to refine these devices and improve patient safety," Dr. Frankel says.

"A dedicated team ensures clinical trials follow rigorous protocols, generating high-quality data and advancing patient care," says Dr. Crooke.

Outstanding Nursing Care at Every Level

Beyond research, Maimonides is proud to offer exceptional nursing care across every stage of the patient journey. From the catheterization lab to the hybrid OR, and cardiac surgery ORs, nursing teams collaborate seamlessly with specialists to ensure the highest standards of care and optimal outcomes. This multidisciplinary teamwork is essential during advanced procedures like TAVR, where precise coordination is critical to patient outcomes.

Following procedures, patients recover in the cardiac surgery ICU, widely recognized as the best in Brooklyn and among the finest in New York City. This state-of-the-art unit is staffed by highly skilled nurses who deliver unparalleled care to critically ill patients, combining clinical expertise with compassionate support.

"Our nursing teams are second to none," says Dr. Crooke. "Their dedication ensures the best outcomes and comfort for every patient."

Coordinated Care Team Approach

Maimonides' TAVR program benefits from a cohesive team of specialists who contribute to an excellent patient experience, from consultation through recovery. The team, which includes interventional cardiologists, cardiothoracic surgeons, radiologists, echocardiographers, highly skilled and compassionate nurses, and dedicated heart coordinators, has worked together for over a decade.

"This longstanding team synergy means we can anticipate each step, enhancing safety and efficiency for our patients," says Dr. Frankel. "The patients and their families feel that personal connection because we, the attending physicians, are there at every stage—from consultation to the procedure and follow-up."

This coordinated care model is a key differentiator for Maimonides. It ensures patients have access to the experts involved in their treatment and provides continuity of care that leads to better outcomes.

Personalized Follow-Up and Support

The Maimonides TAVR team prioritizes thorough education and continuous support throughout a patient's TAVR journey. Dr. Frankel says this is another program standout. "We have two full-time structural heart coordinators who are constantly in touch with patients. We want them to understand the procedure and feel comfortable, so we're always available for follow-up questions, even if it means doing FaceTime calls with family members."

The follow-up process at Maimonides extends beyond the procedure, with structured check-ins at 30 days and 11 months, ensuring the new valve functions well, and the patient's recovery is on track. This thorough approach also includes educating patients on post-procedural care, such as dental hygiene, and avoiding specific activities to prevent infection.

"We call referring doctors ourselves—no nurses, no residents—to keep them updated on their patient's progress every step of the way."

Specialized Capabilities in Structural Heart Care

Beyond TAVR, Maimonides' structural heart program provides solutions for routine and complex heart conditions and procedures. These include advanced mitral valve repair with the MitraClip, atrial septal defect (ASD) to close abnormal openings between the atria, and patent foramen ovale (PFO) closures that repair a small hole in the heart. "We also implant the WATCHMAN device, which helps people with non-valvular atrial fibrillation (AFib) reduce the risk of blood clots without the use of lifelong blood thinners," Dr. Frankel explains.

Additionally, our heart and vascular team collaborates closely with neurology specialists to address cases where cardiac conditions, such as PFO, may contribute to stroke risk.

"For example, young patients with strokes may have a small heart opening—a 'trapdoor' that allows clots to pass and reach the brain," Dr. Frankel adds. "We work with neurologists to identify and close these openings, markedly reducing the risk of recurrent strokes. It's an approach that goes beyond routine structural heart care and highlights our commitment to holistic, multidisciplinary solutions."

Maimonides is a Destination for High-Risk Cardiac Patients

As a high-performing center of excellence, Maimonides is equipped to treat patients who may not qualify for traditional surgical options. The TAVR program's tailored assessment and risk management protocols ensure even the highest-risk patients receive safe, effective care.

"For high-risk patients, our TAVR program offers a minimally invasive alternative that significantly reduces recovery

time and complications," says Dr. Crooke. "Our approach ensures decisions are made objectively and always in the patient's best interest, free from bias toward any one treatment option."

