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Summer 2014

Better Medicine

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High Dose IL-2 Among Available Melanoma Treatments

Rohit Sharma, MD
Surgical oncology
Watch a video to learn more about him.

Although melanoma accounts for less than 2 percent of all skin cancer cases, it accounts for the vast majority of skin cancer deaths.[1] "Fortunately, at Lehigh Valley Health Network (LVHN), 80 percent of melanoma patients present in stage 1 or 2, for which surgery alone is curative," says LVHN surgical oncologist Rohit Sharma, MD, with LVPG Surgical Oncology.

Also encouraging is how treatment for metastatic melanoma has undergone a drastic change. It's now focused on using immunotherapy to combat cancer cells. "Over the last 10 years, we've developed a very effective high-dose interleukin-2 (IL-2) program," says LVHN hematologist oncologist Suresh Nair, MD, senior medical director of research and academics for LVHN's Cancer Center. Lehigh Valley Hospital (LVH) is one of only a small number of specialized IL-2 centers nationwide.

A proven cure

High-dose IL-2, which increases the number of T cells that can attack melanoma cells, is the only proven cure for stage 4 melanoma. "We've treated 70 patients with high-dose IL-2, and seven patients are completely disease free one to eight years out," Nair says. The national cure rate is 6 percent.[2]

Patients often are referred to LVH from cancer centers in Philadelphia and throughout the state. Patients receive up to six courses of treatment by trained IL-2 nurses in a medical-surgical room with telemetry on the oncology floor. As a result of this specialized care, the average hospital stay is just three to four days, creating cost-effective treatment.

Suresh Nair, MD
Hematology oncology
Watch a video to learn more about him.

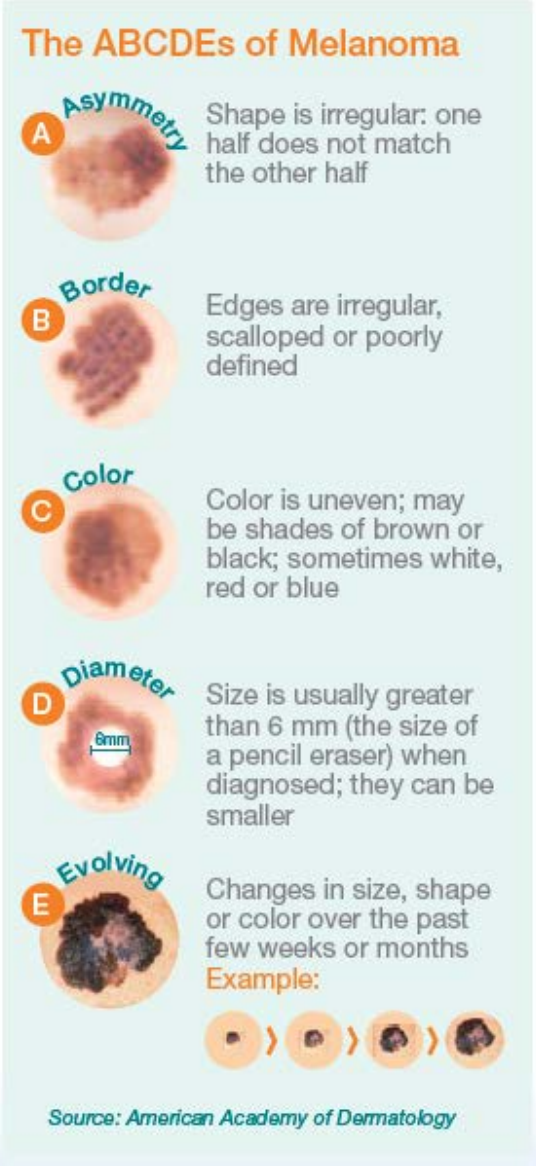
The program's safety record also is among the nation's best. "Out of 70 patients, we've had zero PICC line infections and zero mortality," Nair says. "The national average for PICC line infections is 1 to 2 percent." Health care associated infections affect 5 percent of patients hospitalized in the country each year.[3]

Access to clinical trials

In addition to the IL-2 program, LVHN is the only academic community hospital among eight major medical institutions selected to take part in five early-phase clinical trials conducted over the last year and a half involving immunotherapy and stage 4 melanoma. One phase 2 trial tested the sequential use of two immunotherapy drugs: ipilimumab (Yervoy) and anti-PD-1 (Nivolumab), both of which release the inhibition on T-cell checkpoints to boost the immune system's response to melanoma cells.

"Three out of the four LVHN patients who qualified for the clinical trial are now one year out and in complete remission," Nair says. "Overall, with these three immunotherapy drugs — IL-2, ipilimumab and anti-PD-1 — we have more hope than ever for durable remissions and possible cures for patients with advanced cases of melanoma," Nair says.

To refer a patient for evaluation and potential inclusion in a clinical trial at LVHN, call 610-402-CARE.



1. American Cancer Society.
2. "Ipilimumab and cancer immunotherapy: A new hope for advanced stage melanoma." M. Mansh. Yale J Biol Med 2011 Dec; 84(4): 381-9.
3. Centers for Disease Control and Prevention.

Proper Staging for Chronic Kidney Disease Patients

Roughly 10 percent of U.S. adults — about 20 million — have chronic kidney disease (CKD).[1] In its early stages, CKD is silent, showing no symptoms. That's why many patients aren't diagnosed until stages 5 or 6 of the six-stage illness, when they emergently go on dialysis.

