

Fall 2017

Better Medicine

Lehigh Valley Health Network

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Convenience is Our Specialty – for Patients and Physicians

By Georgia Fliakos, DO

Georgia Fliakos, DO, is Physician Lead, LVPG Family Medicine–Catasauqua.

For patients, finding a Lehigh Valley Health Network (LVHN) physician has never been easier. They are newly able to [schedule appointments online](#) at LVHN.org, call the new 888-402-LVHN or walk into one of our [ExpressCARE locations](#). For minor illnesses and concerns, they can schedule an [LVHN Video Visit](#) and consult with a clinician through a smartphone or computer. They can stay in touch with many LVHN physicians through our online patient portal, [MyLVHN](#).

Collaborating with clinicians

For referring physicians, accessing and collaborating with LVHN clinicians has never been more convenient. We offer phone numbers for transfers, direct admits, consultations, diagnostic tests and more. Once the patient is in our system, we keep the lines of communication open by consulting with referring physicians on medical history and keeping them up to date on all tests and treatments.

Although we do rely on technology, including our website and the Epic electronic medical records system, to reach out to patients and stay connected with the medical team, we realize that sometimes nothing is as effective as a personal phone call between physicians. I was reminded of this recently when I cared for a patient who had initially come to an ExpressCARE center with a fever. The ExpressCARE physician believed that the patient might need follow-up care and coordinated an appointment with my office for the next day. Before the patient arrived, the physician called me personally to discuss the patient's background and symptoms. When I saw the patient, it was apparent that those symptoms had worsened and my own exam, coupled with the ExpressCARE physician's detailed history, helped me realize that he needed immediate emergency care. This turned out to be the right call and the patient ultimately recovered.

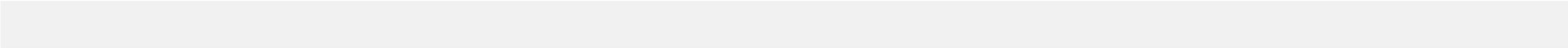
Comprehensive, convenient access



Georgia Fliakos, DO
Family medicine

Whether it's providing seamless appointment scheduling on multiple platforms or taking the time to have an in-depth conversation about a patient's diagnosis, the goal is the same – to provide comprehensive, convenient access to all of our services from the first point of contact and throughout the course of care.

To refer a patient for treatment at LVHN, call 888-402-LVHN or visit [LVHN.org/refer](https://www.lvhn.org/refer) for a complete list of referral numbers.



Lehigh Valley Health Network Announces Formation of Cancer, Heart, Surgery Institutes

Nationally ranked care close to home

In September, Lehigh Valley Health Network (LVHN) announced a significant endeavor in terms of regional care and innovation, one designed to increase its commitment to combating cancer, heart disease and conditions that require surgery – the LVHN Cancer Institute, the LVHN Heart Institute and the LVHN Institute for Special Surgery.

The formation of these institutes enables LVHN to focus on conditions and services that impact many members of the community, offer expanded patient access, as well as create better patient experiences and outcomes.

“We are focusing on cancer and heart disease because they are the top two causes of death in the U.S. as well as our region,” says Brian Nester, DO, MBA, FACOEP, LVHN’s President and Chief Executive Officer. “LVHN leads the fight against these diseases as well as other serious conditions that require surgery. Patients can remain close to home for high-quality care for these specialized services.”



Brian Nester, DO, MBA, FACOEP
President and Chief Executive Officer

LVHN Cancer Institute

People with cancer can have confidence knowing they have access to hundreds of lifesaving and breakthrough clinical trials through LVHN’s partnership with Memorial Sloan Kettering Cancer Institute and other clinical relationships. Patients can receive surgical precision and comprehensive expertise through our multidisciplinary clinics for skin and soft tissue, upper gastrointestinal, breast, prostate, lung and esophageal, and soon head and neck cancers. Suresh Nair, MD, leads this institute.

LVHN Heart Institute

People with heart conditions can take comfort knowing LVHN has the most experienced cardiologists and cardiac

surgeons in the region, and consistently ranks in the nation's top 5 percent for heart attack survival. Consider LVHN was the first in the region to perform transcatheter aortic valve replacement (TAVR) and is recognized as a center for performing complex mitral valve surgery repair. LVHN provides specialized programs for women's heart health, sports cardiology, advanced heart failure, mechanical heart assist devices, lead extraction, peripheral vascular care and rhythm disturbance care. Ronald Freudenberger, MD, MBA, leads this institute.

LVHN Institute for Special Surgery

People who have serious illnesses that require surgery can be assured that our surgeons have the most experience in the region, specializing in robotic and minimally invasive surgery for chest, cancer, obesity, esophageal reflux, colon and rectal conditions, hernia surgery and more. LVHN's emphasis on minimally invasive, leading-edge technologies, such as robotic surgery, allows patients to return to their work and lives more quickly. Raymond Singer, MD, MMM, leads this institute.

Institute structure

Lehigh Valley Hospital (LVH)–Cedar Crest will host the three institutes and serve as the hub where innovation, research and education originate. LVH–Muhlenberg, LVH–Hazleton, LVH–Schuylkill and LVH–Pocono will be part of each institute and provide patients with more convenient access to the institutes' distinct services and expertise in their respective communities.

