

Surgery ADVISOR

SUMMER 2022

A Special Report From Englewood Health

Photo: Englewood Health



Surgeons from many subspecialties at Englewood Health are incorporating the latest robotic technology into clinical practice.

Highly Precise Robotic-Assisted Surgeries Optimize Outcomes

Englewood Health is home to two of the most recent iterations of the robotic da Vinci Surgical System (Intuitive Surgical), used to optimize minimally invasive surgery in a continually expanding list of operations, including hernia repair as well as thoracic, bariatric, gallbladder, urologic, gynecologic and colorectal procedures.

During robotic-assisted surgery, the surgeon sits at a console in the operating room

SEE ROBOTICS, PAGE 34

Game-Changing Technology Expands Spine Surgery Capabilities

A transformational new robotic imaging platform is now being introduced at Englewood Health that will further increase orthopedic and neurosurgical spine surgery precision, improve patient safety and outcomes, and reduce postoperative pain and length of stay.

As of this writing, Englewood Health is the only hospital in New Jersey to acquire this technology, and one of only two in the New Jersey/New York region.

The Excelsius Ecosystem (Globus Medical) combines the Excelsius3D™ imaging system and the ExcelsiusGPS® robotic navigation platform to provide surgeons with a comprehensive intraoperative, image-guided robotic surgery tool. Excelsius3D, which is the latest addition to the Ecosystem, is a mobile x-ray platform designed for 2D fluoroscopy, 2D digital

radiography and 3D imaging of adult and pediatric patients.

The ExcelsiusGPS combines a rigid robotic arm and full navigation capabilities into a single, adaptable platform for accurate trajectory alignment in spine surgery. The Excelsius Ecosystem streamlines surgical workflow for surgeons and staff.

Neurosurgical Precision

"This is a very exciting time of innovation in spine surgery," said Kevin Yao, MD, the chief of neurosurgery at Englewood Health. "This technology takes us to the next era of spine surgery. It will facilitate even more precise and more minimally invasive spine surgery than is

SEE GLOBUS SURGERY, PAGE 30

Precision of Robotics Enhances Minimally Invasive Thoracic Surgery

Robotic-assisted surgery has increasingly become a more popular option for thoracic procedures, although it continues to depend on the experience of the surgeon and the comprehensiveness of the program. Recent estimates show that only 20% of lobectomies are performed robotically nationwide (*J Thorac Dis* 2020;12[2]:70-81).

There are instances when laparoscopic or open surgery is recommended, but both require a larger incision and a longer recovery time for the patient, according to Christos Stavropoulos, MD, the director of thoracic oncology at The Lefcourt Family Cancer

SEE THORACIC, PAGE 33

TABLE OF CONTENTS

GI Bleeds Stanchd By Robotic Colorectal Surgery

PAGE 3

Excellent Outcomes After Robotic Urology Surgery

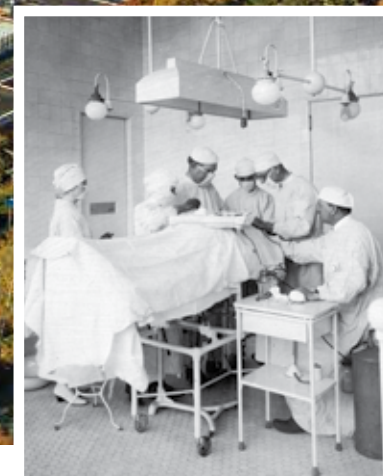
PAGE 4

Leading the Way In Gynecologic Robotics Surgery

PAGE 5

Bariatric Surgery Now Seen as Preventive Medicine

PAGE 6



Englewood Hospital operating room circa early 1900s.

A Letter From James McGinty, MD



James McGinty, MD
Chief, Surgery and Surgical Services
Bariatric Surgery

I am very pleased to introduce this publication, which highlights the work of our surgery department and the extraordinary surgeons who practice at Englewood Health.

As the chief of surgery and surgical services since 2017, I have been honored to participate in the planning and implementation of several new programs and services. They include the construction of new hybrid operating rooms (ORs) and investments in surgical equipment, including best-in-class imaging and robotics systems.

Our implementation of a single, comprehensive electronic medical record (EMR) system (Epic) transformed how surgeons

collaborate with both their patients and medical team. Clinical studies and the U.S. government have credited EMRs with optimizing overall health care quality by improving access to clinical records, enhancing adherence to clinical guidelines, increasing prescription safety, preventing medical errors and improving patient outcomes, according to the Office of the National Coordinator for Health Information Technology.

An outstanding technological development in surgery is the advent of the hybrid OR, which combines a fully equipped surgical room with advanced imaging systems, creating the ability to combine image-guided procedures such as endovascular minimally invasive procedures and open surgery. The availability of hybrid ORs at Englewood Health is a factor that helped our very busy transcatheter aortic valve replacement (TAVR) program achieve certification by the American College of Cardiology. Englewood's TAVR program—one of the earliest in the country—was the first hospital in Bergen County and only the third in New Jersey to receive this ACC honor.

At Englewood Health, we are always mindful of advancements in surgical technology that can improve our patients' outcomes. A recent example of important new technology is Firefly fluorescence imaging, which is used in conjunction with the latest robotic da Vinci Surgical System (Intuitive Surgical). Firefly uses near-infrared imaging technology that can be readily turned off and on by the surgical operator. The da Vinci robotic endoscope triggers injected dye to fluoresce, which helps

identify key anatomic landmarks in certain procedures. As an example, Firefly differentiates healthy from cancerous tissue, thereby greatly improving surgical margins in oncology procedures. Firefly can be used to visually examine tissue perfusion and is also employed to assess the major ducts during gallbladder removal.

In addition, we incorporated the state-of-the-art intraoperative Excelsius™ Ecosystem platform from Globus Medical into our orthopedic and neurosurgery armamentarium. This new platform represents a significant advance and combines image-guided navigation (Excelsius3D) with robotic surgical capabilities (ExcelsiusGPS). Englewood Health is one of just two medical centers in the New Jersey/New York region to have access to this technology.

We are an international leader and innovator in so-called "bloodless surgery," which has been found to reduce the incidence of serious postoperative complications. The departments of surgery, anesthesiology and critical care established Englewood Health as one of the first hospitals in the nation to offer this surgery when transfusion was not an option. Since then, patient blood management (PBM) is now a standard of care for all patients, according to a recent policy brief from the World Health Organization (WHO). Englewood Health is considered to be the cradle of PBM and the program has been named by the WHO as one to emulate. In its policy brief, "The Urgent Need to Implement Patient Blood Management," PBM is called an urgent public health initiative. We believe PBM is good medicine and often results in better outcomes for patients overall.

I am also very proud that the multidisciplinary Englewood Bariatric Surgery Center is fully accredited by the American College of Surgeons' Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program. The program includes a "prehabilitation" component that works with patients months before the surgery, and then supports them for years afterward.

The Englewood Health team of surgeons looks forward to partnering with you in the future. Thanks to our recent expansion to Jersey City and Fair Lawn locations we are more accessible than ever for your patients.

In this issue of the *Surgery ADVISOR*, you will learn about the latest technological innovations being used by our surgeons in many specialties. Your thoughts and feedback are always welcome.

I, along with my colleagues, welcome the opportunity to collaborate with you should the need arise. Please feel free to contact me directly if I can be of assistance.

Lower GI Bleeds Stanchied by Strong Robotic Colorectal Surgery Program

In a 2020 review of the nonoperative management of lower gastrointestinal bleeding, Anna Serur, MD, the chief of colon and rectal surgery at Englewood Health, and her colleagues described an evidence-based approach for managing lower GI bleeding nonoperatively (*Clin Colon Rectal Surg* 2020;33[1]:22-27).

"This is a very common problem we see, and it helps to have an algorithm of treatment because so many specialties are involved in treating this problem, from the emergency room doctor who sees the patient first, to gastroenterologists, interventional radiologists, and other medical doctors and surgeons," Dr. Serur said.

Although the algorithm designates surgery as a last resort, this approach is warranted in patients showing signs of sepsis, those whose bleeding cannot be controlled by nonoperative means, or in patients whose hemodynamic instability may necessitate repeated blood transfusions, which are not without risk.

"We want to avoid blood transfusions for any patient with a lower GI bleed," Dr. Serur said.

At Englewood Health, a patient who undergoes surgery for GI bleeding is likely to receive a robotic procedure. Dr. Serur estimates that she and her partner, Peter Kaye, MD, a colon and rectal surgeon, have performed more than a thousand of robotic cases at the hospital.

"Robotic surgery is a great approach to addressing patients with lower GI bleeds that don't stop with conservative medical treatment," Dr. Serur said. "In an emergency setting, you'd want the surgery to be done by an expert expeditiously, before transfusions are necessary or hemodynamic instability develops."

Today, the majority of all colorectal surgeries performed at Englewood Health, whether for diverticulitis, Crohn's disease, ulcerative colitis or cancer, are done via the robotic platform. This approach carries a number of advantages over laparoscopic surgery, such as better visualization, less blood loss and quicker recovery; it also enables surgeons to perform some of the more challenging aspects of colorectal surgery with greater ease (*Surg Clin North Am* 2020;100[2]:337-360).

"The robotic platform allows us to perform more complex colorectal surgeries in a minimally invasive way, without having to do open procedures with big incisions," Dr. Kaye said. "The obvious benefit to the patient is less pain, a shorter stay in the hospital, and a quicker return to work and their normal life."

The robotic program at Englewood Health continues to grow exponentially across many specialties, including gynecology, urology, thoracics colorectal surgery.

"We've built a strong program," Dr. Serur said. "When I joined Englewood, there were not many hospitals in this area doing robotic surgery, and even now there are very few programs dedicated to

"The robotic platform allows us to perform more complex colorectal surgeries in a minimally invasive way, without having to do open procedures with big incisions."

—Peter Kaye, MD



Anna Serur, MD
Chief, Colon and Rectal Surgery



Peter Kaye, MD
Colorectal Surgery

colorectal robotic surgery. Our administration had the foresight to realize that robotic surgery was an important emerging technology that greatly benefits our patients."

Dr. Kaye noted that, while their patient outcomes today are impressive, Englewood Health's colorectal surgeons are always vying to stay on top of whatever developments arise in their field.

"We're always finding new ways to work with the robotic system, keeping current with the literature and emerging procedures. The world is a lot smaller now, so we're exposed to what people are doing in China, in California, in Thailand. Everyone's always learning from each other. School is never out."

Excellent Outcomes Seen Following Robotic-Assisted Urology Surgery

The prevalence of robotics in surgery has increased meteorically in the last decade. That trend is conspicuous in urologic surgeries at advanced care centers like Englewood Health, where almost all radical prostatectomies are performed with the robotic da Vinci XI Surgical System (Intuitive Surgical).

The growth of robotic surgeries now encompasses radical and partial nephrectomies, cystectomies for bladder cancer, and noncancer procedures like simple prostatectomy for benign prostatic hyperplasia and pyeloplasty for ureteropelvic junction obstruction.

Compared with open radical prostatectomy and laparoscopic-assisted radical prostatectomy, robotic-assisted radical prostatectomy gains more quality-adjusted life-years for patients, according to recent research (*JAMA Netw Open* 2022;5[4]:e225740). It is also more cost-effective.

“On top of the improved outcomes, robotic-assisted procedures allow for faster recovery, less time in the hospital and less blood loss,” said Maz Ganat, MD, the program director of urologic oncology at The Lefcourt Family Cancer Treatment and Wellness Center at Englewood Health.

“But another important thing it provides is opioid-free discharges,” Dr. Ganat added. “It’s

a relief that the patient can receive a successful surgery without requiring any narcotic pain medications.”



Maz Ganat, MD
Program Director,
Urologic Oncology

The benefits of robotic-assisted surgery are seen also in postoperative renal function recovery following partial nephrectomies in patients with renal cell carcinoma. A recent study that compared laparoscopic with robotic-assisted procedures found robotic surgery patients were more likely to achieve

the trifecta of a negative surgical margin, fewer surgery-related complications and warm ischemia times of 25 minutes or less (*Medicina [Kaunas]* 2022;58[4]:485).

Robotic-assisted procedures also allow for advanced intraoperative fluorescence-based imaging—a valuable tool for increasingly complex surgeries (*Urol Clin North Am* 2022;49[1]:57-63). Englewood Health uses the Firefly system that is integrated into the

da Vinci surgeon’s console. When the da Vinci endoscope triggers injected dye to fluoresce, it illuminates the contrast between cancerous and healthy tissues, enhancing the surgeon’s ability to preserve healthy tissue while more precisely removing all the cancerous tissue.