Nelson Kopyt, DO
Nephrology

"That's much too late," says Lehigh Valley Health Network (LVHN) nephrologist Nelson Kopyt, DO, who also is chief, division of nephrology and medical director of the dialysis unit. "Our goal is to get CKD patients diagnosed in stages 3 and 4 so we can keep them out of the emergency department, delay the need for dialysis and prevent acute myocardial infarctions or strokes, while improving the quality of their care and their lives."

Data show that in the first year of dialysis, late-referral patients have a 44 percent higher risk for mortality, especially from cardiovascular events.[2] Their treatment costs can range from $35,000-$50,000, while patients identified sooner and properly prepared for dialysis require just $2,000 in medical services.

Patients with hypertension, diabetes mellitus, cardiovascular disease and/or a family history are at high risk for CKD. Regular screening should include:

- Serum creatinine and estimated GFR (eGFR) laboratory studies
- Urinalysis to determine the presence of proteinuria
- Imaging studies (e.g., ultrasound)

Patients should be referred to a nephrologist for disease and risk factor co-management if they have an eGFR of less than 50 or proteinuria of greater than 300 mg/day or heavy proteinuria with albumin/creatinine ratio of greater than 1,000 mg/g.

To refer a patient with CKD, call 610-402-CARE.

1. Centers for Disease Control and Prevention.
2. "Late nephrology referral and mortality among patients with end-stage renal disease: a propensity score analysis." Kazmi et al. Nephrol Dial Transplant. 2004; 19: 1808-14.

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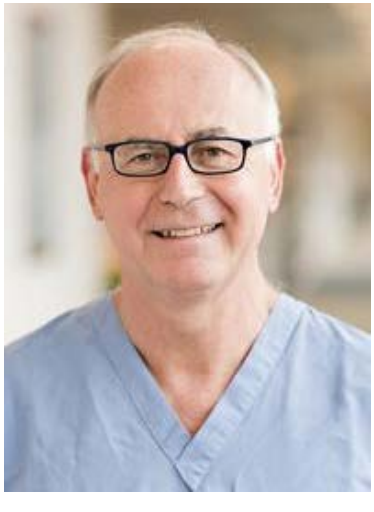
Gamma Knife® Radiation for Nonmalignant Conditions

While well known for treating metastatic brain lesions, Gamma Knife radiation therapy also is a viable treatment for many nonmalignant conditions. At Lehigh Valley Health Network (LVHN), roughly one-third of the 150 patients treated with Gamma Knife annually present with nonmalignant conditions. In general, lesions of 3 centimeters or less are considered suitable targets.

Here's how Gamma Knife may help specific nonmalignant conditions:

- Trigeminal neuralgia (severe facial pain): Gamma Knife intervention can be helpful if medications are unsuccessful in alleviating the pain or if a patient complains of unacceptable side effects. Median time to relief is about one month, and approximately 70 percent of patients maintain relief at two years.[1]
- Schwannomas (or acoustic neuromas, benign brain tumors arising from the vestibular portion of the eighth cranial nerve): Most schwannomas are detected when less than 3 centimeters. "In that case, using a noninvasive approach avoids the morbidity of surgical intervention," says LVHN radiation oncologist Alyson McIntosh, MD, with Allentown Radiation Oncology Associates and co-director of LVHN's Gamma Knife program. "And the 10-year local control rates are 98 percent, with hearing preservation of 70 percent."[2]
- Meningiomas (benign tumors on the brain surface): Gamma Knife stabilizes meningiomas located in a fragile area, such as near the optic nerve. In addition, it is an effective tool for patients who are not candidates for surgery, the standard meningioma treatment. Gamma Knife

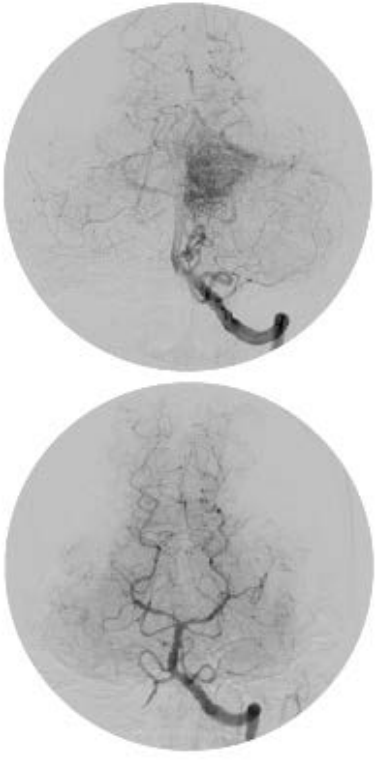
Alyson McIntosh, MD
Radiation oncology



Stefano Camici, MD
Neurosurgery

provides 90 percent local tumor control of meningiomas.[3]

- Arteriovenous malformations (AVMs, abnormal bundles of arteries and veins): Patients with AVMs carry a 2 to 4 percent risk for a bleed each year, causing stroke-like symptoms or possible death. “Once we treat an AVM with Gamma Knife, the patient’s lifetime risk is reduced to less than 1 percent after we achieve obliteration,” McIntosh says. Gamma Knife yields a 90 percent AVM obliteration rate, but it can take up to two years to achieve maximum obliteration as treated vessels sclerose.[4]



A left cerebellar arteriovenous malformation (AVM) is recorded in a cerebral angiogram (top); the second image shows no residual AVM three years post-Gamma Knife radiosurgery.