To learn more about the three new LVHN clinical institutes and other services, visit [LVHN.org/Institutes](https://www.lvhn.org/institutes).



LVHN Provides Comprehensive Hernia Care

Specialists offer nonsurgical and surgical management, including minimally invasive surgery

From infants to the elderly, everyone is susceptible to a hernia, which typically develops in the groin (inguinal hernia), especially in men. But hernias also can occur in the umbilical region (ventral hernia), at the site of a surgical incision (incisional hernia), in the upper thigh (femoral hernia), or at the juncture of the esophagus and diaphragm (hiatal hernia). Hernias also can be congenital.

What causes a hernia?

It's common for patients to think that picking up something heavy without first stabilizing their abdominal muscles can bring on a hernia, which is certainly true. "But the underlying cause is a combination of weakness and pressure on the fascia," says Paul Cesanek, MD, of LVPG General and Bariatric Surgery—1240 Cedar Crest. The pressure pushes an organ or fatty tissue through the weakened spot.

An inguinal hernia is most often initially detected through a medical history and physical examination. But depending on the type of hernia, diagnosis may also involve blood tests, X-rays, CT scans, upper endoscopy, esophagram or manometry. In any event, hernias don't heal on their own. Specialists at Lehigh Valley Health Network can provide nonsurgical and surgical management with an expertise in both minimally invasive surgery and traditional comprehensive surgery to reduce symptoms and prevent lifethreatening complications.

Hernias can often initially look and feel like something else. "Heartburn and reflux that's not well controlled with antacids is a sign of hiatal hernia and under-recognized in patients," Cesanek says.



Paul Cesanek, MD
Surgery



Jayme Lieberman, MD
Surgery

Other common signs include a bulge in the groin area, sudden pain in the groin or scrotum when exercising, severe chest pain, pressure or pain that keeps getting worse, trouble swallowing, changes in voice, fever, rapid heart rate, poor appetite, and nausea and vomiting. But small hernias may not cause symptoms.

Surgical solutions

Treatment options will depend on the hernia's size and the patient's health. Small hernias without symptoms may be watched. Medication may also be prescribed to neutralize stomach acid, decrease acid production or strengthen the lower esophageal sphincter. Most hernias increase in size over time, so it's best to treat them while they're small.

"Surgery is the only way to repair a hernia," says Lehigh Valley Hospital–Hazleton surgeon Jayme Lieberman, MD, with LVPG General and Trauma Surgery–1240 Cedar Crest.

Hernia repair is typically performed with traditional surgical techniques or laparoscopically on a case-by-case basis as an outpatient procedure. "Patients shouldn't put off surgery for too long, especially if they're in pain," Lieberman says. "Inguinal hernias can become strangulated, cutting off the blood supply to the stomach, and require emergency surgery."

To refer a patient for hernia treatment, call 888-402-LVHN.

New MRI Unit Promises a Quieter, More Relaxing Patient Experience

A new magnetic resonance imaging unit at Imaging Services—250 Cetronia Road means a quieter, more relaxing experience for patients during scans. In contrast to the 110-decibel, “jackhammer” sound sensation of a traditional MRI, the new unit delivers excellent image quality while maintaining scanner noise around 77 decibels, which is near background sound levels. It’s all thanks to GE’s Silent Scan technology, described by the company as a revolutionary neuro acquisition technique that makes the sound of an MRI scan “as silent as a whisper.”

Currently, Silent Scan technology is for brain applications. In the future the system will have additional applications, such as abdomen and musculoskeletal exams. “Silent Scan will significantly reduce noise during scans, making this a suitable option for younger patients, kids or claustrophobic individuals,” says Devang Gor, MD, Medical Director of MRI.

Silent Scan works by using hardware and software innovations to minimize changes in electrical current flow during the imaging process, according to GE. The results are fewer vibrations and less noise.

Patients benefit from experiencing less anxiety-inducing noise, leading to increased satisfaction. Reduced prep and scan times, as well as fewer rescans, can be accomplished in the quieter environment, as patients are more likely to lie still. For those needing future scans, this can help them feel better about their treatment plans.

To refer a patient for imaging services, call 888-402-LVHN.

Nuclear Medicine, Vascular Studies Now Offered at Health & Wellness Center at Hazleton

Expanded capabilities have been added for nuclear medicine and vascular studies at the Health & Wellness Center at Hazleton.

Imaging performance efficiency coupled with high-quality visuals enable clinicians to provide patients with superior evaluations and diagnoses. The GE Optima NM/CT 640 scanner, part of the new nuclear medicine suite inside the imaging department at the Health & Wellness Center at Hazleton, provides just that with hybrid imaging that integrates the latest generation general purpose camera with a newly developed four-slice CT.

In addition to high-quality diagnostic images, patients can feel safe with its low radiation dose and short exam times. The camera technology includes “half-time scanning,” which performs studies in half the time it would take to perform on other cameras. Approximately 1,500 nuclear medicine studies are performed annually at Lehigh Valley Hospital–Hazleton. The new site allows greater access to inpatients for diagnostic testing.

As of September, expanded vascular study services have been offered at the Health & Wellness Center at Hazleton. New capabilities include:

- Venous mapping
- Venous reflux studies
- Arterial ankle-brachial index/pulse volume recording
- Arteriovenous fistula
- Arterial bypass graft surveillance

Ultrasound-guided endovenous laser treatment will be added at a later date. Currently offered vascular study services include:

- Carotid duplex
- Abdominal aorta
- Arterial duplex
- Venous duplex

To refer a patient to the Health & Wellness Center at Hazleton, call 888-402-LVHN.