With the highest quality ratings in TAVR outcomes and a program focused on innovation and patient-centered care. Maimonides offers an ideal choice for physicians considering referrals for patients with complex heart conditions.

Connect your patients with Brooklyn's leader in minimally invasive valve replacement. For more information on our Structural Heart Center, visit https://maimo.org/treatments- care/heart-vascular-institute/structural-heart-center/. To refer a patient for comprehensive cardiac treatment, call (718) 283-7364.

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Pediatric Stimulation Testing: Evaluating Short Stature

Growth hormone deficiency (GHD) is a rare pediatric condition that leads to slower than normal growth in children. It impacts only 1 in 4,000 to 1 in 10,000 children¹, but it can trigger additional muscle and bone problems, as well as emotional and mental stress. Early diagnosis of growth hormone deficiency can change the course of a child's health and future. Pediatric stimulation testing offers a clear path toward identifying growth hormone deficiency and providing timely treatment.

The pediatric endocrinologists at Maimonides Children's Hospital are regional leaders in providing this testing. They can see children with suspected GHD within a few weeks of referral, potentially increasing access to this evaluation.

"The awareness of short stature and height problems is very high," says Irina Kazachkova, MD, Director of Pediatric Endocrinology at Maimonides. "Pediatric stimulation testing is necessary to address this concern and get these children the treatment they need to avoid long-term problems."

Diagnosing Growth Hormone Deficiency

GHD is a hormonal condition that occurs when a child's pituitary gland doesn't produce enough of the growth hormone somatotropin. In the most severe cases, growth velocity may slow down in infancy or right after birth, but it is most commonly discovered in patients around 2 to 3 years of age. In addition to growth reduction, this condition also contributes to several other health problems, including



delayed tooth development, late-onset puberty, less hair growth, and low bone density.

Timely GHD diagnosis and treatment is critical, Dr. Kazachkova says. With appropriate treatment, children can reach a normal height, develop better lean muscle mass and bone density, and lower some of their risks for cardiovascular disease later in life.

Accurately diagnosing GHD can be a multistep process. Pediatricians and primary care providers use standard sexappropriate height, weight, and BMI charts to determine if a child has short stature and/or slower than normal growth velocity. They match child's height to genetic height, also called mid-parental height, and to pubertal status in older

children. Blood and bone age tests also provide valuable information. But none of these details can point to a definitive diagnosis, Dr. Kazachkova says.

"Assessment of pituitary GH production is difficult because GH secretion is pulsatile, with the most consistent surges in sleep," explains Dr. Kazachkova. "Between normal pulses of GH secretion, serum GH levels are low, often below the limits of sensitivity of most conventional assays. Thus, measurement of a random serum GH level is not helpful in diagnosing GHD — instead, insulin-like growth factor 1 (IGF-1) and insulin-like growth factor binding protein-3 (IGFBP-3) are measured because they reliably represent GH sufficiency or deficiency."

With this in mind, the diagnosis of GHD is made with a combination of clinical assessment and height and GV measurements, IGF-1 and IGFBP-3 levels, and GH stimulation tests.

Pediatric GH stimulation testing makes it possible to discern GH levels as they fluctuate; it's a more targeted blood test that evaluates a patient's growth hormone level at a designated time after direct exposure to stimuli. Based on the results, providers can see specific growth hormone level changes and can diagnose growth hormone deficiency if a patient's growth hormone level does not rise to within the normal range (10 ng/mL to 50 ng/mL) after stimulation.

Pediatric Stimulation Testing

Pediatric stimulation testing is a lengthy process, Dr. Kazachkova says. This fasting, ambulatory test can last between two and five hours, and it requires multiple blood draws to monitor growth hormone levels.

There are five different medications providers can use to stimulate growth hormone production. Maimonides endocrinologists use two: arginine and clonidine. Arginine is an intravenous medication, and clonidine is a blood pressure medication, delivered as a pill, that also triggers an increase in growth hormone. With both medications, providers conduct blood tests every 30 minutes to pinpoint when and at what measurement the patient's level peaks.