Single, quick treatment

Because LVHN uses the latest-generation Perfexion™ Gamma Knife model, most indications require only a single treatment, which usually takes one hour or less. “With Perfexion, we are able to modulate the radiation dose in a much superior way to the standard Gamma Knife,” says LVHN neurosurgeon Stefano Camici, MD, with LVPG Neurosurgery. “That allows us to spare adjacent structures much better than previous versions.” This is a major benefit to patients, especially when treating near sensitive tissues like the optic nerve or brain stem.

To refer a patient for Gamma Knife surgery, call 610-402-CARE.

1. “Trigeminal neuralgia pain relief after Gamma Knife radiosurgery.” A.M. Baschnagel et al. Clin Neurol Neurosurg. 2014 Feb; 117:107-11.

2. “Long-term follow-up of acoustic schwannoma radiosurgery with marginal tumor doses of 12 to 13 GY.” R. Chopra et al. Int J Radiat Oncol Biol Phys. 2007 Jul; 68(3):845-51.

3. “Long-term outcomes after meningioma radiosurgery: physician and patient perspectives.” D. Kondziolka et al. J Neurosurg. 1999 Jul; 91(1):44-50.

4. Ibid.

Better Management, Improved Access for Patients With Movement Disorders

The prevalence of Parkinson's disease, which affects at least 1.5 million Americans, is expected to double by 2040 as the population ages.[1] While there's no cure for Parkinson's, "the earlier patients start treatment, the better they're able to manage the motor aspects of the disease," says Lehigh Valley Health Network (LVHN) neurologist Peter Barbour, MD, co-director of the movement disorders program at Lehigh Neurology.

Peter Barbour, MD
Neurology

"Parkinson's disease is the most common movement disorder we treat," says Barbour's colleague, neurologist J. Gabriel Hou, MD, PhD, who recently joined LVHN as program co-director to help provide better access to patients with movement disorders. "Of the estimated 1,500 patients with movement disorders in our practice, approximately 800 have Parkinson's disease," Barbour says.

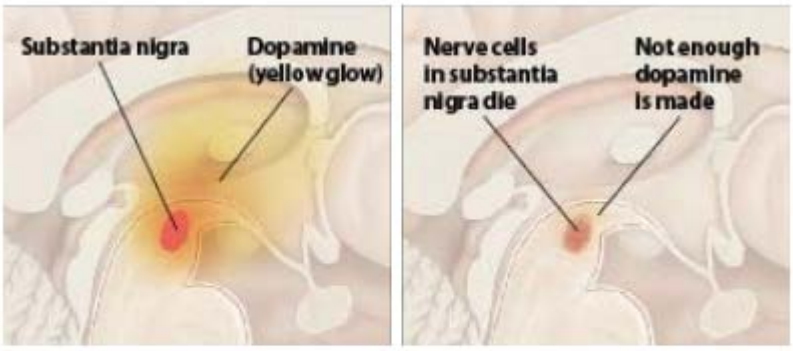
J. Gabriel Hou, MD, PhD
Neurology

Parkinson's disease symptoms include resting tremor (trembling in the hands, arms, legs, jaw and face), rigidity or stiffness of the limbs and trunk, bradykinesia (slowness of movement) and postural instability (or impaired balance and coordination).

LVHN manages Parkinson's disease through three methods:

- **Dopaminergic medications that target dopamine receptors and enzymes in the brain:** "There are many dopaminergic medications, and newer ones are coming out," Hou says. Some medications replace dopamine, some mimic it, and some prolong the effect of dopamine by interfering with metabolism.

- **Deep-brain stimulation:** Lehigh Neurology provides programming for neurostimulators, which are implanted in the brain by neurosurgeons specially educated in this technique. A neurostimulator delivers electrical impulses to targeted areas in the brain that control movement. “We can adjust the frequency and pulse width as well as the strength of the electrical stimulation to make it work well to reduce tremor and improve movement,” Hou says.
- **Physical therapy to help patients maintain function:** Barbour and LVHN colleagues presented a study at the 18th International Congress of Parkinson’s Disease and Movement Disorders in June. Their research found that patients who used the Nintendo Wii had an improvement in step length and speed, which correlates with fall risk. “These games can be tailored to a patient’s rehabilitation program,” Barbour says.



Left: Dopamine is produced in a small area of the brain called the substantia nigra. In healthy people, the substantia nigra makes enough dopamine to control movements. Right: In patients with Parkinson’s disease, the nerve cells that produce dopamine begin to die. Less dopamine results in less control over movement for these patients.

In addition, patients can attend Get Up and Go group fitness classes at LVHN Fitness−Muhlenberg and LVHN Fitness−Cedar Crest. The popular classes are specifically designed for patients dealing with the physiological and psychological challenges of movement disorders. “It’s group therapy that combines exercise with socialization and camaraderie,” says Barbour, who implemented the program more than 20 years ago.

In addition to Parkinson’s disease, LVHN manages patients with other movement disorders, such as various tremor disorders, dystonia disorders, hemifacial spasm and blepharospasm, restless leg syndrome, Huntington’s disease, Tourette’s syndrome and more. Some of these conditions may have psychiatric aspects that can be equally as disabling, such as anxiety, depression, dementia and psychosis. LVHN offers access to neuropsychology and neuropsychiatry services.

To refer a patient for neurological evaluation, call 610-402-CARE.

1. S. Res. 408: A resolution supporting the designation of April as “Parkinson’s Awareness Month,” 113th Congress, 2013-2015. govtrack.us/congress/bills/113/sres408/text.