Structural Heart Program Offers Percutaneous Treatment Options

New fellowship-trained interventional cardiologist specializes in noncoronary defects, abnormalities

The Structural Heart Program at Lehigh Valley Health Network (LVHN) is emphasizing interventional approaches for patients with complex valvular and structural heart disease who are considered inoperable or high-risk surgical candidates. The recent arrival of cardiologist Pranav Kansara, MD, who completed a fellowship in advanced structural interventional cardiology at Cedars-Sinai Medical Center in Los Angeles, is expected to further increase volume for LVHN's interventional cardiology program, which is in the top 11 percent of volume for hospitals nationwide.

A new subspecialty

Structural heart disease has emerged as a subspecialty of interventional cardiology during the past decade,¹ and Kansara is the only structural heart disease subspecialist in the region. Components of LVHN's Structural Heart Program include transcatheter aortic valve replacement (TAVR), mitral and aortic valvuloplasty and percutaneous closure of arterial septal defect, patent foramen ovale, ventricular septal defect, paravalvular leaks, transcatheter mitral valve repair with MitraClip® and percutaneous left atrial appendage closure with the Watchman™ device. "Dr. Kansara's expertise in structural heart disease strengthens our capabilities to meet the needs of patients with acquired or congenital structural heart disease," says Ronald Freudenberger, MD, MBA, Physician-in-Chief, LVHN Heart Institute, of LVPG Cardiology—1250 Cedar Crest "His fellowship experience means that advanced cases can be treated here in an expert, comprehensive manner."



[Ronald Freudenberger, MD, MBA](#)
Physician in Chief, LVHN Heart Institute



[Pranav Kansara, MD](#)
Medical Director, Structural Heart Program

Leader in cardiac care

LVHN's interventional cardiology team has been at the forefront of advances in treatment of valvular and structural heart disease. LVHN, which was the first network in the region to participate in the commercial introduction of TAVR, is a high-volume TAVR center and has participated in TAVR trials. The network also was among the first in Pennsylvania to use the Watchman implantable left atrial appendage closure technology, providing a nonpharmacological alternative to anticoagulation therapy. In addition, LVHN offers MitraClip transcatheter mitral valve repair for patients not suitable for surgery.

Over the past five years, LVHN's interventional cardiology team has performed more than 50,000 diagnostic, therapeutic and peripheral procedures. The multidisciplinary team includes boardcertified cardiologists, interventional cardiologists, cardiac surgeons, cardiovascular radiologists, cardiac anesthesiologists and advanced cardiac imaging specialists. Procedures are performed in a 12,000-square-foot hybrid operating room (OR) that blends the diagnostic imaging equipment of a cardiac catheterization laboratory with standard cardiac OR equipment.

"While having the right people and the right technology in place is important, we are acutely aware of the importance of communication in providing the best care possible," Freudenberger says. "We are streamlining the patient evaluation process so that patients receive the information that they need and spend minimal time at the heart center before a treatment decision is made. We also talk with referring physicians before, during and after any interventions."

1. "Of becoming a structural heart disease expert: another giant leap?" C. Ruiz et al. Journal of Structural Heart Disease. 2015; 1(1): 33-5.

To refer a patient to the Structural Heart Program at the Heart Institute, call 888-402-LVHN .



Thyrogen Protocols Available for Thyroid Cancer Treatment

Injections allow patients to continue thyroid hormone replacement therapy

Lehigh Valley Health Network (LVHN) patients diagnosed with well-differentiated thyroid cancer now have the option of receiving Thyrogen® (thyrotropin alfa for injection) to avoid hypothyroidism prior to remnant ablation or diagnostic follow-up. An estimated 57,000 new cases of thyroid cancer will be diagnosed in 2017.¹ Although thyroid cancer is relatively rare compared to other cancers, new thyroid cancer cases have been rising on average nearly 4 percent each year over the past 10 years.¹



Sharmila Subaran, MD
Endocrinology

New protocols

LVHN began providing Thyrogen protocols through a collaboration between pharmacy, nuclear medicine, endocrinology physician offices, the endocrine testing laboratory and the precertification department. Use of Thyrogen allows patients to continue taking thyroid replacement medication, thus avoiding hypothyroidism. More than 20 post-thyroidectomy patients have received Thyrogen since the program started in March with three sets of protocols for:

- Initial radioiodine ablation
- Ablation of thyroid tissue remnants
- Serum thyroglobulin testing with radioiodine imaging
- Serum thyroglobulin testing without radioiodine imaging

“The protocols provide an efficient process for patients and physicians because lab orders, appointment scheduling for injections and imaging, and precertification for Thyrogen and imaging are included,” says endocrinologist Sharmila Subaran, MD, Medical Director of LVHN’s endocrine testing service, which is located at the Diagnostic Care Center at Lehigh Valley Hospital–Cedar Crest. “Patients have been very happy with the process.”

While the protocols provide standardization, the LVHN team employs a personalized approach for thyroid cancer treatment. The nuclear medicine physician works with endocrinologists, surgeons, radiologists and other members of the multidisciplinary team to develop an individualized radioactive dosing, scanning and treatment plan.