“The intraoperative imaging is an added tool that’s not available with open surgery,” Dr. Ganat said. “It’s a nice complement to robotic surgery, and helps to improve outcomes.

“On top of the improved outcomes, robotic-assisted procedures allow for faster recovery, less time in the hospital and less blood loss.”

—Maz Ganat, MD

“We have fellowship-trained urologists and the expertise to deliver the best possible care to our patients. That means we offer patients a variety of different options and the latest technology, including robotic surgery, when appropriate,” he said. “We also take the time to educate patients about all we plan to do.” ●

Ruben M. Pinkhasov, MD, MPH, director of minimally invasive urological surgery, and Maz Ganat, MD, program director of urological oncology, in the robotic operating room.



Leading the Way in Gynecologic Oncology Robotics Surgery

Gynecologic oncologist Nimesh Nagarsheth, MD, began working with robotic surgical devices in 2005, and so was already experienced and eager to implement Englewood Health's robotics program when the hospital installed its first system in 2009.

"With the background I had, I was able to jump-start the program here once we got our robotics system," said Dr. Nagarsheth, the director of robotic surgery at Englewood Health and a member of the Englewood Health Physician Network. "We now have a very robust program."

So robust in fact that Dr. Nagarsheth is among the first surgeons in the northern New Jersey and the New York City region to have performed 1,000 gynecologic and gynecologic oncology robotic procedures.

"We are performing more complicated robotic procedures than many other institutions because of the expertise of our surgeons," Dr. Nagarsheth said. "With that experience comes a very high safety profile."

According to Dr. Nagarsheth, Englewood Health is able to offer its patients advanced procedures that historically required open surgery, which is a great improvement. This is because traditional open surgery is significantly more invasive and requires a much longer recovery, resulting in greater postoperative pain and a higher risk for infection.

"We have significantly reduced complications by performing these procedures through minimally invasive approaches with robotic technology," Dr. Nagarsheth said. "We have seen excellent outcomes for our patients with enhanced recovery, which means a shorter length of stay in the hospital. Patients return home and to work quicker."

Dr. Nagarsheth's expertise has enabled the hospital to keep pace with advancements in robotic surgical technology. The hospital now utilizes the fourth-generation da Vinci Surgical System (Intuitive Surgical). Each generation brings a multitude of changes that improve

"We have significantly reduced complications by performing these procedures through minimally invasive approaches with robotic technology."

—Nimesh Nagarsheth, MD



Nimesh Nagarsheth, MD
Director, Robotic Surgery

procedures dramatically, enabling Englewood Health surgeons to provide the latest advancements in surgical care.

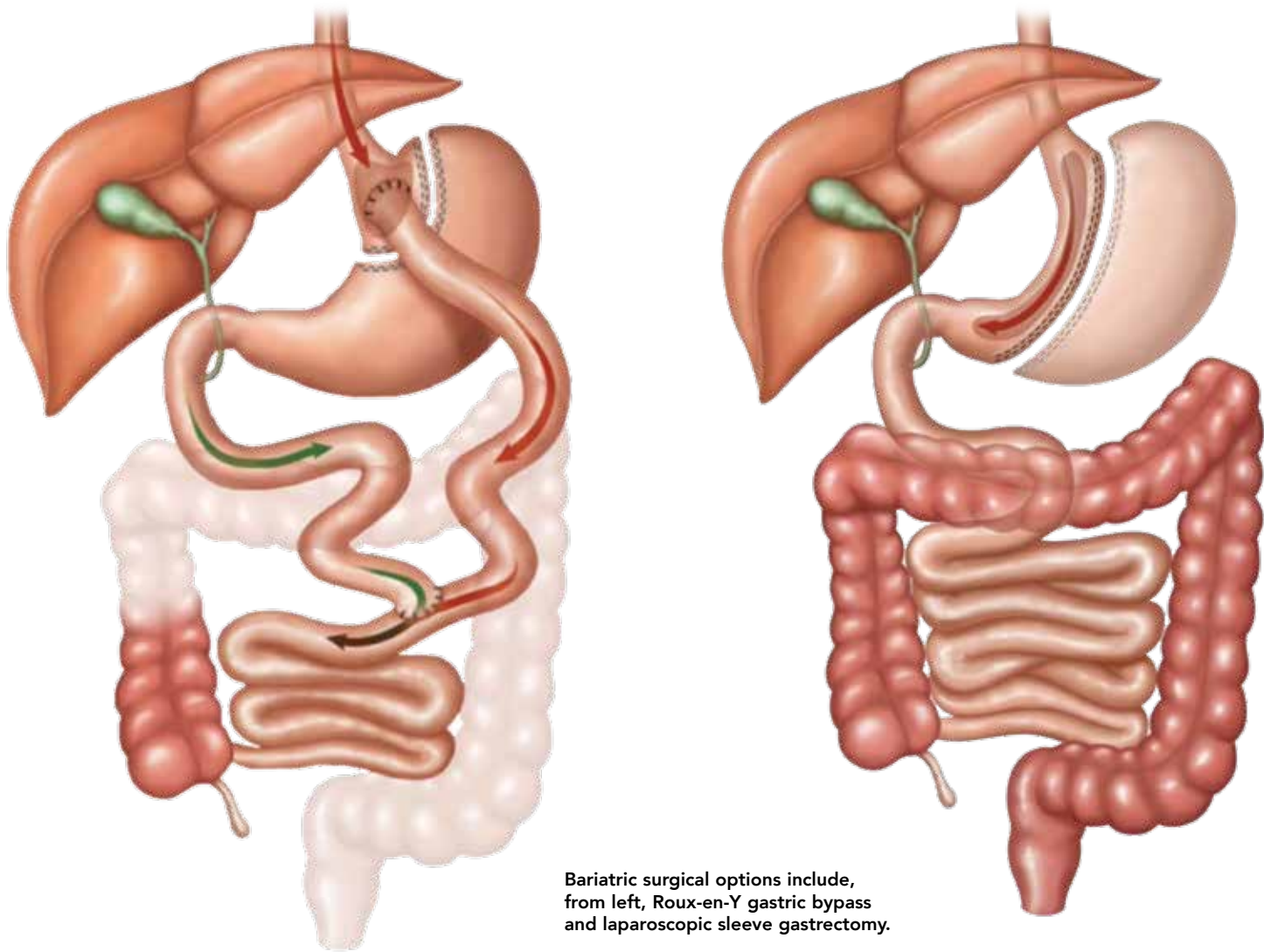
Dr. Nagarsheth has also overseen the implementation of robotics for other surgical practices. "What's good about this is it allows us to work together as a team to integrate our processes," he said. "That encourages colleagues to share new techniques across disciplines, which benefits all patients," he added.

In the field of gynecologic oncology surgery, performing relatively complex procedures becomes much easier physically on the surgeon's body, according to Dr. Nagarsheth. "It actually has been shown to be less stressful for the surgeon to be oper-

ating using a robotic platform because it's less stressful in terms of body position," he said. "You're sitting in a chair and you can see in 3D vision. You can actually see much better using the system's magnified approach."

Dr. Nagarsheth has worked to ensure that current and future generations of surgical practitioners at Englewood have the highest levels of robotic surgical expertise. He has streamlined the robotics training process so the learning curve is less arduous and maintained the hospital's efficient yet rigorous credentialing process.





Bariatric surgical options include, from left, Roux-en-Y gastric bypass and laparoscopic sleeve gastrectomy.

Image: Englewood Health

Bariatric Surgery Now Seen as Preventive Medicine ... Even Against COVID-19

Adults with obesity who achieved substantial weight loss through bariatric surgery reduced their risk for severe adverse outcomes from COVID-19 by 60%, according to a recently published study (*JAMA Surg* 2022;157[3]:230).

Investigators compared nearly 12,000 patients who had bariatric surgery between 2004 and 2017 with more than 128,000 matched patients who did not have the surgery. Patients in both groups contracted COVID-19 at similar rates, but those who underwent bariatric surgery were less likely to be hospitalized, need supplemental oxygen or develop a severe illness after infection.

"This is another important

piece of evidence that shows that excess weight has such detrimental effects on our overall health," said James McGinty, MD, the chief of surgery and surgical services at Englewood Health.

For those with severe obesity, bariatric

surgery is the most effective tool for durable weight loss, as demonstrated in multiple studies (*JAMA Surg* 2016;151[11]:1046-1055; *Lancet* 2021;397[10287]:1830-1841). More than dieting, medication or exercise—alone or a combination—bariatric surgery leads



James McGinty, MD
Chief, Surgery and Surgical Services
Bariatric Surgery



Celines Morales-Ribeiro, MD
Bariatric Surgery



Jingjing Li Sherman, MD
Bariatric Surgery

"As a result of the pandemic, patients have realized that obesity is something that needs to be treated."

—Jingjing Li Sherman, MD

to an improved quality of life, a longer life expectancy and treatment of obesity-related comorbidities, such as diabetes.

“To me, bariatric surgery is more like preventative medicine,” said Celines Morales-Ribeiro, MD, a general and bariatric surgeon at Englewood Health. “For example, people who are prediabetic don’t become diabetic following bariatric surgery. Surgery can significantly improve or resolve conditions like sleep apnea, diabetes and high blood pressure.”

In the first wave of the pandemic, many bariatric procedures across the United States were put on hold because these operations were deemed nonurgent, given the high pressure on health systems in those early months.

The American Society for Metabolic and Bariatric Surgery (ASMBS), however, has called for bariatric surgery to be recognized as a medically necessary procedure, much like cancer surgery (*Surg Obes Relat Dis* 2020;16[8]:981-982).

Obesity and Its Comorbidities

According to the CDC, being overweight or having obesity is now recognized as a risk factor for severe illness from COVID-19. In an editorial accompanying the *JAMA Surgery* study noted above, the writers said COVID-19 should be added to the long list of obesity comorbidities that can be mitigated by metabolic surgery. That list includes more than 40 other diseases, including type 2 diabetes, heart disease, stroke and certain types of cancer—some of the leading causes of preventable and premature death, according to the ASMBS.

Treating obesity has additional benefits, said Jingjing Li Sherman, MD, a general and bariatric surgeon at Englewood Health and a member of the Englewood Health Physician Network. When women with obesity lose weight, such as through bariatric surgery, before they have children, their children are less likely to have obesity, diabetes and heart disease, she said. “This means that we are improving future generation’s outcomes.”

These benefits, along with the improved safety of these surgeries, have made this option more acceptable to physicians and their patients. Over the last year, more primary care

physicians have been referring patients for consultation with the bariatric surgery team, and more patients are seeking information about the procedure on their own because of a growing awareness of the risks associated

“To me, bariatric surgery is more like preventative medicine. Surgery can significantly improve or resolve conditions like sleep apnea, diabetes and high blood pressure.”

—Celines Morales-Ribeiro, MD

with obesity, Dr. Sherman said.

“As a result of the pandemic, patients have realized that obesity is something that needs to be treated,” she said.

Surgeons at Englewood Health perform 350 to 400 bariatric procedures per year, including revision surgeries. The multidisciplinary care team includes a registered dietitian and bariatric social worker.

Many people with severe obesity avoid making an appointment to see a surgeon about their weight because they are afraid of what might lie ahead and feel they should be able to lose weight on their own, Dr. Morales-Ribeiro said. But she encouraged physicians to recommend to any of their patients who are struggling with severe obesity to visit a bariatric surgeon for a consultation to discuss their options.



Bariatric surgeons James McGinty, MD, Celines Morales-Ribeiro, MD, and Jingjing Li Sherman, MD.

Photo: Englewood Health

Multimodal, Regional Anesthesia Techniques Reduce Reliance on Opioids

In the 25 years that Gregg Lobel, MD, has been practicing anesthesiology, the specialty has changed dramatically—perhaps nowhere more than in the way anesthesiologists, pain clinicians and their surgical colleagues approach the use of opioids for intraoperative and postoperative pain.

Whereas narcotics were once the mainstay of perioperative pain control, Dr. Lobel and his team at Englewood Health have changed their approach, and now build their practice on



Gregg Lobel, MD
Chief, Anesthesiology

multimodal analgesia that makes use of a host of nonopioid medications, including regional anesthetic techniques. For patients, the benefits of these efforts include better pain control, fewer side effects and, perhaps most importantly, a reduced risk for developing long-term dependence on opioids.