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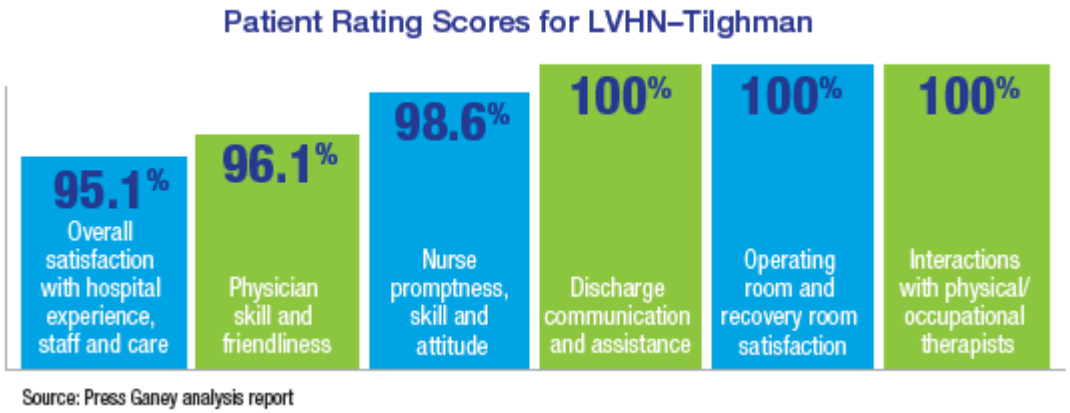
Collaboration, Innovation Lead LVHN−Tilghman to High Marks in Patient Satisfaction

The Center for Orthopedic Medicine at Lehigh Valley Health Network (LVHN)−Tilghman is designed to provide a superior experience for orthopedia patients. Early results indicate the center is achieving that goal.

Paul Pollice, MD
Orthopedic surgery

Since opening in February, the Center for Orthopedic Medicine's patient satisfaction scores on Press Ganey surveys and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) evaluations place it in the highest percentiles across a range of indices.

"We believe a location completely focused on orthopedic surgery means a new, more efficient way of delivering care," says LVHN orthopedic surgeon Paul Pollice, MD, with OAA Orthopaedic Specialists. A collaborative effort with LVHN allows Pollice and his colleagues at OAA Orthopaedic Specialists to provide medical oversight of procedures done at the Center for Orthopedic Medicine. "Our goal is to be proactive in identifying deficiencies and making meaningful changes in how we deliver care for this clinical specialty." The result, in addition to a high level of care, is a direct and personalized approach to the patient experience.



High scores on staff, facilities

Patient surveys indicate high satisfaction in nearly every area evaluated. In the HCAHPS survey, LVHN−Tilghman scored in the 99th percentile for staff responsiveness, pain management, discharge process and physician communication. In the Press Ganey analysis, respondents ranked LVHN−Tilghman above the 95th percentile in:

- Overall satisfaction with the hospital experience, staff and care provided
- Physician skill, communication and friendliness
- Nurse promptness, skill and attitude
- Discharge communications andassistance
- Operating room and recovery room satisfaction
- Interactions with physical and occupational therapists

Among the highest ratings, scores for attention to patients' personal concerns — including sensitivity to privacy and convenience, inclusion in care decisions, pain management and attention to emotional needs — ranged from 95 to 100 percent. Nearly 95 percent of inpatient respondents also were extremely satisfied with the noise level and hospital atmosphere.

"Patients can have an incredible amount of anxiety leading up to surgery, which can be heightened or quelled depending on their initial experience," Pollice says. "We wanted to create an environment where our patients feel calm, comfortable and safe from the moment they walk through ourthrough our door."

A patient-focused experience These scores are a testament to both the design of the new facility and the quality of its clinicians. Physicians from OAA Orthopaedic Specialists and VSAS Orthopaedics perform inpatient and outpatient surgeries at LVHN−Tilghman.

"We've brought together a group of extraordinary fellowship-trained specialists in every area of orthopedics and sports medicine," says Michael Pasquale, MD, chair of the department of surgery at LVHN. "We've complemented them with fantastic nurses, anesthesiologists and ancillary staff, and our patients see the difference." Pollice says, "These scores are an order of magnitude higher than [those of] other facilities I've worked with. It's very gratifying."

To refer a patient to an orthopedic surgeon at LVHN, call 610-402-CARE.

Summer 2014

A Comprehensive Approach to Sports Medicine

Rob Palumbo, MD
Orthopedic surgery

Neal Stansbury, MD
Orthopedic surgery

Like many sports themselves, sports medicine is all about the team. Coordination of treatment among a combination of practitioners is paramount to optimizing care of the athlete.

When all these caregivers work not in isolation but in collaboration, “it results in better outcomes,” says Lehigh Valley Health Network (LVHN) orthopedic surgeon Rob Palumbo, MD, with OAA Orthopaedic Specialists. “Through LVHN’s program, we cover the spectrum of sports medicine care with a close-knit group of specialists who are working together. If a physical therapist isn’t happy with a patient’s progress, he can speak with the physician. If the physician has a concern, he calls the therapist. All of us are communicating with athletic trainers working with schools and teams.”

A continuum of orthopedic care

LVHN sports medicine services span injury and illness, prevention, evaluation, rehabilitation and performance training, as well as consulting with primary care physicians to help make treatment decisions. The program has specialists who address all areas of orthopedic medicine, including surgeons who are fellowship trained in every surgical subspecialty.