Patient education

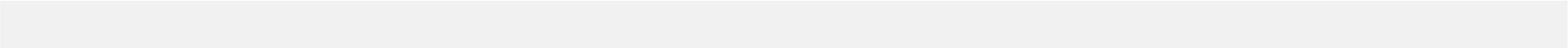
Patient education is an important component of the Thyrogen protocols, which culminate with two intramuscular injections in the buttock administered on an outpatient basis on two consecutive days prior to ablation or diagnostic testing.

“Preparing for ablation or surveillance is a lengthy process, and we work to help patients get through it by providing information and reassurance,” says Roberta Hower, RN, MSN, Nurse Coordinator for endocrine testing.

Hower and her endocrine testing colleague Deborah Herr, RN, MSN, CCRC, work closely with patients to explain the schedule of events, as well as provide education about issues such as adhering to a low-iodine diet prior to ablation or imaging. “More than half of patients who have received Thyrogen to date have had ablation, which means they’re only four to six weeks post thyroidectomy. They are understandably concerned about the future,” Herr says.

1. “Cancer stat facts: thyroid cancer.” National Cancer Institute website.
seer.cancer.gov/statfacts/html/thyro.html.

To refer a patient to endocrinology, call 888-402-LVHN



Patients with Type 1 Diabetes May Benefit from Transplant

With a pancreas transplant, eligible patients with Type 1 diabetes do not require dietary restrictions and may not need insulin. “With a functioning pancreas, their diabetes is cured,” says Patty Liu, MD, with LVPG Transplant Surgery—1250 Cedar Crest. Because of this life-changing potential, more patients with Type 1 diabetes should be referred and evaluated for pancreas transplant, she says.

The best candidates for pancreas transplant are Type 1 diabetics with renal disease, approaching or on dialysis (for Simultaneous Pancreas-Kidney transplant), or with a prior kidney transplant (for Pancreas After Kidney). Also, Type 1 diabetics with hypoglycemia unawareness and preserved kidney function may be eligible for Pancreas Transplant Alone. Pancreas transplant candidates are ages 18-60, whereas kidney candidates can be 18-80 (on a case-by-case basis).

In addition to Liu, Lehigh Valley Health Network’s (LVHN’s) transplant team includes Michael Moritz, MD, and Pradip Chakrabarti, MD, who will rejoin LVHN in November 2017. They perform deceased donor pancreas transplants as well as live donor and deceased donor kidney transplants. “This past fiscal year, we did more than 100 kidney transplants, which is the most we’ve ever done,” Liu says.

Healthy patients interested in donating a kidney also can be referred to the LVHN’s living donor kidney program. Living donor kidney transplants are preferred because the organs tend to function longer than deceased donor kidneys. “Last year, 23 people donated a kidney through our program to someone who needed it,” Liu says.

To refer a patient to the transplant program, call 888-402-LVHN.



LVHN Expands Access to Neurologic Care

Technology brings expertise to underserved areas, patients with restricted mobility

Lehigh Valley Health Network (LVHN) is improving access to neurologic expertise for patients in locations with a lack of access to specialists or for patients with neurologic disabilities who may not be able to travel. The launch of LVHN's teleneurology program addresses an increasing demand for services coupled with a growing national shortfall of neurologists.¹

Wider application of telemedicine

Teleneurology was first employed in emergency stroke and neurocritical care, and has since been broadened to treat patients with epilepsy, Parkinson's disease and other movement disorders,



Nicole Purcell, DO
Neurology

multiple sclerosis, headaches, dementia and new neurologic referrals or consultations.

“Teleneurology allows for twoway conversations with patients who I wouldn’t be able to see otherwise due to location, and to accomplish the goals of a patient visit as if I was sitting in the room with them,” says board-certified neurologist Nicole Purcell, DO, of LVPG Neurology–1250 Cedar Crest. “I can be [virtually] at several hospitals that aren’t close to each other all in the same day, providing access to specialized care.”

As part of LVHN’s teleneurology program, Purcell is available from 8 a.m. to 5 p.m., Monday through Friday, for consultations at facilities that do not have full neurologic coverage. Facilities participating in the program include:

- Easton Hospital
- Lehigh Valley Hospital (LVH)–Hazleton
- LVH–Pocono
- LVH–Schuylkill

Benefits of technology

LVHN’s teleneurology program relies on two-way, audiovisual interactions via monitors in an acute care setting or patient smartphones or tablets. “With the push of a button, the patient and I can have a conversation about symptoms, medical history and lab results,” Purcell says. “Patients and clinicians who are providing on-site treatment benefit from this because technology similar to Skype or FaceTime allows for a speedier diagnosis and treatment plan.”

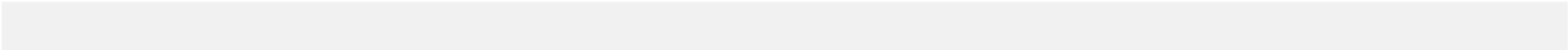
Purcell relies on a standard camera that is capable of zooming in for examination of ears and eyes, as well as use of a stethoscope for heart and lung analysis. Nurses can also support patients who may be unable to comprehend or otherwise assist with the teleneurology exam. Patients may follow up with an inperson visit at a later date, and all information from the teleneurology exam is incorporated into the patient’s medical record at LVHN as well as at the residing facility.