“We have a large group comprising more than 40 anesthesiologists,” said Dr. Lobel, the chief of anesthesiology at Englewood Health. “Within that group, we have physicians that are specialty-trained in many different practice areas—whether

it’s cardiac anesthesia, pediatric anesthesia, obstetric anesthesia or our newest addition, regional anesthesia.”

For Dr. Lobel, a staunch believer in continuing education, as well as the idea that younger physicians can help introduce cutting-edge techniques to their more experienced colleagues, the creation of the position of director of regional anesthesia was an obvious product of this evolution in thinking.

“As with anything in medicine, regional anesthesia represents a continuous learning curve,” he said. “And we felt it was important enough to have someone who could really focus on regional techniques, help educate the rest of our group in it and act as a point

“From the patient’s standpoint, it’s beneficial in many ways. From a surgeon’s perspective, patients are more comfortable than they otherwise would be, are able to go home sooner and tend to be a lot happier.”

—Barry Ettinger, MD

person to work with our surgeons to make sure that as a group we're doing everything we can to help optimize outcomes among our patients."

Enter Barry Ettinger, MD, the physician who now serves in that role. Since joining Englewood Health about five years ago, he has seen regional anesthesia come to exert an increasingly important role in an ever-growing variety of surgical procedures.

"The idea behind regional anesthesia is that instead of using medication that works systemically throughout the entire body, we're able to localize and control the pain in a specific area," Dr. Ettinger said. "It comes with a lot fewer side effects, and also allows us to avoid—or at least reduce—the amount of opioids that we administer to our surgical patients."

The literature supports this approach, as numerous studies have documented the benefits of peripheral nerve blockade in

decreasing patients' postoperative opioid consumption for a variety of procedures, from total knee arthroplasty (*J Knee Surg* 2021;34[7]:705-711) to nephrolithotomy (*J Endourol* 2022;36[1]:38-46), and virtually everything in between.

For Dr. Lobel, the benefits of reducing opioid consumption by patients are mainly twofold: minimizing such side effects as nausea, vomiting and constipation, and limiting the chance that surgical patients might go on to abuse opioids.

"If you talk to people who have become addicted to opioids, they often say they were exposed to the agents after a surgical procedure and typically early in life," Dr. Lobel said. "So, we try to limit their exposure to minimize addiction possibilities."

Yet at Englewood Health, efforts to minimize opioid consumption and optimize the patient experience go beyond the operating and recovery rooms. That's where physicians such as Vinnidhy Dave, DO, the director of palliative medicine at Englewood Health, come in. Dr. Dave oversees inpatient pain management for all of Englewood Health's hospital sites, and uses his expertise to address the needs of patients who are experiencing more complicated pain issues.

For Dr. Dave, the best approach for these patients is to use multimodal pain management. "What that really means is using a variety of pain medications along with regional anesthesia to improve pain control," he said. An added benefit of multimodal analgesia is its focus on reducing opioid consumption, he added.

"Years ago, narcotics were the foundation of all postoperative pain control," Dr. Dave said. "But we know the issues that come with narcotics in terms of addiction and side effects. So, in trying to minimize the amount of narcotics by utilizing other medications, we're actually finding that a lot of patients do better."

Despite the focus on minimizing opioid therapy, clinicians recognize that the drugs continue to play an important role in perioperative pain management, even as they occupy an increasingly smaller space.

"For sure, we still have to use opioids in certain situations," Dr. Dave said. "But we're noticing that we need to use them a lot less frequently and in lower doses when we employ a multimodal approach. So, between these varied medications and peripheral nerve blocks, patients are requiring opioids much less—sometimes not at all. For example, our bariatric surgeons have created an opioid-free



Barry Ettinger, MD
Anesthesiology



Vinnidhy Dave, DO
Director, Palliative Medicine

postoperative protocol and their patients are doing really well with it."

In some cases, extra analgesia is still needed, but anesthesiologists like Dr. Ettinger have an effective answer.

"In addition to single-shot nerve blocks, we'll also use continuous nerve catheters for certain cases, such as upper and lower extremity surgeries," he said. "So, while the initial medication may wear off after 12 to 18 hours, these catheters allow us to give continuous medication for three days or so.

"That helps patients get over that

initial period where postoperative pain tends to be the worst," Dr. Ettinger added. "I've had many patients who haven't needed a single opioid pill at all after surgery with a good continuous block in place."

Moreover, the regional anesthesia program at Englewood Health is growing continually, as newer nerve blocks addressing different body sites and more complex surgeries are regularly added to the armamentarium available to its physicians.

"We're always assessing the newest literature to see what works, what our patients like and what works for the surgeons as well," Dr. Ettinger said.

"From the patient's standpoint, it's beneficial in many ways," Dr. Ettinger added. "From a surgeon's perspective, patients are more comfortable than they otherwise would be, are able to go home sooner and tend to be a lot happier."

As Dr. Dave described, the sum of these combined efforts is a practice that addresses all aspects of patient care.

"It's great to see patients doing so well," he said. "There's an increasing awareness in our patient population of the side effects of pain medications, and many want to avoid narcotics but don't know how to approach it. Once we talk to them about our multimodal regimens, they feel very comfortable with it." ●



Englewood Health Physician Network Welcomes New Surgical Specialists

In recent months, 10 new surgical specialists have joined the Englewood Health Physician Network. Their specialties include endocrine, breast, orthopedic, spine, podiatric, vascular and urologic surgery. Englewood Health continues to grow its network to ensure that patients have access to leading care right in their own community.



Podiatric foot and ankle surgeon **Vrunda R. Dalal, DPM**, has joined Northeast Podiatry Group, a member of the Englewood Health Physician Network.

Dr. Dalal's clinical interests include arthritis of the foot and ankle; heel pain;

foot and ankle sprains and fractures; post-traumatic reconstruction of the foot and ankle and revision surgery; sports medicine; and wound care.

Dr. Dalal received her DPM from New York College of Podiatric Medicine, in New York City. She did a podiatric medicine and foot and ankle (forefoot and rearfoot) surgery residency at CarePoint Health–Hoboken University Medical Center. She is an associate member of American College of Foot and Ankle Surgeons and a member of the American Society of Podiatric Surgeons and the American Association for Women Podiatrists. In addition to English, Dr. Dalal is fluent in Gujarati and Hindi.



Orthopedic surgeon **David N. Feldman, MD**, a longtime provider at Englewood Health, recently joined the Englewood Health Physician Network. Dr. Feldman's main clinical interests are surgeries of the hip, knee and shoulder, including joint

replacement surgery, (minimally invasive) arthroscopic surgery, bloodless medicine and surgery, sports injuries and fracture care. He sees patients at Active Joints Orthopedics, a member of the Englewood Health Physician Network.

Board certified in orthopedic surgery, Dr. Feldman received his MD from SUNY Downstate College of Medicine in Brooklyn. He did an orthopedic surgery residency at Maimonides Medical Center, in Brooklyn, which included pediatric orthopedic surgery training at Shriners Hospitals for Children, in Minneapolis, and orthopedic oncology training at Memorial Sloan Kettering Cancer Center, in Manhattan. He is a fellow of the American College of Surgeons and the American Academy of Orthopaedic Surgeons, a member of the American Association of Hip and Knee Surgeons and a founding member of the Society for the Advancement of Blood Management.



Breast surgeon **Jenna E. Gillen, DO**, has joined Breast Surgery of Englewood Health Physician Network. Dr. Gillen's primary clinical interests are breast cancer surgery, breast cancer in minorities and young women, hereditary breast cancer

syndromes, women at higher risk for breast cancer, benign breast disease and lactation disorders.

Dr. Gillen received her DO from New York Institute of Technology College of Osteopathic Medicine in Old Westbury, N.Y. She did a general surgery residency and was academic chief resident at Hackensack Meridian Palisades Medical Center, in North Bergen, and did a breast surgery fellowship at Phelps Hospital Northwell Health, in Sleepy Hollow, N.Y.; Northern Westchester Hospital, in Mount Kisco, N.Y.; and Lenox Hill Hospital, in Manhattan. She is a member of the American Society of Breast Surgeons, Society of Surgical Oncology, Society of American Gastrointestinal and Endoscopic Surgeons, American College of Surgeons, American College of Osteopathic Surgeons and American Osteopathic Association.



Podiatrist **Alandra M. Greenlee, DPM**, has joined Englewood Orthopedic Associates, part of the Englewood Health Physician Network. Dr. Greenlee's clinical interests include adult and pediatric deformity correction, arthroscopic foot and ankle surgery, foot

care, lower limb extremity trauma, limb salvage and sports medicine.

Board certified in podiatric medicine and board eligible in forefoot surgery and reconstructive rearfoot and ankle surgery, Dr. Greenlee received her DPM from Des Moines University College of Podiatric Medicine and Surgery in Iowa. She did a podiatric medicine residency in surgery and rearfoot reconstruction at Atlantic Health System–Morristown Medical Center, in Morristown, where she was chief resident for research. She is an associate of the American College of Foot and Ankle Surgery. In addition to English, Dr. Greenlee is conversational in Spanish.



Vishal A. Khatri, MD, an orthopedic surgeon, joins Englewood Orthopedic Associates, a member of the Englewood Health Physician Network. Dr. Khatri's main clinical interests are degenerative spine disease, traumatic spine injuries, geriatric fractures, spinal tumors and spine injuries in athletes.

Dr. Khatri did an orthopedic surgery residency at Cooper University Hospital in Camden, followed by a spine surgery fellowship at the University of Maryland Medical Center–R. Adams Cowley Shock Trauma Center, in Baltimore. He is a member of AO

Spine, the New Jersey Orthopedic Society and the North American Spine Society.



Endocrine and general surgeon **Ki Won Kim, MD**, has joined the Englewood Health Physician Network and Englewood Hospital. Dr. Kim's primary clinical interests are diseases of the thyroid, parathyroid, and adrenal glands, including thyroid cancer, goiter,

Graves' disease, primary hyperparathyroidism and adrenal adenomas. He is skilled in laparoscopic and open surgery for acute and chronic abdominal conditions, including appendicitis, diverticulitis, bowel obstructions, gallbladder disease, hernias and soft tissue masses.

Board certified in general surgery, Dr. Kim received his MD from the Icahn School of Medicine at Mount Sinai in Manhattan. He did a general surgery residency and was chief resident at Montefiore Medical Center (Albert Einstein College of Medicine) in Bronx, N.Y., followed by an endocrine surgery fellowship at the University of Miami–Jackson Memorial Hospital in Miami. He is a member of the American College of Surgeons and the American Association of Endocrine Surgeons. In addition to English, Dr. Kim is conversational in Korean and Spanish.



Jonathan Lee, MD, an orthopedic spine surgeon, joins Englewood Orthopedic Associates, a member of the Englewood Health Physician Network.

Dr. Lee's clinical interests include neck and low back pain, pinched nerves, herniated disks, degenerative disk disease, arthritis of the spine, spinal stenosis, scoliosis, spine fractures, traumatic spine injuries, minimally invasive spine surgery and revision spine surgery.

Dr. Lee did an orthopedic surgery residency at Rutgers New Jersey Medical School, followed by an orthopedic spine surgery

fellowship at the Mount Sinai Hospital (Icahn School of Medicine at Mount Sinai) in Manhattan. He is a member of the American Academy of Orthopaedic Surgeons, AO Spine and the North American Spine Society.



Ruben M. Pinkhasov, MD, MPH, a urologist, has been appointed the director of minimally invasive urologic surgery at The Lefcourt Family Cancer Treatment and Wellness Center at Englewood Health. His main clinical interests are in uro-

logic cancers, including those of the prostate, adrenal gland, bladder, kidney, testis and ureter. Dr. Pinkhasov joins Urology of Englewood Health Physician Network.

Dr. Pinkhasov received his MD from SUNY Downstate Health Sciences University College of Medicine and an MPH from SUNY Downstate Health Sciences University School of Public Health, in Brooklyn. He did a urology residency and was chief resident at Maimonides Medical Center in Brooklyn. He completed a urologic oncology fellowship focused on minimally invasive surgical approaches, including robotic surgery and laparoscopy, for the treatment of genitourinary cancers, at Roswell Park Comprehensive Cancer Center, in Buffalo, N.Y. His research focuses on nutrition and prostate cancer prevention. He is a member of the American Urological Association, the Society of Urologic Oncology, and the New York State Urological Society. In addition to English, Dr. Pinkhasov is fluent in Russian.