“Our specialists have accrued significant experience treating more and different types of injuries,” says LVHN orthopedic surgeon Neil Stansbury, MD, with VSAS Orthopaedics. “We attend conferences regularly to ensure the surgeries and treatments we offer are the latest and best available.”

Jesse Schimmer, PT, DPT
Rehabilitation services

David Maxted, ATC
Athletic training

LVHN athletic trainers and rehabilitation therapists also have extensive education in specialty fields. “We have 14 rehabilitation locations regionwide and board-certified orthopedic specialists with fellowship training in multiple orthopedic specialties,” says Jesse Schimmer, PT, DPT, LVHN rehabilitation director. “And our patient-to-therapist ratio is much lower than in most programs, typically two-to-one or one-to-one.”

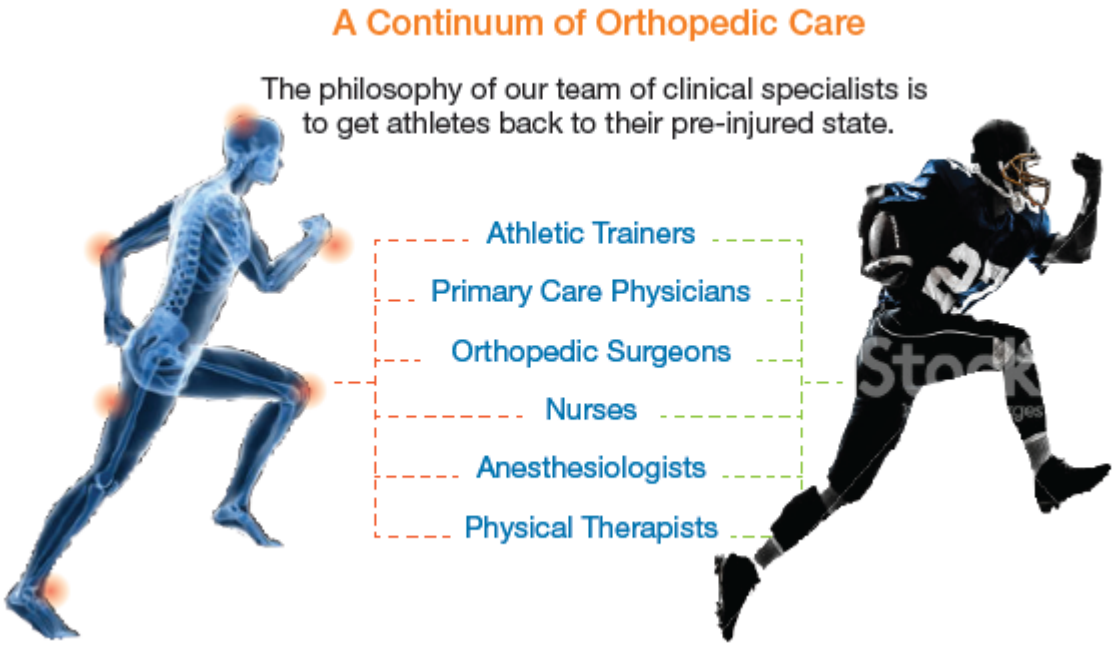
A passion for sports medicine

The broad expertise doesn’t end with subspecialty education. LVHN orthopedic specialists have experience with virtually every sport — both in treating injuries and participating themselves.

Palumbo played college football, works with the National Football League and the Lehigh Valley IronPigs, and provided care for the U.S. Women’s National Soccer Team. Stansbury holds a world record in cycling, is medical director of the Valley Preferred Cycling Center, and treats competitive cyclists from across the country. Other specialists with the program played collegiate or professional hockey and baseball. Several are world-class runners.

They all bring not just a love of orthopedic medicine but a passion for sports. They also share a belief that sports medicine functions best when clinicians closely coordinate across the orthopedic care spectrum.

“Communication is our strength,” says LVHN certified athletic trainer David Maxted, ATC. “Take an athlete with a concussion. We know these athletes because we work with them every day, and we also know they may not be forthcoming with information, because they are motivated to get back to competition. We talk almost daily with the physicians and physical therapists to make sure that athlete is getting appropriate treatment.”



The combination of deep subspecialty expertise and collaboration among multiple service lines makes a significant difference for patients.

“With traditional orthopedic medicine, the goal is to get the individual back to the point where he or she can perform daily activities,” Palumbo says. “Our philosophy is to get athletes back to their pre-injured state. If you’re playing basketball and tear a ligament, we’re not just trying to help you walk again. Our goal is to get you back to playing, and playing well.”

To learn more about LVHN’s sports medicine program or to refer a patient, call 610-402-CARE.

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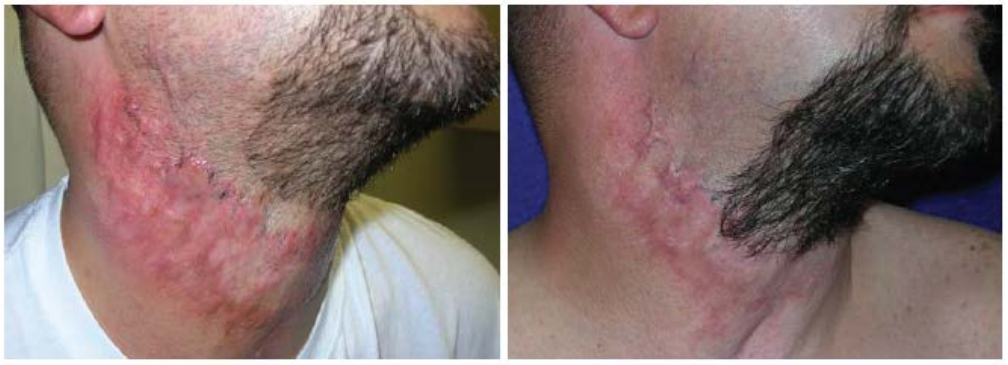
Latest Laser Treatment Improves Scar Appearance

Sigrid Blome-Eberwein, MD
Plastic surgery

Lehigh Valley Health Network's (LVHN) Regional Burn Center has launched a new scar treatment program to treat the scars from burns as well as those from non-burn injuries.