Streamlined Access to Treatment

While pediatric stimulation testing is vital for proper diagnosis, it has another, equally important role, Dr. Kazachkova says. It opens the door for children to get easier access to the daily synthetic hormone injection therapy that endocrinologists most commonly prescribe for this condition.

"GH stimulation testing determines final diagnosis of GH deficiency, and thus a patient's eligibility for growth hormone treatment," she says. "GH isn't a medication we can freely

use without appropriate testing and eligibility criteria, but as soon as a child is diagnosed with growth hormone insufficiency or deficiency, the availability of growth hormone treatment is virtually 100%."

The Maimonides Difference

As pioneers in pediatric endocrine care, the Maimonides Children's Hospital team is dedicated to bringing specialized testing and compassionate care to children and families across our region. Although pediatric stimulation testing is an outpatient procedure, it's a lengthy process. Sitting through hours of testing can be difficult for young children and their parents, Dr. Kazachkova says. To make patients as comfortable as possible, the multidisciplinary team of endocrinologists, nurse practitioners, and nurses perform all testing at Maimonides' Infusion Center.

"Our Infusion Center is fully set up to make this testing process as relaxed as possible," she says. "They have extensive experience with infusions to make medication delivery easier."

Beyond clinical expertise, Maimonides provides a calming environment designed to ease the testing experience for young children and their families, with a multidisciplinary team is on hand to monitor and attend to children throughout the entire test. Additionally, each infusion bay is equipped with comfortable chairs, televisions, and entertainment materials to reduce stress and anxiety for each patient.

For children showing signs of growth delay, Dr. Kazachkova says, pediatricians and primary care providers should consider an early referral for specialist evaluation. In many cases, Maimonides endocrinologists offer expedited next-day appointments and the expertise necessary to ensure accurate diagnosis and timely intervention. This rapid access allows primary care providers to move children quickly toward the care they need, giving families peace of mind and confidence in their child's growth journey.

"If a provider is concerned about a child with short stature, I advise them to send that patient to us for evaluation," she says. "We can determine if they need pediatric stimulation testing and can help them enroll in treatment upon diagnosis."

For more on pediatric stimulation testing and our comprehensive approach to growth disorders, visit https://maimo.org/treatments-care/childrens-hospital/pediatric-endocrinology-and-diabetes-care/ or call (718) 283-7500 to make a referral.

¹ https://pmc.ncbi.nlm.nih.gov/articles/PMC3279941/

Maimonides Holds First Annual Neurology Symposium

The inaugural Maimonides Neurology Symposium, held on Nov. 14 at Maimonides Medical Center, brought together more than 200 neurology specialists, primary care physicians, trainees, and non-physician staff, underscoring Maimonides' leadership in neurological care and research. The event featured diverse sessions, marking significant strides in transforming the field.

The event was spearheaded by Nuri Jacoby, MD, Vice Chair of Neurology at Maimonides Medical Center and Associate Professor of Clinical Neurology at SUNY Downstate Health Sciences University. According to Dr. Jacoby, transformative advancements have been made in the field over the past decade, with treatments once unthinkable for conditions like spinal muscular atrophy, myasthenia gravis, and Alzheimer's Disease now becoming widely available.

"When I first began my residency in neurology in 2009, there were limited treatment options for many neurological conditions, but that is different today," he said. "The field is advancing rapidly, with truly groundbreaking therapies."

The success of the symposium represents Dr. Jacoby's vision to create a setting to foster knowledge-sharing among the region's neurology and primary care specialists. The symposium also highlights the clinical expertise of the expanding Maimonides neurology team, which has grown to 11 specialists providing advanced neurological care to the Brooklyn community for a range of conditions.