Nakul Rao, MD, a vascular surgeon, has joined Englewood Health Physician Network – Vascular Surgery and Englewood Hospital. Dr. Rao's clinical interests encompass complex aortic disease, including abdominal and thoracic aortic aneurysms;

carotid artery disease; renal artery disease; venous disease and peripheral artery disease.

Dr. Rao is a member of the American College of Surgeons, Society of Clinical Vascular Surgery and Vascular Society of New Jersey. Dr. Rao did his residency at Drexel University School of Medicine in Philadelphia and his fellowship at Englewood Health.



Urologist **Yale Shulman, MD**, of Shulman Urology, is part of the Englewood Health Physician Network, and he welcomes new patients to his practice, in Jersey City. Dr. Shulman's clinical interests include urologic cancers, including those of the bladder, kidney and

prostate; male infertility; urinary incontinence; urinary tract infections; kidney-sparing surgery; and robotic surgery.

Dr. Shulman received his MD from Albert Einstein College of Medicine, in the Bronx. He did a urology residency and was chief resident at NYU Langone Medical Center in Manhattan. He is a fellow of the American College of Surgeons; a member of the American Urological Association, American Association of Clinical Urologists, Sexual Medicine Society of North America and Society of Urologic Prosthetic Surgeons; and president of the Urology Society of New Jersey. In addition to English, Dr. Shulman is fluent in Hebrew and conversational in Spanish.

To reach any of these specialists, or to find a physician at Englewood Health, visit englewoodhealthphysicians.org or call 833-234-2234.

Early Breast Cancer Screening Vital, Despite Family History, and Especially for Minorities

A growing body of evidence shows that women have not benefited equally from advances in the treatment and detection of breast cancer over the last 30 years.

Mortality rates from breast cancer have declined 40% since 1989, but women's survival varies by race, geography and socioeconomic status, according to findings from the American Cancer Society (ACS).

"One thing that hasn't really changed much over decades is that certain demographics have worse survival," said Violet M. McIntosh, MD, the chief of breast surgery and the associate director of the Breast Care Center at Englewood Health. "We are still seeing those differences in 2022."

Black women especially have an elevated risk for mortality from breast cancer. In 2019, the ACS reported that the breast cancer death rate was 40% higher in Black women compared with white women between 2013 and



Violet M. McIntosh, MD
Chief, Breast Surgery

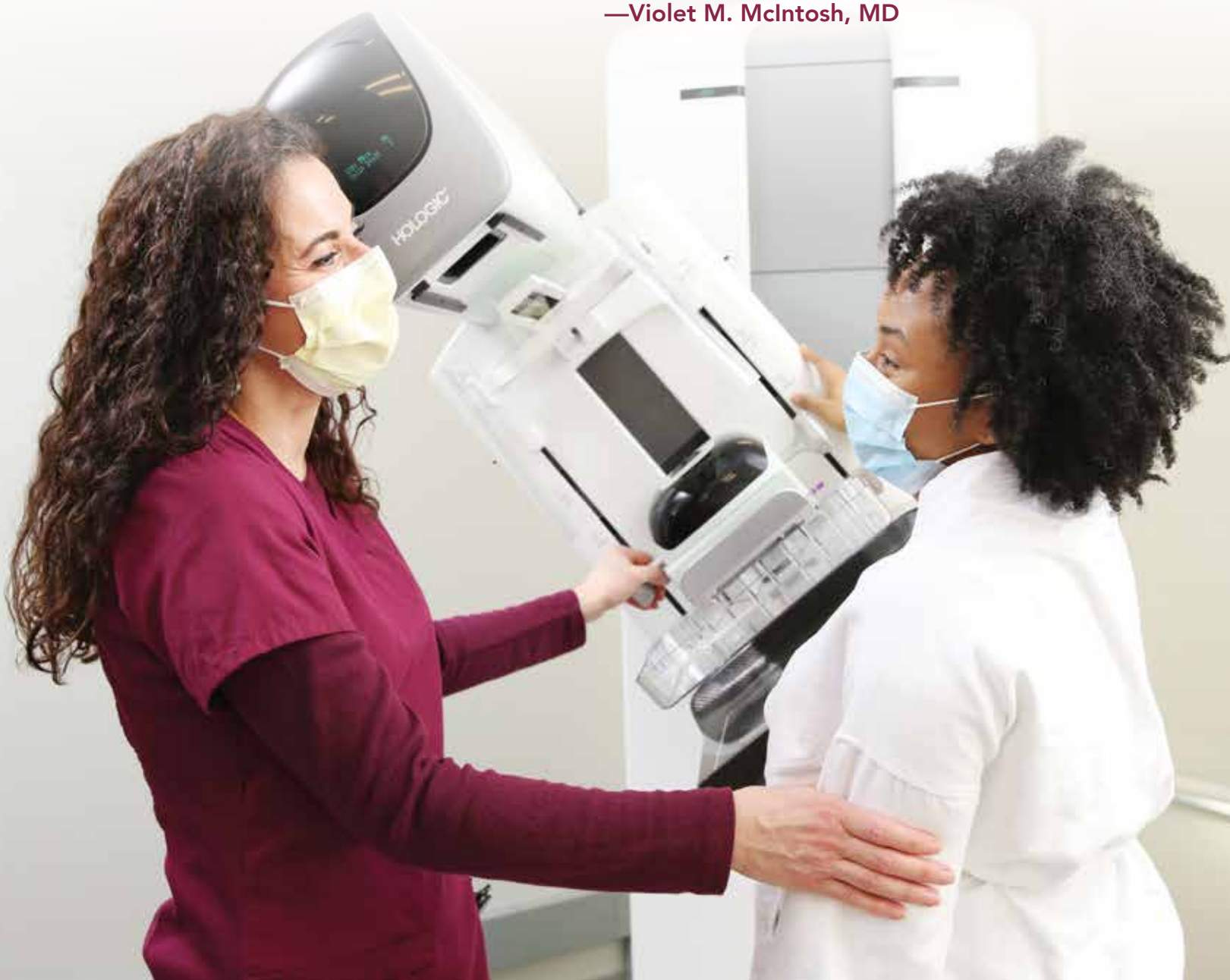
Rachelle Y. Leong, MD
Breast Surgery

"Patients need to understand that the top risk factor for breast cancer is being female, and the second is getting older."

—Violet M. McIntosh, MD

2017, according to the American Cancer Society. The reasons for these gaps are multifactorial and poorly understood, Dr. McIntosh noted. One factor may be that Black women are more likely to be diagnosed with triple-negative breast cancer, an aggressive cancer with fewer treatment options than other breast cancers. Black women are also more likely to be screened at lower-resourced and non-accredited facilities. They often wait longer between mammograms and have greater delays in seeing a physician after receiving abnormal results from a mammogram.

Dr. McIntosh said breast cancer outcomes would be improved if all women started undergoing regular screening mammograms by 40 years of age. Women with a first-degree relative who was diagnosed with breast cancer before age 50 should begin even earlier, with their first mammogram 10 years younger than



their relative's age at diagnosis, she added.

The U.S. Preventive Services Task Force does not recommend routine screening of women between the ages of 40 and 49; however, many specialists who care for women with breast cancer believe this represents a dangerous delay in screening. National organizations, such as the American Society of Breast Surgeons and the American College of Radiology, recommend that all women undergo screening mammograms starting at age 40.

Many women mistakenly think they are not at risk for breast cancer if the disease does not run in their families, Dr. McIntosh said. But about 75% of patients with breast cancer are the first in their families to receive the diagnosis, she pointed out.

"Patients need to understand that the top risk factor for breast cancer is being female, and the second is getting older," she said.

Research on Korean American Outcomes

Across the United States, physicians are working to reduce diagnosis and treatment gaps among women. Many do outreach in their communities, trying to raise awareness about breast cancer risk and the need for early and regular screening. Englewood Health physicians are involved in these efforts as well. In New Jersey, Dr. McIntosh speaks at churches, patient advocacy groups and other organizations about the value of screening. The COVID-19 pandemic has further hindered breast screenings, she noted.

She tells women to pay attention to what's normal for them in terms of overall and breast health. "If something changes, they should seek medical attention," she said.

The breast surgery team at Englewood Health is undertaking a study to examine breast cancer rates and outcomes among its Korean American patients. The team started the study after noticing that these patients often presented with more advanced disease and at younger ages.

Other studies have shown that Korean American patients have relatively low breast cancer screening rates, thereby increasing their chances of being diagnosed at an advanced stage.

The Englewood Health team will use the results of this study to identify ways to help the community, possibly through educational resources or other programs. "Our hope is that we can help change that pattern of delayed diagnosis," added Rachelle Y. Leong, MD, a breast surgeon at Englewood Health. ●

When Breast Surgery Is Necessary

Despite the best screening efforts, surgery may be required for some patients. At Englewood Health, some of the more common breast cancer procedures are:

- excisional biopsy, performed when more information is needed about an image, or a high-risk lesion is present and needs to be ruled out as an associated cancer;
- partial mastectomy (lumpectomy), which is the removal of a breast cancer with a normal rim of tissue around it and without removing the whole breast;
- mastectomy, the removal of the whole breast, which can be done as a total mastectomy, skin-sparing mastectomy or nipple-sparing mastectomy; and
- breast reconstruction, which is usually performed by a plastic surgeon.



Jenna E. Gillen, DO
Breast Surgery

The department also has a wide array of reconstructive capabilities, including tissue expanders and implants, and the use of a patient's own tissue to form a DIEP (deep inferior epigastric perforator) flap to reconstruct a new breast.

Englewood Health has the latest technological capabilities in-house. The department now uses the Mozart Specimen Tomosynthesis Imaging System, a type of x-ray that allows surgeons to complete 3D images of their specimens. According to Jenna E. Gillen, DO, a breast surgeon at Englewood Health, the system has been shown to decrease positive margins.

"I use a probe to assess my margins during cancer operations as an additional adjunct to decrease my positive margin rate," Dr. Gillen said. "The probe uses radiofrequency electrical fields to examine the tissue and identify any cancer that may be at a margin."

Dr. Gillen also uses the LOCALIZER (Faxitron), a wireless breast lesion localization system, to precisely identify the tissue that needs to be removed during a case.

"This new technology allows the patient to be localized in advance of their surgery with nothing sticking outside of the breast, like a surgical wire."

To provide the best care possible, there is extensive collaboration between surgeons and oncologists, Dr. Gillen said. "We have a multidisciplinary approach to every cancer patient at Englewood," she said. "Every case is discussed pre- and post-surgery at a tumor board that involves the breast surgeon, plastic surgeon, radiation oncologist, medical oncologist, pathologist, radiologist and nurse navigator."

Dr. Gillen's surgical philosophy is to always try to take a conservative approach. "This means that I complete surgery by only removing the defined area of cancer and allow the patient to keep the rest of the breast tissue whenever possible. We also try to minimize axillary surgery by following new guidelines, including the American Society of Breast Surgeons Choosing Wisely campaign, which omits sentinel lymph node sampling in certain patients." In addition, an increasing number of patients are receiving neoadjuvant chemotherapy for breast cancer, which has been shown to improve surgical outcomes in some patients, Dr. Gillen added.

Finally, Englewood Health is also involved in breast cancer research, helping to shape treatment approaches for the years to come. One ongoing clinical study is the COMET (Comparing an Operation to Monitoring, with or without Endocrine Therapy trial for low-risk DCIS) trial. In this study, patients are randomized to receive either surgical intervention or be monitored with a hormone for stage 0 ductal carcinoma in situ. The results will inform practitioners about the best way forward for these low-risk breast cancers.

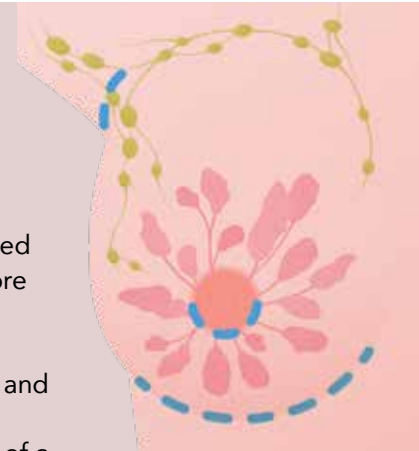


Image: Adobe Stock



Kevin Yao, MD, chief of neurosurgery, and Omar N. Syed, MD, use fluorescence-guided technology to improve the visualization of tumor tissue.