"Any scar qualifies to be seen in our program," says program creator Sigrid Blome-Eberwein, MD, of LVPG Burn Surgery-1210 Cedar Crest. The burn center is the only one in Northeastern Pennsylvania verified by the American Burn Association. Our practitioners provide about 5,000 outpatient treatments every year on more than 1,500 new outpatients, mainly those with burn injuries. About half of the program's patients present with non-burn-related scars. These can be due to skin diseases or necrotizing infections, surgery, trauma, and animal or insect bites — in short, any injury that leaves a scar.

In the program, physicians provide several interventional approaches, including the latest in laser technology to remodel the look and feel of scars. Previously, standard clinical practice for scars included anti-inflammatory or bleaching creams and pressure garments. "After going through laser treatment, our burn patients do not need as much pressure garment treatment as they used to," Blome-Eberwein says. "And although we cannot make scars disappear, we can make ugly, thick, red, itchy scars flatter and softer."



These before-and-after photos show the outcome of a patient's laser scar treatment at LVHN.

Leading-edge treatment

The Regional Burn Center offers patients the most advanced laser scar treatment available — the fractional CO2 laser. “With this laser, we produce pinpoint injury to all layers of the skin,” says Blome-Eberwein, whose background includes training in plastic surgery. She has done clinical research in developing new laser techniques in combination with other treatments for the past 11 years and is now conducting a trial at LVHN of laser therapy with and without anti-inflammatory cream. “The fractional CO2 laser makes scar redness fade to white,” she says. It improves the thickness, texture and tightness of the skin. The best outcomes have been in patients with surgical scars — “the scars virtually melt away,” she says — but almost any scar that has some redness and hypertrophy responds well.

Blome-Eberwein is the only doctor in the area applying this technology for scar treatment. Ideally, treatment should begin in the two- to four-month range after wound healing, but she has successfully treated scars that were six years old.

Additional options for patients

Microderm abrasion technology, the least invasive of the interventional scar protocols, is used mainly for inclusion cysts and scar surface irregularities. It can be applied throughout the entire scar formation cycle, which can take up to five years. Three to 10 treatments are needed.

LVHN physicians also apply nonablative laser therapy targeting the dermal skin layer. This treatment can decrease redness and itchiness and prevent scars from thickening, leaving the remaining scar softer. This treatment should begin one to two weeks after the wound is closed.

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

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Physician-Hospital Alignment Will Help Us Produce Value for Our Community

Dear physician colleague:

For the past 10-and-a-half years, I've had the privilege of working alongside Ron Swinfard, MD, first while he served as chief medical officer, then as president and chief executive officer (CEO) of Lehigh Valley Health Network (LVHN). During this period, we worked closely together while health care began its evolution from fee-for-service to fee-for-value.

Brian Nester, DO, MBA
President and chief executive officer Lehigh Valley Health Network

Now, as Dr. Swinfard has retired, I am privileged to serve as LVHN's acting president and CEO. Our Board of Trustees' instructions to me are direct — the role is acting because they want me and the entire organization to act. Top on the list will be strategic endeavors that help LVHN produce value for our community — that is, creating access to affordable and high-quality care.

Given the Institute of Medicine's estimate that roughly 30 percent of health care spending is wasteful (IOM 2012), we have the exciting opportunity to deliver appropriate and high-quality care to more people at a lower cost by addressing shortcomings in care delivery. To implement value production, we need a highly aligned ethical, financial and clinical compact between hospital and physician providers. Together, we can efficiently and effectively address the needs of the populations we serve.

The future of our health care economy will bring challenges. Administrative and billing functions will become more complex. Competition for patients in the ambulatory setting will heat up as new care outlets emerge. Physicians will need to continue to adapt to a business model that emphasizes access, service, wellness and outcomes.

We at LVHN are committed to facing these challenges with you, our physician colleagues. It's why we are assembling all the tools we need to produce value. We have inpatient facilities that are among the nation's best. We have 11 health centers and continue to build our outpatient assets. We already have the AllSpire Health Partners consortium, which will help us gain economies of scale and other corporate efficiencies. We have a partnership with Optum Labs to give us the "big data" we need to effectively manage populations. And, we are implementing the Epic electronic medical record to coordinate and track patient care across the continuum.

Producing value can only take place through an aligned commitment by hospitals and physicians. We remain committed to you, and I ask for your continued collaboration with LVHN. Together we'll continue to find innovative ways to fulfill our mission — to heal, comfort and care for our community.

Sincerely,

Brian A. Nester, DO, MBA, FACOEP
President and chief executive officer Lehigh Valley Health Network

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Firefly Imaging Aids Robotic Surgeons

Fluorescence, or Firefly imaging, is a game-changing tool that is now being used in robotic gallbladder surgery at Lehigh Valley Hospital (LVH)–Muhlenberg and LVH–Cedar Crest.

Paul Cesanek, MD
General surgery
Watch a video to learn more about him.