Clinical Collaboration Bolstering Expertise and Innovation in Brooklyn

Presented by Maimonides Neurosciences Institute in partnership with the Brooklyn Neuroscience Center at NYC Health + Hospitals/Kings County and SUNY Downstate Health Sciences University Department of Neurology, the symposium spotlighted advances in neurologic patient care in Brooklyn through clinicians' combined clinical expertise, research efforts, and educational impact.

"Our partnership enables us to leverage collective knowledge to advance patient care and support a broader medical community," Dr. Jacoby says.

Symposium Highlights: Advancing and Expanding Treatment Options

The day began with a welcome address from Daniel M. Rosenbaum, MD, Distinguished Service Professor & Chair of Neurology at SUNY Downstate Health Sciences University and Regional Chair of Neurology at Maimonides Medical Center, setting the stage for sessions highlighting significant advances.



Innovations in Multiple Sclerosis (MS) Treatment

Attendees explored transformative advancements in neuroimmunology, especially in multiple sclerosis (MS) care, in a session led by Jamie Nichols, MD, Attending Physician in Neurology at Maimonides and Assistant Professor of Neurology at SUNY Downstate Health Sciences University. Historically, treatments reduced MS relapse rates by only 20-30%¹, leaving many patients experiencing frequent relapses. During these relapses, patients might lose vision, experience instability, or develop weakness, often requiring hospitalization and IV steroids to improve—though many would not fully return to their baseline level of function. This "relapsing-remitting" pattern characterized most MS cases, impacting long-term quality of life.

In recent years, greater medical therapies have emerged for MS, dramatically reducing relapse rates by as much as 67%². These advancements mark a fundamental change, with early indicators suggesting they may significantly slow disease progression, potentially lessening the long-term debilitation many patients face.

Maimonides, long recognized as an MS Center of Excellence by the National MS Society, provides specialized care that enables patients to lead fuller lives. With new therapies emerging annually, Maimonides remains at the forefront of MS treatment. continuously advancing treatments.

Advancements in Myasthenia Gravis and Neuromuscular Care

Myasthenia gravis (MG) is a neuromuscular disorder impacting both younger and older patients. MG affects the neuromuscular junction, disrupting the nerve-muscle connection due to autoimmune antibody attacks. Symptoms include double vision, difficulty swallowing, and even severe breathing difficulties, which can be lifealtering for many patients.

Historically, MG treatments were limited to general immunosuppressants and steroids, which were not specifically approved for MG. Patients experiencing exacerbations often faced hospitalization and sometimes required ICU intubation.

"Before 2019, I had multiple patients frequently hospitalized due to exacerbations. It was hard to see the impact this had on their lives," Dr. Jacoby recalls.

In his symposium session *Updates in* Peripheral Nerve and Neuromuscular Junction Disorders, Dr. Jacoby presented on research and best practices developed over the last five years that has helped uncover MG's unique pathophysiology and led to new, targeted treatments. These advancements include two new classes of medications, each with

multiple drugs approved in the last few years, and a third class expected to be available soon.

They focus on specific MG-related antibodies that significantly reduce exacerbations and enable patients to remain out of the hospital.

"These treatments have completely changed the paradigm," Dr. Jacoby explains. "Where patients were once routinely in the ICU, now it's much less common. My patients are doing well, and it's truly encouraging as a neurologist to offer these new treatments and see such positive outcomes."

Beyond MG, neuromuscular care is advancing in other conditions as well. During the symposium, Yaacov Anziska, MD, Director of SUNY Downstate's Muscular Dystrophy Association Clinic, presented on the advances in genetic neuromuscular disorders. He discussed how patients with Spinal Muscular Atrophy (SMA) and, more recently, Duchenne muscular dystrophy, have benefited from gene therapy. Both of these disorders, like MG, previously had limited options that could not effectively alter their progressive course. Gene therapy has changed the clinical course of SMA so that children with severe SMA—who previously would likely not have been able to sit up or even survive past the second year of life—are now walking and attending school with their classmates.

"It's incredibly rewarding to be part of these breakthroughs. Being able to offer my patients treatments that genuinely improve their lives—it's why I love my work."