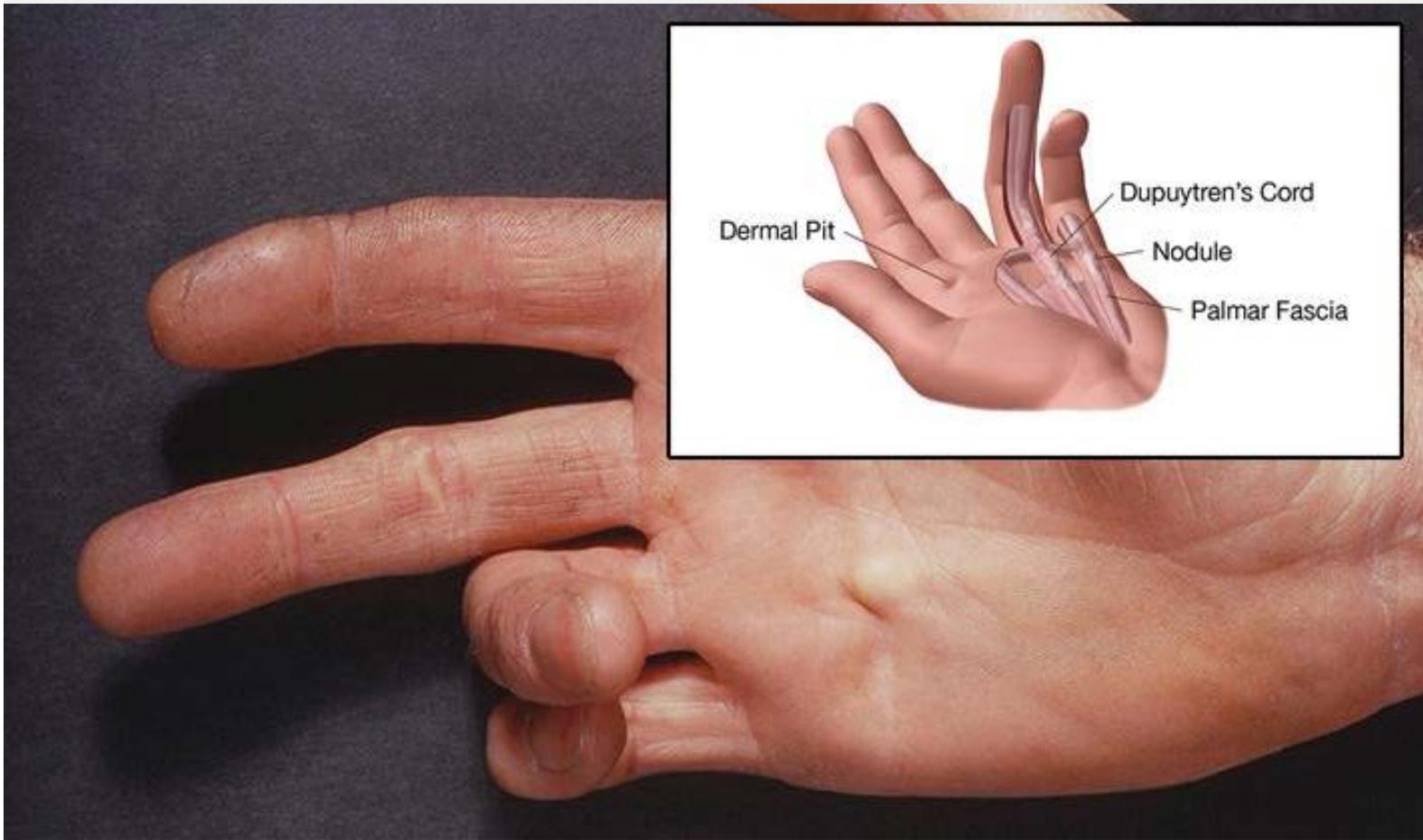
Connected care

The teleneurology program complements LVHN's emergency TeleStroke services at LVH–Hazleton, LVH–Schuylkill (two campuses) and Easton Hospital. The TeleStroke program allows an on-call LVHN stroke expert to assess stroke cases and advise if transport to LVHN is critical. TeleStroke receives approximately 150 calls annually from each hospital site, with 41 percent of calls resulting in intervention.

1. “A teleneurology curriculum: applications, evidence, and practice for neurology residents.” N. Chiota-McCollum et al. *Neurology*. 2017; 88(16 Suppl): P1.033.

To refer a patient for neurology services, call 888-402-LVHN.





LVHN Provides Leading-Edge Treatments for Patients with Dupuytren Disease

Genetic condition can be monitored with self-test until treatment is warranted

Patients with Dupuytren Disease can now benefit from treatment close to home. Hand specialists, such as Daniel Torres, MD, with LVPG Orthopedics and Sports Medicine, can provide the latest nonsurgical and surgical techniques for the genetic deformity.

Prevalence and treatment options

“Dupuytren disease is a proliferation of myoblast cells that deposit collagen and cause the fingers to contract, causing permanent deformity,” Torres says. It typically affects the ring and small finger in



Daniel Torres, MD
Orthopedics

men in their 50s and 60s. Less often, it can target other parts of the body, such as the penis (Peyronie's disease) and feet (Ledderhose disease). It affects 10 to 15 percent of the population of northern European descent.