Surgical, Technological Expertise Combine For Innovative Oncologic Approach

As the field of surgical oncology continues to advance, optimizing care will depend increasingly on multidisciplinary approaches, guided by the interaction between traditional surgical techniques and novel technological advances.

At Englewood Health, this future is being shaped around a “three pillar” approach:

1. exemplary patient care,
2. educating the next generation of cancer surgeons, and
3. translational research that defines precision medicine.

“We take care of the most complex tumors and many high-acuity patients,” said Steven T. Brower, MD, the chief of surgical oncology at Englewood Health, and the medical director of The Lefcourt Family Cancer Treatment and Wellness Center. “The cancers we are treating—including pancreatic, stomach, liver, melanoma, gastrointestinal and esophageal—are unique, challenging cancers that require coordination and cutting-edge therapies.”

In such a competitive field, Englewood’s approach combining surgeons with many years of experience with complex surgery, preoperative advanced imaging of tumors and surgical simulation, utilization of intraoperative advanced imaging, application of minimally invasive surgery, and returning of patients to their preoperative functional status is a commitment that results in outcomes that consistently exceed national averages.

As an example, advanced imaging techniques, such as fluorescence-guided surgery, are being used for lymph node mapping in gastric cancers, allowing for more minimally invasive surgeries with outcomes

that are similar to lymph node dissections with open surgery.

Fluorescence-guided surgery is also being used to target cellular differences and liver margin status in hepatocellular carcinoma, colorectal and neuroendocrine cancers, allowing for curative surgery and protection of uninvolved liver parenchyma.

For patients with melanoma, historically a very difficult cancer to treat if found at a more advanced stage, surgery is just one component of a truly multidisciplinary, team-based approach that includes medical oncologists, immunologists and radiation oncologists offering state-of-the-art immunotherapy following surgery.

Additionally, Dr. Brower stressed the importance of providing experienced, hands-on training for prospective surgeons who are faced with complex problems of the liver, pancreas, stomach and esophagus.

“We are committed to training surgical residents and allowing them to have direct experience with very complex surgeries,” he said. “They get experience with these extremely intricate cases, allowing them to gain experience both in the operating room and with helping patients return as quickly as possible to normal life.”

Recently, Dr. Brower was involved with the development and publication of updated American Society of Clinical Oncology guidelines for systemic therapy of advanced hepatocellular carcinoma, which focused on multidisciplinary treatment approaches (*J Clin Oncol* 2020;38[36]:4317-4345).

“The committee developed guidelines that combine multidisciplinary treatment including surgery, interventional radiology, radiology and medical oncology,” Dr. Brower said. “The guidelines look stage-by-stage at an appropriate clinical pathway for the treatment of hepatocellular carcinoma. This includes clinical pathways that involve surgery first, or situations where surgery takes place following other modalities, and also focuses on how best to protect the liver remnant following treatment.”



Steven T. Brower, MD
Chief, Surgical Oncology

Expertise in ‘Bloodless Surgery’ Techniques Stands Out During Nationwide Blood Shortage

The American Red Cross recently declared a nationwide blood shortage, a crisis caused by a general decline in blood donations made more acute by the on-going pandemic.

The shortage has begun to affect the timing of elective surgeries, with some hospitals delaying procedures that may require blood transfusion. Patient blood management, on the other hand, is the standard of care at Englewood Health, long a leader and innovator in this approach.

The initial motivation behind “bloodless surgery” was that there were patients who had religious objections to receiving blood. Additionally, there was growing literature that the benefits of transfusion were likely exaggerated and risks were massively understated.



Margit Kaufman, MD
Medical Director, Institute for Patient Blood Management and Bloodless Medicine and Surgery

Englewood Health’s experience with treating “bloodless” patients in the 1990s helped pioneer the concept of patient blood management. Today, a world-renowned leader in the field, Englewood has more than 300 physicians, nurse practitioners and physician assistants trained in this approach.

“Patient blood management is a multidisciplinary technique,” said Margit Kaufman, MD, an anesthesiologist and intensivist who is the medical director of the Institute for Patient Blood Management and Bloodless Medicine and Surgery at Englewood Health. “We focus on improving the health of the patient’s own blood volume and supply rather than relying on donor blood.”

The use of Englewood Health’s patient blood management techniques was approved for its open-heart program nearly 20 years ago, an approval “that served to create national standards for patient anemia in surgical patients,” Dr. Kaufman said. Since then, the concept of a restrictive approach to surgical transfusions has continued to gain adherents (*Curr Opin Anaesthesiol* 2008;21[5]:664-668).

“I practice blood management because it turns out to be the best medicine,” said Richard S. Goldweit, MD, the chief of interventional cardiology and medical



Richard S. Goldweit, MD
Chief, Interventional Cardiology

director of the cardiac catheterization laboratory at Englewood Health. “Anticipating bleeding, preventing it, treating anemia—all without transfusion—that’s bedrock medical care. And we have proven at Englewood Health that it translates into better outcomes.”

Bloodless Strategies

Blood conservation is one of the pillars of an effective patient blood management program, along with managing anemia for low hemoglobin, optimizing coagulation and patient-centered decision making. Englewood Health uses both thromboelastography and rotational thromboelastometry—real-time tests that enable the surgeon and anesthesiology team to assess hemostasis throughout the



Photo: Englewood Health

“Anticipating bleeding, preventing it, treating anemia—all without transfusion—that’s bedrock medical care. And we have proven at Englewood Health that it translates into better outcomes.”

—Richard S. Goldweit, MD

perioperative period. Originally limited to cardiothoracic surgery and liver transplantation, the two technologies are now widely used in critical care and emergency medicine as well as cardiac, hepatic and orthopedic procedures.

In addition, physicians use the reticulocyte hemoglobin equivalent (Ret He) laboratory test, which measures the iron content of reticulocytes, the initial cells produced by bone marrow.

These tests, together with close teamwork in the OR, permit the use of acute normovolemic hemodilution, a blood conservation technique that removes whole blood from the patient shortly after induction of anesthesia for later use—it also dilutes the amount of shed blood. Normovolemia can be restored with the use of crystalloid or colloid replacement fluids.

Innovation Continues

Englewood Health has been working diligently to improve its use of technology to enhance its patient blood management protocols.

Dr. Kaufman is a recent recipient of Englewood Health Foundation’s Physician Innovation Fund, which will enable her to launch a digital application that helps provide physicians with decision support for their bloodless surgery patients. Dr. Kaufman is also part of a team that is consolidating all information relating to bloodless surgery patients into one location within the hospital’s electronic medical record. “Instead of having to click multiple times, we are creating one standard dashboard,” she said. Ready access to this data bank will assist patient decision making and studies of clinical outcomes.

Patient feedback on the blood management program continues to be very positive. “Patients are so thankful that they are being seen and heard fully, and not just as someone with a problem with their gallbladder or appendix or heart,” Dr. Kaufman said. “Our medical team assesses the whole body, and we find ways to help the patient to be healthier overall.”

New Strides in Foot and Ankle Surgery for Younger Patients

Persistent foot or ankle pain often stems from an injury suffered in early adulthood. Acute ankle sprains are highly prevalent, especially in young athletes, and have a high recurrence rate, which often leads to chronic ankle injury. Research shows that up to 70% of patients who experience an acute ankle sprain develop residual physical disability, including chronic ankle instability (*J Athl Train* 2019;54[6]:603-610).

Former ankle sprains may lead to future ones.

"We're seeing more and more studies showing that a minor injury has long-term repercussions," said Alandra Greenlee, DPM, a podiatric physician with Englewood Orthopedic Associates and a member of the Englewood Health Physician Network. "We'll see recurrent ankle sprains, an altered gait or a decreased quality of life. That's when patient education and communication are critical to take the necessary steps so it doesn't happen again."

Ignoring the minor injury can be devastating. A study found that patients who suffered ankle sprains experienced a litany of physical issues three to 15 years post-injury, including increased pain and symptoms, poorer function, and even reduced quality of life. They were also more likely to stop participating in sports (*Foot Ankle Int* 2022;43[1]:21-31).

Ailments like chronic ankle instability may take a physical and an emotional toll on younger patients, since they are restricted in the jumping and lateral movements that are often integral to youth sports. Ankle instability is associated with reduced ankle eversion and knee abduction, greater ankle plantar flexion movement and greater sagittal plane hip-joint stiffness (*J Athl Train* 2020;55[2]:169-175).

"We use the latest surgical techniques when surgery is called for," said Kirten Parekh, DPM, a podiatric surgeon with HVA Medical Group and a

member of the Englewood Health Physician Network. "That might mean ankle reconstruction, fixing an osteochondral deficit or surgically structuring ligaments on the lateral side to improve biomechanics. Many of these procedures are caused by old injuries if left untreated."

Drs. Greenlee and Parekh consider surgical interventions as a last resort for their young patients, but their affiliation with Englewood Health is a boon to patients because of easy access to divergent specialists within the same building.

"A patient can have an appointment for an upper extremity and a lower extremity injury on the same day, and the doctors will collaborate to find the best path forward for the patient," Dr. Greenlee said. "It also allows for quick access to other physicians in case we suspect some underlying but undiagnosed condition that requires immediate attention."



Alandra Greenlee, DPM
Podiatric Surgery



Kirten Parekh, DPM
Podiatric Surgery

"We're seeing more and more studies showing that a minor injury has long-term repercussions."

—Alandra Greenlee, DPM



Photo: Shutterstock

New Surgery Techniques Improve Foot, Ankle Conditions in Older Patients

Osteoarthritis of the first ray, which encompasses the first metatarsal and first cuneiform bones, is extremely common, affecting more than two-thirds of all adults aged 65 years and older. The conditions cause pain, difficulty in daily activities and an altered gait, which could lead to other injuries.

To treat disorders of the first ray, such as end-stage arthritis and hallux rigidus, surgeons have often used arthrodesis of the first metatarsophalangeal joint, which is highly effective at reducing pain but may limit a patient's range of motion.

As joint replacement materials advance, surgeons are moving away from arthrodesis and opting for a silastic first metatarsophalangeal joint replacement (*Bone Joint J* 2020;102-B[2]:220-226), which has been shown to reduce pain and improve patient satisfaction (*EFORT Open Rev* 2019;4[3]:77-84).

"The new joint replacement material is leading to tremendous success, and we are seeing consistent results, which means an elimination of pain, a fuller range of motion and less postoperative disability for most patients," said Ritchard Rosen, DPM, a partner at Northeast Podiatry Group, a member of the Englewood Health Physician Network.

The team of physicians at Northeast Podiatry Group combines decades of experience while constantly learning new techniques to provide quality care to older patients.

"At Englewood Health, we take procedures that have been done for many years, along with refined techniques and the latest technology, so our patients heal faster and achieve earlier ambulation than what was once possible," said Jeffrey Cohen, DPM, the chief of podiatry at Englewood Health and a partner at Northeast Podiatry Group.

Drs. Cohen and Rosen have been quick to adopt new surgical procedures that have been proven to benefit patients. For example, they were pioneers in using radiofrequency ablation to treat Morton's neuroma, a painful condition affecting the ball of the foot. Their work was part of a study on its efficacy (*J Foot Ankle Surg* 2012;51[1]:20-22). They also now use the ablation procedure for heel pain.

"The procedure is quick and has a 78% resolution of pain," Dr. Rosen said. "We see proof of this technology and our patients thriving, so we're happy to have made it part of our practice."

The team sees many older patients seeking relief from foot deformities like bunions and hammer toes, and handles a lot of complications from diabetes, including amputations and wound care caused by deformities.

"Our affiliation with Englewood—and its extensive physician network—enables us to treat patients more effectively because we have a better picture of the patient," Dr. Cohen said. "We're in constant touch with other physicians who are treating our patient, so we know the doctors they are seeing, other conditions that are affecting them and the medications they're on."

"We take procedures that have been done for many years, along with refined techniques and the latest technology, so our patients heal faster and achieve earlier ambulation than what was once possible."