Surgical Advancements in Epilepsy Care

Epilepsy care has also evolved, with surgery now recognized as critical for many drug-resistant cases. While antiseizure medications remain a cornerstone of treatment, approximately one third of patients living with epilepsy have seizures that cannot be controlled with medications alone. Research shows that if a patient fails to respond to one medication, the likelihood of success with additional drugs is significantly lower.

"Consequently, there is an increased emphasis on early consideration of surgery for patients with drug-resistant epilepsy, a shift driven by leading neurology associations and epilepsy specialists," Benjamin Cunningham, MD, Director of Epilepsy at Maimonides Medical Center, said in his symposium presentation, which focused on the non-pharmacologic treatments of drugresistant epilepsy.

Maimonides' epilepsy team includes three specialists. In addition to Dr. Cunningham, this team includes Susanna O'Kula, MD, an expert in pre-surgical planning who recently joined from SUNY Downstate, and Dr. Grigoriy Gutin, MD, PhD, who is involved throughout the spectrum of care in his dual role of neurohospitalistepileptologist at Maimonides. Their combined expertise is pivotal in assessing candidates for epilepsy surgery through detailed pre-surgical evaluations, including video EEG monitoring and other tests to precisely locate seizure origins. Careful presurgical planning minimizes risks,

especially when seizures originate near critical motor or language centers in the brain. For many patients, surgery dramatically reduces or even eliminates seizures, significantly enhancing quality of life.

Some patients suffer from drug-resistant seizures that occur from critical areas of the brain that cannot be surgically removed, or seizures that occur from more than one location in the brain. These individuals ultimately may not be eligible for traditional epilepsy surgery, but remain good candidates for treatment with an implantable neurostimulation device. These devices provide stimulation to the brain to reduce seizures, and the therapeutic effect of these devices actually increases over time.

While epilepsy surgery might seem intimidating, the procedures have been refined to prioritize patient safety. Educating patients about these options is a priority, as surgery, though complex, can offer transformative outcomes for those struggling with frequent seizures.

Maimonides currently refers patients needing surgical intervention to specialized centers, while handling all epilepsy pre-surgical planning and postoperative care inhouse, allowing patients to receive continuous support close to their homes.

Diagnosing and Treating Alzheimer's Disease

Recent breakthroughs in Alzheimer's disease are transforming both diagnostic accuracy and treatment options, marking a pivotal shift for specialists and general practitioners. Traditionally, Alzheimer's diagnosis relied on patient history and neurological examination, including cognitive testing. MRI was used mainly to rule out other conditions. This led to a diagnostic accuracy of only 60-70%, even among dementia specialists. This gap left room for misdiagnoses, often resulting in delayed or less effective management.

New biomarker-based diagnostics, however, are improving precision. Among these tools, the amyloid PET scan can detect amyloid deposits in the brain a key indicator of Alzheimer's. Recently covered by Medicare, this scan is now more accessible. Lumbar puncture also offer reliable diagnosis, although it is more invasive. Even more accessible options are on the horizon, as blood tests for Alzheimer's biomarkers are expected to become widely available, providing a less invasive and cost-effective alternative.

These diagnostic advancements are significant, given new treatment options.

Anti-amyloid treatments such as lecanemab (approved in 2023) and donanemab (approved in July 2024) have shown promise in slowing disease progression. While not cures, these treatments help delay cognitive decline, benefiting patients in the early stages of Alzheimer's. The therapies carry some risk, but they represent a promising step forward in Alzheimer's care.

Maimonides is preparing to launch a dedicated Alzheimer's clinic, one of only a few centers in New York City to offer these innovative treatments. This clinic will expand access to cutting-edge therapies and serve as a resource for patients and families, reinforcing Maimonides' commitment to pioneering solutions in neurological health.

Expert Knowledge for Specialists and Community Providers

Timed to highlight recent FDA-approved treatments across neurology, Dr. Jacoby explained, "The symposium provided an opportunity to share new insights with fellow neurologists, primary care doctors, and the broader community."