"Dupuytren disease has no cure, so it's important to discuss expectations and treatment options with patients," Torres says. Patients may initially experience nodules that feel like hard bumps on their palm that may or may not be painful. In that early stage, nothing should be done. "Surgically removing the nodules can aggravate the disease," Torres says. In some patients, the disease never develops beyond the nodule stage.

When nodules mature and become fibrous cords that cause the fingers to contract, it can be time to intervene. Patients who visit their primary care physician should be advised to do a simple tabletop test: If the patient can lay the palm of the affected hand flat on a table, no treatment is necessary. Patients should repeat the tabletop self-test at home every three to four months to check for progression of the disease.

Referral to a hand specialist

Those who fail the tabletop test should be referred to a hand specialist. "The only time to start treatment is if there's more than 30 degrees of contracture at the metacarpophalangeal joint," Torres says. "That's when there's enough of a contracture that we can talk about treatment options." They include:

- Collagenase injection, an enzyme that dissolves the collagen in the cords in a patient's hand.
- Needle aponeurotomy, a minimally invasive procedure in which a patient's hand cords are ruptured by passing the sharp end of a hypodermic needle. "We cut the cord in progression, starting from the palm and heading toward the finger," Torres says.
- Surgery, including fasciotomy, which involves surgically cutting a patient's hand cords and fasciectomy, which involves surgically removing scar tissue causing the contracture.

The goal is for patients to be able to straighten their fingers to put on gloves or put their hands in their pockets again. "No matter what we do, the disease recurs about 10 to 15 percent per year after any treatment," Torres says.

To refer a patient to a hand specialist, call 888-402-LVHN



Leading Cardiothoracic Surgeon Joins LVHN Robotic Surgery Team

Comes to the network with one of the largest robotics programs in the country

This past fall, Lehigh Valley Health Network (LVHN) welcomed [Richard Chang, MD](#), one of the nation's leading robotic surgeons. Chang is dual board-certified in surgery and thoracic and cardiac surgery, and was the first surgeon in Philadelphia to perform a robotic complete endoscopic lobectomy in 2010. He also performs robotic complete endoscopic esophagectomy, robotic anterior mediastinal tumor excision and robotic radical thymectomy for myasthenia gravis.

New programs and technologies



Richard Chang, MD
Cardiothoracic surgery
[Watch a video to learn more about him.](#)

Chang comes to LVHN from Aria-Jefferson Health, where he served as Chief of Thoracic Surgery, Director of the Lung Cancer Screening Program and Medical Director of the Lung Cancer Program.

“I came to LVHN because it’s a very progressive institution that is fully committed to investing in new programs and new robotic technologies, including the da Vinci Xi, the most advanced surgical robot available,” Chang says. LVHN is currently the only network in the region with the Xi system.

Chang says that the Xi is optimized for thoracic surgery, offering maneuverability, control and precision while working in multiple quadrants of the body without having to undock the robot. It also features Firefly Fluorescence Imaging, which provides enhanced real-time visualization of blood vessels and tissue perfusion.

“Robotic cardiothoracic surgery also offers numerous benefits to patients, including less pain and blood loss, and a faster recovery,” Chang says. “Post-op hospital stays average two to four days, as opposed to at least five days with traditional approaches, and patients are generally back to normal activities within a week.”

LVHN has two Xi Surgical Systems and six Si Surgical Systems, which are designed for single-quadrant surgery. Robotic surgery is offered at six LVHN hospitals across 10 service lines. With more than 10,000 robotics procedures completed, the network has one of the largest programs in the country.

In addition to robotic surgery, Chang performs a full complement of advanced thoracic procedures, including endoscopic bronchial ultrasound, endoscopic esophageal ultrasound and super dimension electromagnetic navigational bronchoscopy.

Applying art, science and technology

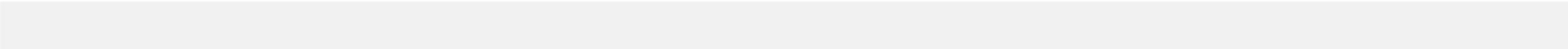
Chang’s first profession was architecture. “I [enjoyed] the intellectual aspect of [combining] art and science, but what was lacking for me was the human component,” he says. “I found medicine to be a much more fulfilling profession and a driving force in my life.”

After earning undergraduate degrees in architecture and physiology at McGill University in Canada, he completed his medical education at Drexel University School of Medicine, his surgery residency at New York Medical College

and his cardiothoracic fellowship at Jefferson Medical College at Thomas Jefferson University Hospital.

“Robotic surgery is just one component of LVHN’s comprehensive surgical oncology program, which offers advanced technologies for screening, diagnosis and treatment,” Chang says. “We are a regional leader and well on our way to becoming world class.”

To refer a patient for thoracic surgery, call 888-402-LVHN.



New Staff Member Expands Capabilities of LVPG Urology

Fellowship-trained urologist specializes in complex cases for female patients

The arrival of urologist [Maria Voznesensky, MD](#), with [LVPG Urology–1250 Cedar Crest](#) at Lehigh Valley Health Network (LVHN) brings expertise in the subspecialty of female urology and genitourinary reconstruction. The number of female urologists such as Voznesensky is increasing, but represents only eight to 12 percent of urologists in the United States despite the fact that female urological patients are growing in number and prefer to be treated by female urologists.¹

Pelvic floor disorders

Voznesensky specializes in the complete management of female pelvic floor disorders. Damage to the pelvic floor can be caused by childbirth, chronic disease, surgery or repeated heavy lifting. Common pelvic floor disorders include issues related to urinary incontinence, retention, frequency, nocturia and infection.