"The gallbladder and biliary tree are different for everyone," says Lehigh Valley Health Network (LVHN) board-certified general surgeon Paul Cesanek, MD, with LVPG General and Bariatric Surgery-1240 Cedar Crest. "Firefly helps us identify anatomic variations we weren't expecting, such as an extra duct or one that's closer to the structure we're dividing than anticipated. Being aware of them ahead of time can make surgery safer and prevent complications for the patient."

The leading-edge imaging technology involves injecting a patient with indocyanine green dye, either pre-operatively or in the operating room. The dye is detected by the robot's camera and light source. The resulting illuminated tissue appears green on the computer screen, similar to the night vision that's used by the U.S. military. Surgeons can contrast the operative view by toggling between the common white light and the Firefly green light of the injected tissue.

Immediate reconstruction preferable

"There's the potential to use this technology in multiple types of surgery," Cesanek says.

To refer a patient to a gallbladder specialist, call 610-402-CARE.

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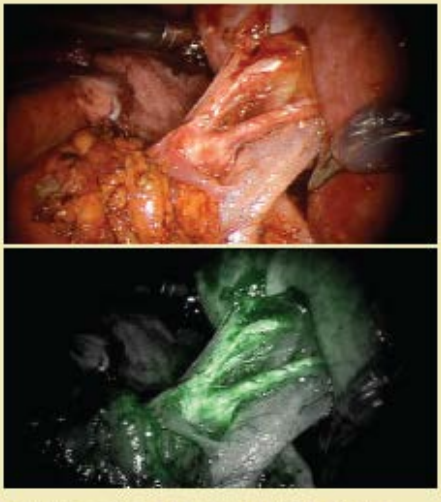

Fluorescence is seen in the bottom photo, as compared with common white light.

Robotic Surgical Platform Reduces Length of Stay

Martin Martino, MD
Gynecologic oncology
Watch a video to learn more about him.

Since 2008, Lehigh Valley Health Network (LVHN) surgeons have provided more than 3,500 patients with the potential for better outcomes through the use of the da Vinci® Si HD surgical robotics platform.

LVHN surgeons primarily use da Vinci within five oncology service lines — gynecological oncology, thoracic oncology, urologic oncology, colon-rectal surgery and hepatobiliary surgery. The team has access to three da Vinci Si platforms, two at Lehigh Valley Hospital (LVH)−Cedar Crest and one at LVH−Muhlenberg.

Benefits to patients

"Since the robotics platform was adopted at LVHN, the rate of open-incision laparotomies for endometrial cancer has declined from 90 percent to 18 percent," says LVHN gynecologic oncologist Martin Martino, MD, medical director of LVHN's minimally invasive robotic surgery program. "Endometrial cancer patients we treat with robotic surgery experience shorter operative times, less blood loss, shorter length of stay, fewer transfusions and fewer complications compared to laparoscopic surgery."

LVHN has performed about 400 robotic thoracic surgery procedures since 2011.

With robotics protocols, hospital length of stay (LOS) after some thoracic procedures at LVHN has declined significantly. For esophagectomy, the average LOS at LVHN is five-and-a-half days, compared with nine days for open procedures. In lung cancer robotic lobectomy, LOS is two days, as opposed to six days for an open surgery -- getting patients back to their families more quickly. LVHN data also show that robotic thoracic patients may experience a lower rate of postoperative complications than is traditionally seen with open procedures.

“LVHN’s minimally invasive surgical team also is the only one in Northeastern Pennsylvania to use the robotics platform for single-site hysterectomy,” Martino says. “We are now able to offer women a minimally invasive surgery with just a hidden scar in the navel.” With this procedure, women can be back to work within two to three weeks, compared with six to eight for traditional surgery.

“Our team includes the only physicians in the region offering sentinel lymph mapping via infrared imaging for patients with uterine cancer,” Martino says. In Firefly imaging, the surgeon injects an inert molecule into the cervix, which travels to the sentinel nodes, considered the first nodes to which a cancer may migrate. “We are able to remove that node and spare the rest,” Martino says. This provides patients with a more minimally invasive approach with fewer complications, such as lymphedema and cellulitis.

LVHN team performing a robotic esophagectomy.

Photo by J.B. Moffat Photography

A multisurgeon, multidisciplinary team

“LVHN is home to one of the nation’s largest multidisciplinary robotic surgery oncology teams,” Martino says. It includes pulmonologists, medical oncologists, radiation oncologists, social workers, geneticists and nutritionists. The team also has its own staff of specially educated physician assistants and nurses. “All patients are exposed to the team approach,” Martino says. Even if a patient does not personally see each member of the team, the full team is working on each case.

To refer a patient for minimally invasive robotic surgery, call 610-402-CARE.

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Partnership Creates Strong IVF Results

Six years ago, Lehigh Valley Health Network (LVHN) partnered with the newly formed Reproductive Medicine Associates of Pennsylvania at Lehigh Valley (RMAPA) in Allentown to provide reproductive endocrinology and infertility care to patients throughout our region. RMAPA currently has in vitro fertilization (IVF) birth rates per cycle of 68 percent, which is 27 percent above the national average of 41 percent.[1]

Wendy Schillings, MD
Hematology oncology

"We offer an attentive atmosphere and access to leading-edge technology and state-of-the-art research," says reproductive endocrinologist and obstetrician/gynecologist Wendy Schillings, MD, FACOG, LVHN's chief of reproductive endocrinology and infertility (REI). "RMAPA offers nationally recognized, exceptionally high-quality care for patients who suffer with infertility, and RMAPA is immediately accessible to patients right here in Allentown through its office on North Cedar Crest Boulevard," says obstetrician/ gynecologist Thomas Hutchinson, MD, chair, LVHN department of obstetrics and gynecology.