—Jeffrey Cohen, DPM



Jeffrey Cohen, DPM
Chief, Podiatry



Ritchard Rosen, DPM
Podiatric Surgery

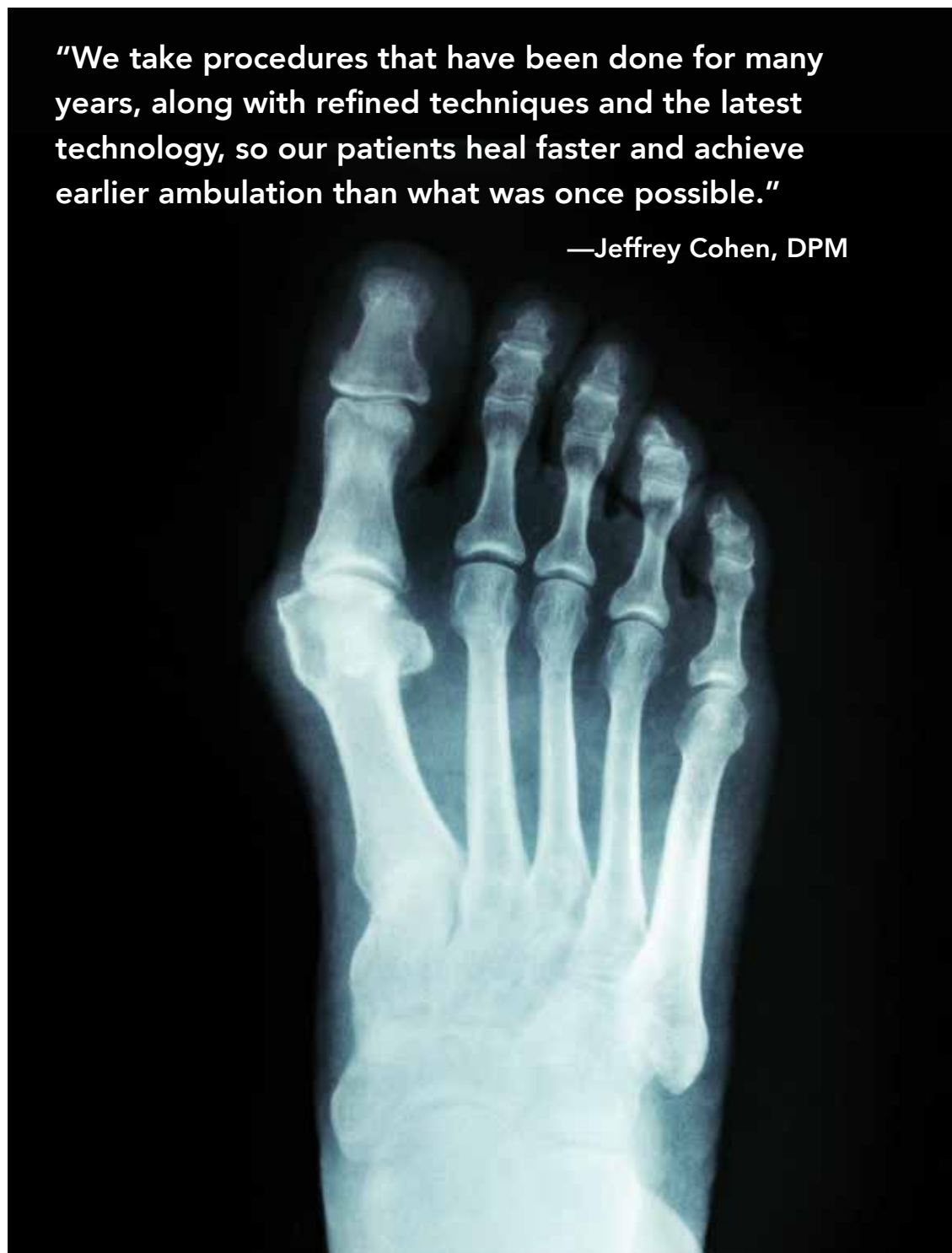


Photo: Adobe Stock

Vasa Previa: When Labor Is Not an Option

Standardization in ultrasound assessment of umbilical cord visualization in recent years has allowed obstetricians to more precisely identify a rare but potentially devastating birthing complication called vasa previa, which can have a 90% fetal mortality rate if undetected before labor or ruptured membranes.

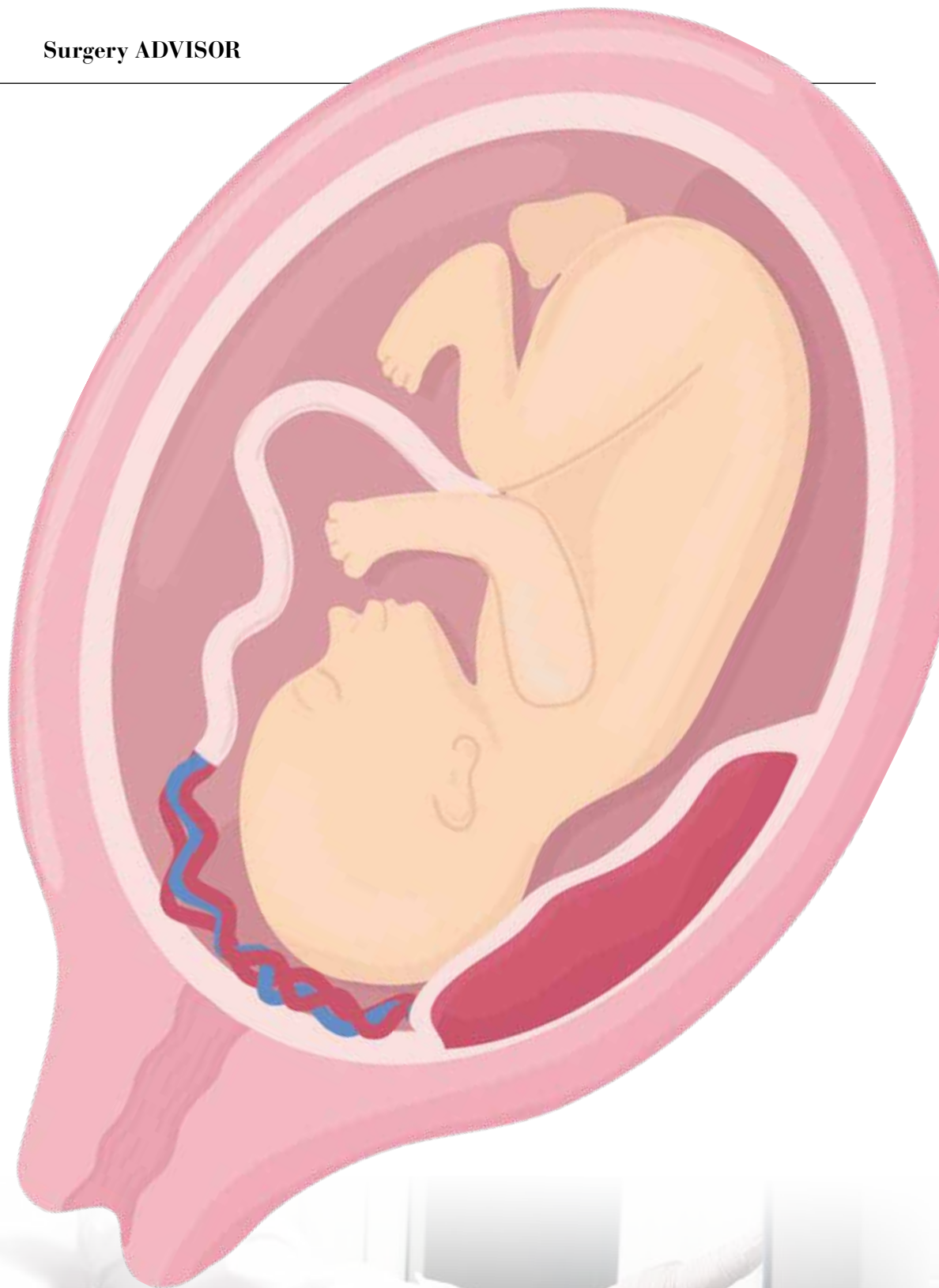
Presenting in about one of every 2,000 births, vasa previa occurs when unprotected fetal blood vessels run through the amniotic membranes and traverse the cervix. It can result in fetal hemorrhage, exsanguination and fetal death, according to Andrei Rebarber, MD, the co-director of the Maternal-Fetal Medicine Center at Englewood Health.

"It can be missed very easily because these are tiny fetal vessels that are difficult to distinguish with older gray scale ultrasound imaging," Dr. Rebarber said. "But using 3D transvag-

inal ultrasound with color-flow Doppler, we are now able to accurately identify when the fetal blood vessel is presenting over the cervix, localize vasculature within the uterine cavity and determine exactly how the vessel is coming off the placenta."



Andrei Rebarber, MD
Co-Director, Maternal-Fetal
Medicine Center



Using this information, Maternal-Fetal Medicine Center physicians schedule cesarean deliveries during the late pre-term period, resulting in better outcomes for both mothers and babies.

Risk factors for vasa previa, according to the International Vasa Previa Foundation, include:

- low-lying placenta or placenta previa in the second trimester, even if this resolves;
- bilobed or succenturiate-lobed placenta;
- velamentous insertion of the cord;
- in vitro fertilization pregnancies;
- multiple-fetal pregnancies; and
- history of uterine surgery or dilation and curettage.

“The American Institute of Ultrasound in Medicine and the American College of Radiology have only recently begun recommending routine screening for vasa previa in patients with these risk factors, but our team has been doing these screenings since 2005, and achieved excellent results that we have published in peer review journals,” Dr. Rebarber said.

In a 2014 paper in the *Journal of Ultrasound in Medicine*, Dr. Rebarber and colleagues reviewed cases of vasa previa identified in their practice between June 2005 and June 2012 (2014;33[1]:141-147). They identified 31 vasa previa cases out of 27,573 patients, for an incidence of 1.1 per 1,000 pregnancies.

“With the expertise that we have at Englewood Health, we are able to successfully manage pregnancies with vasa previa, and families go home with a healthy baby.”

—Andrei Rebarber, MD

“We watched very closely and managed these patients carefully, and timed their deliveries earlier to ensure that they were delivered prior to the onset of labor, typically at around 35 or 36 weeks,” he said. Of the 29 cases that had full records available, the vasa previa resolved in five patients (17.2%). Of the 24 pregnancies with persistent vasa previa (five twin gestations and 19 singleton gestations), cesarean deliveries occurred at a mean length of gestation of 35 weeks, with 100% perinatal survival.

“With the expertise that we have at Englewood Health, we are able to successfully manage pregnancies with vasa previa, and families go home with a healthy baby,” Dr. Rebarber said.

Perfecting Cerclage: Improving Outcomes for Cervical Insufficiency

In the past, if a woman had experienced a second-trimester miscarriage or preterm birth, she was often diagnosed with “cervical incompetence”—a functional or mechanical defect of the cervix. In subsequent pregnancies, a transvaginal suture, known as a cerclage, was placed to prevent premature cervical dilation. But today, maternal-fetal medicine specialists know that many of these women actually have nothing wrong with their cervix, and cerclage in those patients does not improve outcomes.

“We’ve been much more selective of the patients in whom we diagnose what we now call ‘cervical insufficiency,’” said Nathan Fox, MD, the co-director of the Maternal-Fetal Medicine Center at Englewood Health. “We don’t call it cervical incompetence anymore, because it implies that the cervix is either ‘all good’ or ‘all bad,’ whereas the fact is that it just isn’t good enough for the job it needs to be doing in this pregnancy.”

Today, Dr. Fox and his colleagues at the Maternal-Fetal Medicine Center perform cerclages only on high-risk patients, including those who, in their current pregnancy, have a very short cervix or a dilated cervix, or have had multiple prior miscarriages and possible cervical damage.

“Quality evidence shows that cerclage prolongs pregnancy in high-risk women with a short cervical length, with a history of preterm birth and with painless cervical dilation in the second trimester,” Dr. Fox said. “In these cases, we are highly confident that our patients need the cerclage, but it also means that the circumstances of the pregnancy are much more complicated than when we were less selective and used to do them more readily.”

Dr. Fox and his colleagues at the Maternal-Fetal Medicine Center typically use the modified Shirodkar technique for performing a cerclage, rather than the simpler McDonald “purse-stitch” technique. “Shirodkar requires much more surgical dissection, but it gives you a cerclage that is placed higher up on the cervix, which is thought to produce better outcomes,” he said.

In a retrospective study, Dr. Fox and his co-investigators found that Shirodkar was associated with later gestational age (GA) at delivery compared with McDonald (mean GA at delivery, 36.98 weeks \pm 3.39 vs. 33.34 weeks \pm 6.37) and a lower likelihood of premature rupture of membrane (13.0 vs. 46.2). (*J Matern Fetal Neonatal Med* 2012;25[12]:2690-2692).