In addition, Voznesensky, who completed a fellowship in female urology and genito-urinary reconstruction at the University of Iowa, treats female patients for more complicated urinary incontinence (UI) issues such as fistula and prolapse. “Dr. Voznesensky expands our ability to meet the health needs of women and make a difference in the community,” says urologic surgeon [Angelo Baccala, MD](#), chief, division of urology, Lehigh Valley Health Network (LVHN). “Her fellowship means that complex cases can be treated here in an expert, comprehensive manner.”



[Maria Voznesensky, MD](#)
Urology

Comprehensive management includes preventive,

diagnostic, therapeutic and surgical procedures necessary for the total care of female patients with these conditions, complications and sequelae resulting from pelvic floor disorders. Although urologic conditions impact women of all ages, a growing number of women are seeking treatment from urologists due to incontinence associated with aging.¹ Baccala expects that approximately 80 percent of Voznesensky's caseload will be female.



Angelo Baccala Jr., MD
Urology

Voznesensky's other practice areas include male incontinence, urethral stricture disease, sexual dysfunction and general urology. She is experienced in both robotic and open urologic surgery. "It's important to find the best solution for the individual patient, and Dr. Voznesensky will further our efforts to personalize care," Baccala says.

1. "The gender divide: The impact of surgeon gender on surgical practice patterns in urology." D. Oberlin et al. J Urol. 2016; epub available at [jurology.com/article/S0022-5347\(16\)30386-X/abstract](http://jurology.com/article/S0022-5347(16)30386-X/abstract).

To refer a patient for urologic treatment, call 610-402-CARE.



Level IV NICU Offers Region's Most Capable Newborn Care

Pediatric subspecialists provide 24/7 coverage

The Neonatal Intensive Care Unit (NICU) of Lehigh Valley Children's Hospital at Lehigh Valley Hospital (LVH)–Cedar Crest is the only one in the Lehigh Valley that meets the requirements for a Level IV designation, according to standards set by the American Academy of Pediatrics (AAP). Level IV classification reflects a facility's ability to provide immediate, onsite pediatric surgery, pediatric anesthesia and pediatric medical specialists for complex and congenital conditions.¹

Highest level of care

The NICU meets the Level IV standards set by AAP's Committee on Fetus and Newborn. Regional NICUs have all of the capabilities of Level I, II and III units, and meet the following additional criteria:¹

- Are located within an institution that has the capability to provide surgical repair of complex congenital or acquired conditions
- Maintain a full range of pediatric medical subspecialists, pediatric surgical subspecialists and pediatric anesthesiologists at the site
- Facilitate transport and provide outreach education
- Provide ECMO (extracorporeal membrane oxygenation)

"We have an experienced team of clinicians who are highly skilled in caring for premature and critically ill newborns," says pediatrician J. Nathan Hagstrom, MD, MHCM, Chair of Pediatrics at Lehigh Valley Children's Hospital. "This is an asset to the community in that physicians can refer pregnant women who have identified risk factors, and the patient can deliver her baby in the same facility that treats and attends to the special needs of both her and her baby."

Pediatric specialists, subspecialists

The multidisciplinary NICU team includes 10 full-time board-certified neonatologists and six certified neonatal nurse practitioners (NNP). One neonatologist and one NNP remain in the NICU at all times. The care team also includes three pediatric surgeons, a fellowship-trained pediatric urologist and fellowship-trained pediatric



J. Nathan Hagstrom, MD, MHCM
Pediatrics



Wendy Kowalski, MD
Neonatology

otolaryngologist, as well as pediatric neurologists, pediatric gastroenterologists, pulmonologists, endocrinologists and infectious disease experts. In addition, four pediatric anesthesiologists and pediatric certified registered nurse anesthetists (CRNAs) provide services as anesthesia is one of the most common risk points for pediatric patients.² The NICU also relies on nurses, respiratory therapists, nutritionists, social workers, pharmacists, laboratory technicians and physical therapists, who are all trained in the specific needs of neonates.

“We’re able to provide a full complement of care 24 hours, 7 days a week, which means more babies will be able to stay in the Valley,” says neonatologist Wendy Kowalski, MD, Chief, Division of Neonatology. “The prenatal and surgical teams meet regularly about referral cases, and we can also quickly and effectively treat emergency situations such as a very low birth weight baby who experiences respiratory decompensation at 3 a.m.”

Treatment of complex and congenital conditions

Pediatric specialists in the Level IV NICU at Lehigh Valley Children’s Hospital are treating an increasing number of complex and congenital anomalies, including a neonate with the rare association of birth defects known as VACTERL syndrome. (The term VACTERL is an acronym for a disorder that affects multiple median and paramedian structures: V = vertebral; A = anal atresia; C = cardiac; TE = tracheal esophageal abnormalities, including atresia, stenosis and fistula; R = renal; L = limb.)