Primary care providers, often on the front line for conditions like migraines, increasingly manage neurological cases due to the shortage of specialists and the growing array of FDAapproved therapies, and staying up to date on this rapidly advancing field is critical to helping patients get the results they need.

Plans are in place for a second annual symposium in November 2025, which Dr. Jacoby envisions as an evolving event with a different theme and expanded speaker lineup each year.

See highlights of Maimonides Neurology Symposium at https://maimo.org/treatments-care/stroke-andneurosciences/1st-annual-maimonides-neurologysymposium/. For more information about Maimonides Neurosciences Institute, visit https://maimo.org/ treatments-care/stroke-and-neurosciences/. To refer a patient, call (718) 283-7470.

- ¹ Cross A, Riley C. Treatment of Multiple Sclerosis. Continuum (Minneap Minn). 2022;28(4):1025-1051
- ² Cross A, Riley C. Treatment of Multiple Sclerosis. Continuum (Minneap Minn). 2022;28(4):1025-1051

Early Intervention for Kidney Disease Care

For many patients with kidney disease, including the roughly 2 million in the New York metro area estimated to be affected by chronic kidney disease (CKD)¹, nephrology care may seem synonymous with dialysis. Recent advances in treatment, however, are expanding the scope of nephrology care, giving patients and providers more effective options. especially when these issues are caught early on.

At Maimonides' Division of Nephrology, clinicians have long been dedicated to providing strong outpatient services for patients with kidney disease, setting their practice apart among a field of medicine that is practiced largely through inpatient care.

"Maimonides is unique in our strength and quality of outpatient nephrology services in this area," says Sheldon Greenberg, MD, Director of Nephrology at Maimonides. "For years, we've devoted ourselves to building up our outpatient nephrology practice and caring for patients with CKD to slow down progression."

Revolutionary Treatments Effectively Preserve Kidney Function

In recent years, many treatments have emerged that have transformed the management of CKD like diabetic nephropathy, polycystic kidney disease and lupus nephritis.

SGLT2 (sodium-glucose cotransporter-2) inhibitors are one example. Originally developed as a treatment for type 2 diabetes, several are now approved by the FDA to treat CKD in patients with or without diabetes.

"SGLT2 inhibitors have been shown in several studies over the past three years to stabilize and slow down the progression of CKD, which previously had very limited options in terms of stabilization," says Hillary Grainer, DO, attending physician in the Division of Nephrology at Maimonides. "They lower blood pressure and blood sugar, preventing kidney damage, and decrease the amount of protein in urine, a hallmark of CKD."

Along with ACE inhibitors and ARBs, the long-available blood pressure and CKD treatments, finerenone is another treatment available to patients that has been shown to slow progression of CKD. Finerenone has emerged within the past five years as a safe, effective therapy targeted specifically toward patients with CKD at any stage, and has been available to Maimonides patients for several years.

Along with ACE inhibitors and ARBs, medications that have long been used to treat blood pressure and slow CKD, finerenone has also been approved to slow progression of CKD. Finerenone has emerged within the past five years as a safe, effective therapy targeted specifically toward patients with diabetic nephropathy at any stage, including patients with heart disease, and has been available to Maimonides patients for several years.

Targeted Therapies for Specific Renal Diseases

For years, nephrologists had limited treatments for polycystic kidney disease. Now, tolvaptan has emerged, a drug that directly decreases the size of cysts on the kidneys. Maimonides nephrologists have quickly become experienced in stabilizing polycystic kidney disease with this treatment, which is not very well known even within the nephrology community.



"Tolvaptan is the first medication shown to decrease the size of the cysts, in addition to blood pressure medications," said Dr. Grainer. "It is well suited to younger patients, below the age of 50, who retain the most residual renal function. Sides effects can include liver enzyme elevation, so we provide monthly liver enzyme monitoring to ensure these medications are safe and effective for every patient."