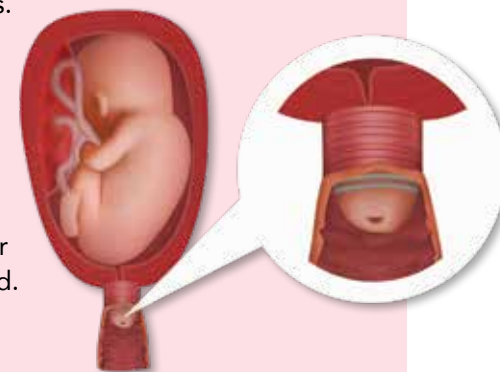
“We have very successful outcomes at Englewood with this approach, with patients who are able to bring their pregnancies to full term who might previously have been sent elsewhere, lost their pregnancy or told to terminate because it was hopeless,” Dr. Fox said. “This is why we do what we do. It’s very satisfying.”



Nathan Fox, MD
Co-Director, Maternal-Fetal
Medicine Center

“We don’t call it cervical incompetence anymore, because it implies that the cervix is either ‘all good’ or ‘all bad,’ whereas the fact is that it just isn’t good enough for the job it needs to be doing in this pregnancy.”

—Nathan Fox, MD





Cardiac surgeons Molly Schultheis, MD, and Robert Ferrante, MD.

Cardiothoracic Care Employs Latest Technologies With a Team Approach

At Englewood Health, the coronary artery bypass graft (CABG) team is dedicated to improving cardiac patient care by using innovative procedures, avoiding unnecessary blood transfusions and employing state-of-the-art medical devices.

In addition, the multidisciplinary nature of the program means patients get the best care from an entire team of experts, thereby setting the standard for cardiothoracic care.

"I truly think that patients are getting the best care because there are so many minds on one case," said Molly Schultheis, MD, a cardiothoracic surgeon at Englewood Health. "It's not just one physician making these decisions; it's a dedicated team."

Arterial Grafts

Saphenous veins are the most common conduit used in CABG, but research published in recent years suggests arterial conduits may offer several advantages over veins, such as better patency, fewer complications,

reduced readmissions and lower risk for death (*Curr Cardiol Rep* 2019;21[5]:36; *JAMA* 2020;324[2]:179-187). This is not news to the cardiothoracic team at Englewood Health.

"Originally, arterial grafts were used only for younger patients (between 30-50 years of age). But these grafts are coming out so well, we've been using them in older patients, too—which is especially pertinent, as patients are living longer," Dr. Schultheis said.

For patients, one of the advantages of arterial grafts is that they stay open longer than venous grafts. "We feel that by using arterial conduits, we can give our patients bypasses that have better patency over the long term, to keep them happy, healthy, out

of the hospital, free from heart attacks, free from chest pain, free from angina, free from recurrent interventions and free from repeat procedures," said Adam Arnofsky, MD, the chief of cardiothoracic surgery at Englewood Health.

Using arterial grafts presents unique challenges to surgeons who perform CABG, such as the need to harvest vessels from different parts of the body. Englewood Health is relatively unique in its use of arterial conduits, Dr. Schultheis said. "A great majority of cardiac surgeons use just the left internal mammary artery," she said, "but we also commonly use the right one."

A recent CABG patient was referred to

"I truly think that patients are getting the best care because there are so many minds on one case. It's not just one physician making these decisions; it's a dedicated team."

—Molly Schultheis, MD



Molly Schultheis, MD
Cardiothoracic Surgery

Dr. Schultheis after screening revealed he had very high levels of calcium. Despite the patient's complete lack of symptoms—no chest pain, no shortness of breath—five of his coronary arteries were found to be completely blocked.

"If you have no calcium in your coronary arteries, the chance that you have flow-limiting plaque is very low," said Robert Ferrante, MD, a cardiothoracic surgeon at Englewood Health. "The presence of some calcium might warrant a stress test. Calcium is a marker for a problem, and it's a good place to start."

In July 2020, the patient underwent a CABG procedure in which Dr. Schultheis used three arterial conduits: left internal mammary artery, right internal mammary artery and radial artery grafts. "All five blockages were completely covered and grafted," she said, noting that two saphenous veins were also employed in the procedure.

Bloodless Surgery

Another aspect of patient care that sets Englewood Health apart is its emphasis on bloodless surgery, managing patients pre- and intraoperatively in such a way that the likelihood of a transfusion is minimized.

Blood-sparing surgery is essential for Jehovah's Witnesses, who do not accept blood transfusions or the receipt of blood products, although they will accept medical care including surgery. Minimizing the use of blood transfusion not only decreases associated risks, but a 10-year follow-up of Jehovah's Witnesses who underwent cardiac procedures between 2000 and 2010 reported excellent outcomes after both elective and urgent procedures (*Ann Thorac Surg* 2012;93[1]:19-25). Blood-sparing approaches make sense in many cardiovascular surgical cases, not just those dictated by religious restrictions.



Robert Ferrante, MD
Cardiothoracic Surgery



Adam Arnofsky, MD
Chief, Cardiothoracic Surgery

Impella Pump

For high-risk patients such as those with severe coronary artery disease and severe heart failure, the cardiothoracic team at Englewood Health has been increasing its use of the Impella pump (Abiomed) to support sicker patients through the perioperative course of bypass surgery.

Although there are a number of mechanical circulatory support devices on the market, the Impella pump is miniaturized and minimally invasive; some clinicians have found it better than other mechanical circulatory support devices in patients with cardiogenic shock (*Ann Transl Med* 2020;8[13]:829).

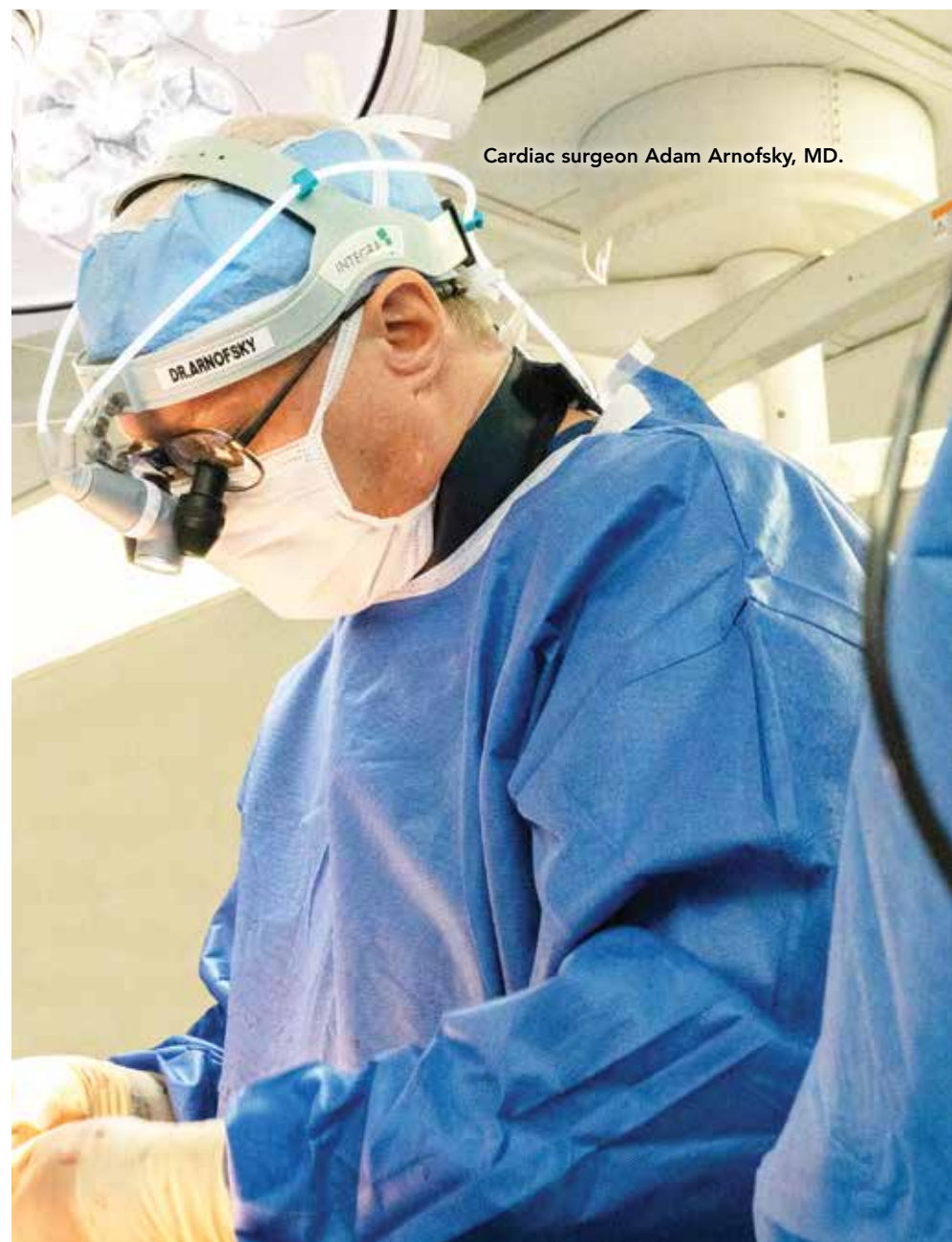
"By using arterial conduits, we can give our patients bypasses that ... keep them happy, healthy, out of the hospital, free from heart attacks, free from chest pain ... and free from repeat procedures."

—Adam Arnofsky, MD

"When patients have a poor squeeze or pumping function of their heart, they're at very high risk of having any type of heart procedure," Dr. Arnofsky said. "To try to decrease that risk and help them have a healthier course, we've been implanting an Impella pump at the time of bypass surgery."

The device is implanted directly into the heart through a small incision above the clavicle. Once in place, it helps support heart function for the first few postoperative days, the most critical time of recuperation.

"Once the pump is no longer necessary, we can remove it through a bedside procedure in the ICU," Dr. Arnofsky said. "This allows the patient to proceed toward a normal, hopefully speedy, postoperative recovery."



Cardiac surgeon Adam Arnofsky, MD.

Research and Technical Excellence Define Vascular Surgery Division

Englewood Health has observed an increase in the number of patients with arterial thrombosis associated with COVID-19. Endothelial damage and increased coagulation activity have been reported in some of these infected patients, resulting in a variety of thrombotic events. The Division of Vascular Surgery at Englewood Health has a wide array of the latest technology at its disposal, and is involved in various research projects in an effort to provide the best care possible.

A study involving Englewood Health researchers describes varying degrees of disease severity in four COVID-19 patients who presented with acute arterial thrombosis (*J Vasc Surg Cases Innov* 2020;6[4]:698-702). The study highlights the major life- and limb-threatening clinical sequelae of COVID-19.

"Three of the four patients were sent to the operating room for a surgical thromboembolectomy. The fourth patient was treated conservatively with anticoagulation, because he was found to have the thrombus incidentally and never had any symptoms," said study co-author Adam Sagarwala, DO, a vascular surgeon at Englewood Health.

Other Englewood studies have added to

the wealth of information regarding vascular surgery. Thomas Bernik, MD, the chief of vascular surgery at Englewood Health, published a paper on the genesis of crural, or infragenicular, revascularization (*Ann Vasc Surg* 2019;58:357-362).

The researchers conducted an extensive literature review of articles published between 1960 and 1979 to recognize investigators who pioneered this type of below-the-knee revascularization. The researchers identified a total of 746 crural bypasses defined during the decades of interest, with overall six-, 12- and 36-month patencies of 76%, 59% and 48%, respectively. The overall amputation rate was 17%. Today, as Dr. Bernik noted, amputation is rare.

"What is happening now with the endovascular revolution is that a lot of the medical training programs are reducing open surgery



Thomas Bernik, MD
Chief, Vascular Surgery



Adam Sagarwala, DO
Vascular Surgery



Michael Wilderman, MD
Vascular Surgery

and revascularization training. And I think some of the younger generation physicians now are graduating with less-than-optimal experiences in revascularization." However, that knowledge is very much present at Englewood Health.