In addition to undergoing surgery to repair the tracheal esophageal fistula, the infant was evaluated by a pediatric cardiologist, pediatric neurosurgeon and pediatric otolaryngologist before being discharged after two months in the NICU. “VACTERL syndrome



Marybeth Browne, MD
Pediatric surgery

LEVELS OF NEONATAL CARE
AMERICAN ACADEMY OF PEDIATRICS
NEONATAL INTENSIVE CARE UNIT (NICU)

LEVEL I BORN 35-37 WKS STABLE CONDITIONS
Level I NICUs provide care to infants in stable condition born 35 to 37 weeks, and ill infants born at less than 35 weeks until they are stable and can be transferred to a higher level of care.

LEVEL II BORN 32+ WKS 3.3+ POUNDS
Level II NICUs provide the same care as Level I. They also care for infants born at more than 32 weeks, weigh more than 3.3 pounds and have physical problems or illnesses that aren't significant. They can also care for infants coming out of intensive care and for infants who need help breathing. Infants born younger than 32 weeks and less than 3.3 pounds can be cared for at a Level II NICU until they're in stable condition.

LEVEL III ALL AGES AND BIRTH WEIGHTS SPECIALIST ACCESS
Level III NICUs provide the same care as Level II. They also provide life support for infants born at all ages and birth weights who have critical illnesses. Breathing support and advanced imaging, such as X-ray, are all quickly available. Many pediatric specialists are available.

LEVEL IV
Level IV NICUs can care for and provide life support for infants born at all ages and birth weights, and those who have critical illnesses. They are located in a hospital setting and can provide surgery for complicated conditions. Many pediatric specialists are on site. They can also transport patients and provide families with education before and after the baby's delivery.

Lehigh Valley Children's Hospital
LEHIGH VALLEY HEALTH NETWORK

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and pediatric otolaryngologist before being discharged after two months in the NICU. “VACTERL syndrome

requires a Level IV NICU, and we were able to care for this infant thanks to the subspecialists who were available to treat immediate needs and to formulate an extended care plan for the cardiac and spinal defects,” says pediatric surgeon Marybeth Browne, MD, Surgical Director of the Lehigh Valley Children’s Hospital. “Rather than having this baby go 90 minutes away from his family to Philadelphia, he stayed close to home and his mother spent time with her baby every day.”

Other examples of the types of complex cases that can be treated at the NICU at Lehigh Valley Children’s Hospital include:

- Medical and surgical conditions associated with complications of extreme prematurity; the most current statistics from the Centers for Disease Control and Prevention show that one of every 10 babies born in the United States is preterm³
- Persistent pulmonary hypertension of the newborn requiring complex management and potentially ECMO
- A variety of general pediatric surgical and surgical subspecialty conditions affecting the newborn
- Infants with rare diseases

Commitment to pediatric patients

Established in 2000, the NICU at LVH– Cedar Crest treats 650 premature or critically ill newborns each year. The unit had been classified as Level III by providing specialty care for large volumes of infants born at less than 32 weeks’ gestation, or with complex medical or surgical needs. Thirty of the NICU’s 40 beds meet Commonwealth of Pennsylvania Level IV criteria; the remaining 10 beds continue to meet Level III criteria and are not classified at Level IV due to square footage requirements per patient station.

The network also operates a Level II NICU at LVH–Muhlenberg and a Level III NICU at LVH–Pocono. Both units have urgent access to the medical and surgical subspecialists, as well as the neonatologists at LVH–Cedar Crest via the neonatal transport team.

1. “Levels of neonatal care.” American Academy of Pediatrics website. pediatrics.aappublications.org/content/130/3/587.
2. “Optimal resources for children’s surgical care in the United States.” Task Force for Children’s Surgical Care. Journal of the American College of Surgeons. 2014; 218(3): 479-87.
3. “Preterm birth.” Centers for Disease Control and Prevention website. cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm.

To refer a patient to Lehigh Valley Children's Hospital, call 888-402-LVHN.

LVH–Cedar Crest Earns Baby-Friendly Designation

Lehigh Valley Hospital (LVH)–Cedar Crest has met the criteria to be designated a “baby-friendly” hospital and birthing center by Baby-Friendly USA and the Baby-Friendly Hospital Initiative, a program that’s been supported internationally by the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) since 1991.

LVH–Cedar Crest is one of 447 hospitals and birthing centers across the country and the Commonwealth of Puerto Rico to hold a baby-friendly designation. The designation is awarded to health facilities that are dedicated to improving the care of pregnant women, mothers and newborns by promoting and supporting the breastfeeding of babies as the best start in life. Clinical evidence has indicated both long- and short-term health benefits for lactating women and their newborns.



“Being named a WHO Baby-Friendly Hospital continues our legacy as a provider of quality health care,” says Mary Bianchi, LVHN Vice President, Women and Children’s Service Line. “We provide support and education for all women so they understand the unique benefits of breast milk and breastfeeding. No matter what feeding method a woman chooses, we will respect her choice.”

The goal of WHO and UNICEF is to increase the proportion of live births that occur in health facilities worldwide that provide care for lactating mothers and their babies. Almost 870,000 births occur annually at baby-friendly facilities in the U.S. There were 4,500 births at LVH–Cedar Crest over the 2017 fiscal year. On a typical day, there is an average of 50 mothers and babies on the mother-baby unit.

To refer a patient for mother and baby services, call 888-402-LVHN.