Patients with systemic lupus erythematosus are at high risk of developing lupus nephritis, a condition that can lead to kidney failure when left unmanaged. According to Dr. Greenberg, two medications approved within the last five years, belimumab and voclosporin, are being proven to effectively treat lupus nephritis, decreasing proteinuria

for patients. For several years, Dr. Greenberg and other Maimonides nephrologists have been utilizing these medications to help lupus nephritis patients manage their conditions and gain better outcomes.

"We're really focusing on slowing down progression of disease and stabilizing kidney function," says Dr. Greenberg. "If you didn't have the benefit of these medications and expertise, these kidney diseases would progress until patients end up on dialysis. Now, patients can live years longer off dialysis, majorly changing their quality of life for the better."

Identifying and Avoiding Complications

Appropriate management of kidney diseases can help patients avoid complications they may experience as a result of the disease itself or suboptimal treatment methods. Patients with CKD often have systemic, multiorgan problems, which Maimonides nephrologists are well-versed in navigating. It is important for patients to receive these assessments from a specialist, as not all internists retain a consistent awareness of the unique systemic effects of kidney disease.

"Complications need to be sought after and identified, as they are often present long before dialysis and aren't caught in a routine blood test," says Dr. Grainer.

These complications can be treated medically and through dietary changes. An example is electrolyte imbalances, which can cause cardiac issues for patients. Patients may require sodium, potassium, calcium, or phosphorus restriction in their diet, increased water intake, or medical therapies to prevent adverse effects on the heart.

Additionally, when each patient sees a Maimonides nephrologist, their entire regimen of medications is evaluated for safety and correct dosage considering the unique physiology of kidney disease.

"We evaluate medications because even those that are ordinarily beneficial can actually harm a CKD patient," says Dr. Greenberg. "This is because the kidney may eliminate certain medications, and because the kidney is now weaker, the medications can accumulate. That may not be known to all physicians. Certain drug interactions may also cause greater harm to the kidneys. For example, if a person has CKD or hypertension and is taking an NSAID like ibuprofen, even though it's a common, over-the-counter medication, it can cause significant damage to the kidneys. Many patients don't receive the counseling necessary to have that awareness, until they come to our practice."

Even treatments targeted toward kidney disease can potentially exacerbate worsening renal function. ACE inhibitors or ARBs, for example, can lower blood pressure, but can increase potassium levels in some patients, so expert monitoring is necessary in both the diagnostic and treatment stages.

Early Identification of Kidney Disease is Critical to **Slowing Progression**

Most individuals with CKD are unaware of their condition, which is why asymptomatic screening is critical. With these comprehensive services available, conscientious primary care is key to accessing early diagnosis and securing the best chances of stabilization of kidney function.

The most common methods of screening for CKD are blood and urine testing. Blood testing for creatinine can detect kidney disease, but it should not be the first line of defense in screening.

"What is often not well-known about creatinine testing is that once the creatinine rises above normal, already 50% of the kidneys' function could be damaged," says Dr. Greenberg. "By the point at which up to 40% of the kidney has incurred damage, the creatinine test may still be normal. Once it rises to the point of being just slightly abnormal, the damage will already be significant."

All well visits should include routine urine tests to screen for albuminuria, or the presence of protein in urine. A significant amount of protein in the urine is an indicator that a patient should begin to be evaluated for kidney disease - even if blood tests show that creatinine is normal.

Aside from albuminuria or elevated creatinine, if potassium or sodium levels are elevated, those are also signs to refer a patient to a nephrologist. Another red flag is high blood pressure that is difficult to treat; nephrology specialists can determine if the elevated blood pressure is being caused by secondary causes related to renal function.

"Early on is the best time to diagnose kidney disease," says Dr. Greenberg. "The earlier these problems are identified, the more likely is that patients will be able to be cured or that their condition will be stabilized."

For more information on nephrology care at Maimonides, visit https://maimo.org/treatments-care/nephrology/. To refer a patient, call (718) 283-7908.