'ART' and science of IVF

RMAPA uses the latest assisted reproductive technology (ART) and techniques, including:

Comprehensive chromosomal screening: This can identify blastocysts that are chromosomally normal with unprecedented accuracy, increasing the likelihood of successful pregnancies. Developed by Richard Scott Jr., MD, Schillings' colleague at RMA of New Jersey and a partner in RMAPA, the technology has been validated by rigorous clinical research.[2]

Blastocyst transfer: "We do only blastocyst transfers," Schillings says. Embryos at this stage, transferred on day six of culture, are more likely to result in successful pregnancies than those transferred earlier.

Single-embryo transfer: The primary risk of IVF has been high-order multiple pregnancies (triplets or more). “This issue has been greatly minimized at RMAPA because we advise many patients to have a single-embryo transfer and will transfer a maximum of only two embryos at a time,” she says. RMAPA’s excellent success rate per embryo makes this approach feasible.[3]

Intensive follow-up: “Once our patients become pregnant, we follow them closely with blood work and serial ultrasounds for eight weeks,” Schillings says. “After the eight-week pregnancy scan, we send them back to their ob/gyn for further care.”

In addition to IVF, RMAPA also provides other reproductive endocrinology and infertility services, including ovulation induction, intrauterine insemination and gamete preservation (freezing eggs/sperm).

Left: Preparing specimens to test patient hormone levels. Right: Laboratory technician readies a semen specimen prior to patient procedure.

When to make a referral

Referral to an infertility specialist is indicated for:

- Women younger than age 35 who have been trying to conceive for one year
- Women age 35 or older who have been trying to conceive for six months

RMAPA has a close working relationship and exclusive teaching partnership with LVHN. When surgery is recommended, it is performed at Lehigh Valley Hospital.

After the initial patient consultation, Schillings sends a letter to the referring physician outlining the recommended treatment strategy.

To refer a patient to RMAPA, call 610-402-CARE.

1. Thirty-one fresh IVF cycles performed in women less 35 years old in 2012 resulted in 68 percent (21/31) of cycles resulting in live birth rates, as published by SART and CDC for Reproductive Medicine Associates of Pennsylvania. The national average for 2012 is 41 percent per cycle, for the same age group. A comparison of clinical cycle success rates may not be meaningful because patient medical characteristics, treatment approaches and entrance criteria for ART may vary from clinic to clinic.
2. “Blastocyst biopsy with comprehensive chromosome screening and fresh embryo transfer significantly increases in vitro fertilization implantation and delivery rates: a randomized controlled trial.”

R.T. Scott Jr. et al. Fertil Steril. 2013 Sep; 100(3): 697-703.
3. “Single embryo transfer with comprehensive chromosome screening results in improved ongoing pregnancy rates and decreased miscarriage rates.” E.J. Forman et al. Hum Reprod. 2012 Apr; 27(4): 1217-22.

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Expert Care for Serious Childhood Infections

When she worked as a general pediatrician early in her career, Tibisay Villalobos-Fry, MD, saw plenty of infectious disease cases. “In regular pediatric practice, close to 90 percent of the problems that are seen are infectious in nature,” she says. But when a child presents with a difficult diagnosis, persistent fever or unusual infection, those cases can become challenging.

Tibisay Villalobos-Fry, MD
Pediatric infectious disease
Watch a video to learn more about her.

Now Villalobos-Fry offers area pediatricians and family medicine physicians subspecialty expertise as the region’s only pediatric infectious disease specialist. Affiliated with Children’s Hospital at Lehigh Valley Hospital, Villalobos-Fry is board-certified in both pediatrics and pediatric infectious disease medicine.

Villalobos-Fry addresses the gamut of infectious diseases in children and teens — from meningitis, tuberculosis and complicated pneumonia to bone-andjoint infections and tick-borne disease such as Lyme disease. “With Lyme, the interpretation of clinical symptoms, exposure history and laboratory tests is not always straightforward,” she says. Villalobos-Fry can help clarify the diagnosis. Through Lehigh Valley Health Network (LVHN) she also has access to polymerase chain reaction technology that expedites diagnostic testing.

Fighting infection on all fronts

Pediatric infectious disease care at LVHN includes:

- Inpatient care in the pediatric unit, pediatric intensive care unit and neonatal intensive care unit at Children’s Hospital at Lehigh Valley Hospital
- Coordination of IV antibiotic therapy in the hospital and at home
- Outpatient care for patients who are referred to LVPG Pediatric Endocrinology-17th

Street, including consultation, evaluation and treatment

- A travel clinic offering immunizations and/or prophylactic treatments as well as travel precautions for children preparing to travel abroad
- An adoption clinic, offering full evaluation to rule out prior or current infections for children who are being adopted from foreign countries

Villalobos-Fry also cares for children with fevers of unknown origin that have lasted for 10 days or longer, and for HIV-exposed infants, who are followed up to age 18 months. Plus, as part of our Children's Hospital, Villalobos-Fry is able to collaborate and consult with other pediatric specialists and pediatric surgeons as needed.

Closing the loop

As a former general pediatrician, Villalobos-Fry knows the importance of regular followup with referring physicians. "I understand the primary care perspective," she says. "When all of a child's treatment providers work together as a team, you get better outcomes and more satisfied families."

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