¹ https://www.kidney.org/greater-new-york-ending-disparities-andinequities-ckd-leadership-summit#:~:text=Approximately%20 2%2C220%2C000%20adults%20in%20Greater,adults%20are%20aware%20of%20it.

Second Annual Maternal and Neonatal Health Symposium



Maimonides Health hosted its second annual Maternal and Neonatal Morbidity Reduction Symposium on Monday, Sept. 23, featuring New York State Health Commissioner Dr. James McDonald as the keynote speaker. The symposium included a day of seminars from distinguished health officials on several maternal and infant health topics, such as birth equity, decreasing maternal morbidity, perinatal mood and anxiety disorders, and nutrition. Read more.

Maimonides Ranked #19 in Newsweek's Best Hospitals in NYS: Maimonides Physicians Recognized as Best Doctors

Maimonides Medical Center was recognized by Newsweek in its America's Best-in-State Hospitals 2024 as the No. 19 Hospital in New York state, and the only Brooklyn-based hospital to be included. In Newsweek's individual top doctor recognitions released earlier this year, Robert Rhee, MD, Director of Vascular & Endovascular Surgery, has been named one of America's Best Vascular Surgeons and Dr. Ervin Teper, MD, Urologic Oncologist and Urologic Oncology Residency Program Director, has been named one of America's Best Prostate Cancer Oncologists 2024. These exclusive lists identify only 150 top doctors in the country in their respective specialties. Both Dr. Rhee and Dr. Teper are the only Brooklyn-based physicians to be included in these rankings. Read more.

Healthgrades Names Maimonides #2 in NY for Orthopedic Surgery, #3 in NY for Prostate Surgery

Maimonides Medical Center achieved 18 accolades for clinical excellence from Healthgrades. Among Maimonides' distinctions are three Specialty Excellence Awards, placing the hospital among the nation's top 5% for orthopedic surgery for the fourth year in a row (2022-2025), the top 5% in prostate surgery, the top 5% in the nation for outpatient prostate care, and the top 10% in the nation for surgical care. Maimonides was also rated five stars for nine clinical services, including valve surgery, defibrillator procedures, pacemaker procedures, hip fracture treatment, pneumonia, peripheral vascular bypass, transurethral prostate resection surgery, outpatient prostate care, and diabetic emergencies. Read more.

Maimonides Bariatric Center Named One of America's Best Weight Loss Centers

Maimonides Bariatric Center was included in Newsweek's 2025 list of America's Best Weight Loss Clinics & Centers. Determined by a national survey of medical professionals with knowledge of weight loss, criteria for inclusion included program accreditations, staffing, equipment, patient-centered care, and patient safety metrics. Out of the eight New York state bariatric centers included, Maimonides was the only Brooklyn-based facility on the list.

Ambulatory Health Services Gains Patient-Centered Medical Home Accreditation

Maimonides Ambulatory Health Services Network (AHSN) Adult and Pediatric Primary Care has been awarded the prestigious New York State Patient-Centered Medical Home Accreditation by the National Committee for Quality Assurance (NCQA). This recognition reflects our commitment to delivering patient-centered, high-quality care.

Dr. Luis Riquelme Awarded Highest National Speech-Language Pathology Honors

Luis F. Riguelme, PhD, Director of Rehabilitation and Speech-Language Pathology (SLP), has been selected to receive the 2024 Honors of the Association Award from the American Speech-Language-Hearing Association (ASHA). The Honors of the Association is the highest award given by ASHA, recognizing members for their distinguished contributions and significant enhancements to the field of communication sciences and disorders. Dr. Riquelme's dedication and service to the field of SLP have deeply contributed to the advancement of knowledge in the areas of swallowing and swallowing disorders (dysphagia), leadership in the field, and the connection of culture and cultural responsiveness to the effective provision of SLP services. He is well known locally and internationally for his work and standards of excellence, and this year also won the New York State Speech-Language-Hearing Association Honors of the Association.