Hybrid OR Allows Complex Procedures

Vascular surgery at Englewood Health benefits from the latest technology, including two hybrid ORs. "This OR has allowed us to do hybrid procedures, such as limb salvage procedures, where we do combined open surgery and endovascular minimally invasive surgery to save limbs," Dr. Bernik said. "The complexity of our procedures not only in lower extremity revascularization but also in aneurysm work, as well as in carotid surgery, has evolved dramatically in the last few years. With carotid disease, we are now doing transcrotid artery revascularization, which is a hybrid procedure. Regarding aneurysms, we are doing a lot that involve the visceral vessels and aortic arch vessels, which are very complex procedures requiring multidisciplinary teamwork and both open and endovascular techniques, and which are completely confined to the hybrid OR."

The Noninvasive Peripheral Vascular Laboratory at Englewood Health is also armed with the latest technology. "Using the latest and greatest duplex ultrasound, the technologists are outstanding at providing us with a great noninvasive clinical picture prior to our doing any surgical or endovascular interventions," said Michael Wilderman, MD, a vascular and endovascular surgeon at Englewood Health. The acuity of the imaging optimizes outcomes.

Photo: Englewood Health



Adam Sagarwala, DO, Thomas Bernik, MD, and Nakul Rao, MD.

Center for Vein Disease, With an Active Research Program, Is Unique in New Jersey

Englewood Health is the only hospital in New Jersey with a dedicated Center for Vein Disease. Led by Steve Elias, MD, a pioneer in the field, the center provides the latest technology and most comprehensive treatment options for a variety of conditions, including leg ulcers, varicose and spider veins, and venous ulcers.

“Almost 99% of patients with vein problems are first evaluated with ultrasound, which can give us the answer in probably 95% of cases,” Dr. Elias said. “If they have problems that perhaps involve bigger veins, or a main vein, or the veins in the abdomen or pelvis, then we may use a CT scan or MRI. Sometimes, we will employ venography, which injects dye into the veins to visualize what is going on with x-ray.”

For treatment of vein diseases, clinicians use minimally invasive or completely noninvasive technologies. These technologies manage vein disease usually with only a few needlesticks, and at most, two or three little cuts that measure about 3 mm each. Dr. Elias said more than 90% of vein procedures are covered by insurance because vein disorders either impair patient quality of life or cause significant complications, such as blood clots and venous ulcers.

“The newest technique for treatment is a procedure called Sonovein [Theraclion],” Dr. Elias said. “This is the first completely noninvasive procedure that does not involve even one needlestick. It’s done in the office using HIFU—high-intensity focused ultrasound. When ultrasound is high-intensity and focused, it produces heat. You can target the vein you want to treat right through the skin without even a needlestick. We are the first and only center in the United States or the Americas to use it in a clinical trial. We’ve already done our first four and are actively recruiting a total of 20 patients.”

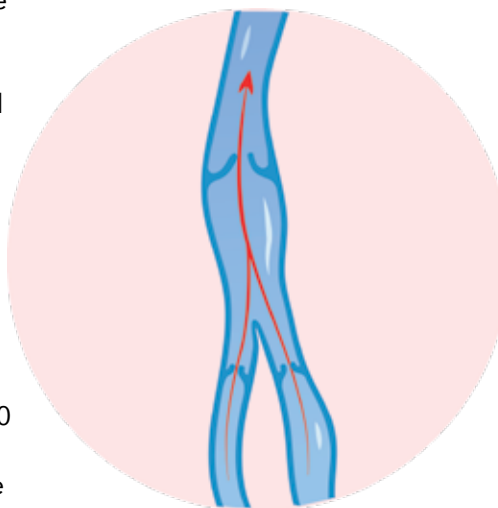
The Center for Vein Disease’s active clinical trial research program is exploring other aspects of vein therapy. Another ongoing clinical trial is evaluating the use of intravascular ultrasound to look at the veins of people who have venous ulcers. Dr. Elias said the investigators just completed a clinical trial of a new stent for narrow veins in the pelvic area.



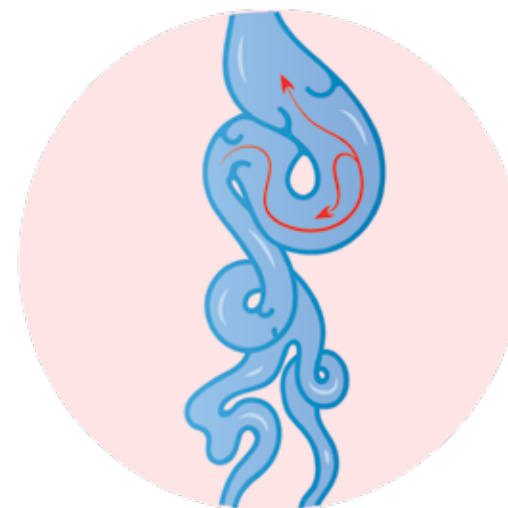
Steve Elias, MD.

Photo: Englewood Health

Normal vein



Varicose vein



“We don’t only do procedures, we evaluate the newest technologies; and for the last 20 years, we have been a leader in educating residents and fellows, as well as doctors that are already treating vein disease,” Dr. Elias said.



Steve Elias, MD
Director, Center for Vein Disease

Collaborative Approach Brings Better ENT Surgical Outcomes

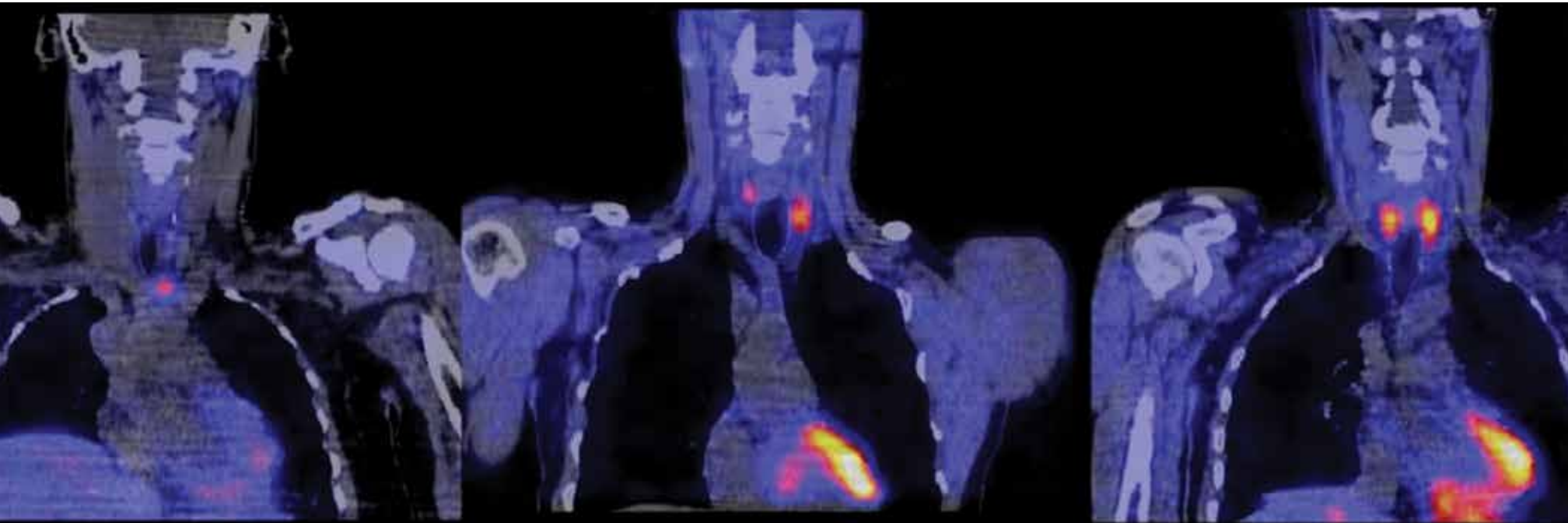


Photo: Wikimedia Commons

The collaborative environment of Englewood Health's ENT department enables its physicians to adopt a multidisciplinary approach to perform precise procedures. One example of such a procedure is hyperparathyroidism due to parathyroid adenoma.

"We have a comprehensive group of 15 physicians, many of whom are fellowship trained in otology, facial plastic surgery, laryngology and sinus surgery," said Bryan Ho, MD, the chief of otolaryngology at Englewood Health. "To highlight just one of my associates, Dr. Rosemary Ojo specializes in neurotology and is the only physician within our area with this subspecialty."

ENT surgeons work closely with radiologists and pathologists to pinpoint and remove the adenoma, according to Dr. Ho.

In the past, however, finding a parathyroid adenoma was a very difficult surgery, explained Michael Scherl, MD, an ENT surgeon at Englewood Health.

"We used to call it a parathyroid exploration because the procedure entailed exploring literally all four quadrants and looking for the adenoma, not knowing where it was," he said.

Accurate localization of a parathyroid adenoma is critical to a successful operation (*Langenbecks Arch Surg* 2021;406[5]:1615-1624). By teaming up with radiologists, ENT surgeons can now perform minimally invasive surgery without the need to explore surrounding tissues.

"We do a sestamibi nuclear scan and an associated 4D CT scan with radiologists who help us pinpoint exactly where the parathyroid adenoma is," Dr. Scherl said. "It's changed that surgery dramatically."

The ENT surgeons also work closely with pathologists

"We do a sestamibi nuclear scan and an associated 4D CT scan with radiologists who help us pinpoint exactly where the parathyroid adenoma is. It's changed that surgery dramatically."

—Michael Scherl, MD

to confirm an adenoma using frozen sections and to perform bloodwork pre- and intraoperatively to verify successful removal. A recent meta-analysis indicated intraoperative parathyroid hormone monitoring was tied to increased cure rates and decreased reoperation rates (*JAMA Otolaryngol Head Neck Surg* 2021;147[2]:135-143).

Collaboration also extends to the anesthesiologists involved in the surgery, who use a special endotracheal tube and intubation with a GlideScope (Verathon) video laryngoscope, which facilitates nerve monitoring and prevents injury to the vocal cords and laryngeal nerve.

Knowing exactly where the adenoma is located has shortened the time the patient spends in surgery, Dr. Scherl added. "It's diminished the risks associated with this surgery. If I were to look back in perspective for one of the big changes that I've seen in the past 30 years, this is something that is very dramatic."

The multidisciplinary approach to these and other procedures is a hallmark of Englewood ENT care, Dr. Ho said. "We're doing all this to provide the best possible outcomes for our patients in our community." ●



Michael Scherl, MD
ENT Surgery



Bryan Ho, MD
Chief, Otolaryngology

Individualizing Thyroid Cancer Treatment Reduces Unnecessary Surgery

Between 1980 and 2010, the incidence of thyroid cancer more than doubled in the United States, partly because of improvements in detection of small thyroid nodules.

This increase in patients, many of whom have microcarcinomas—cancers of less than 1 cm in size—raised questions about the best approach to treatment.

The prognosis for differentiated thyroid cancer is excellent, with five-year survival rates of more than 95% for adults with localized and regional disease, according to data from the American Cancer Society. However, the recommended strategy has always been aggressive: surgery to remove the entire thyroid gland, which results in lifelong medication and carries the risk for complications.

As a result, over the last decade, there has been a notable change in thyroid cancer treatment. Surgeons who care for patients with thyroid cancer now use a more individualized strategy, one that considers a person's risk for recurrence while seeking to reduce treatment-related complications or unnecessary treatment.

"A lot of the focus of thyroidology in the last 10 years has been finding that sweet spot where you're doing just the right amount of treatment with just the right amount of surgery, without doing too much," said Ki Won Kim, MD, an endocrine and general surgeon with Englewood Health. Dr. Kim also treats the parathyroid gland as well.

This new era in treatment of thyroid cancer was formally ushered in when the American Thyroid Association (ATA) recommended that patients with cancers of less than 1 cm and no aggressive features undergo a lobectomy—removal of half the thyroid—instead of a total thyroidectomy (*Thyroid* 2016;26[1]:1-133).



Ki Won Kim, MD
Endocrine Surgery

"A lot of the focus of thyroidology in the last 10 years has been finding that sweet spot where you're doing just the right amount of treatment with just the right amount of surgery, without doing too much."

—Ki Won Kim, MD

The rationale for this approach was to reduce the risk for treatment-related complications, including recurrent laryngeal nerve injury and hypocalcemia.

This less aggressive approach does not leave patients at higher risk for worse outcomes. Disease-specific survival and recurrence are similar with lobectomy and total thyroidectomy, provided patients are carefully selected, according to several peer-reviewed international studies from multiple institutions.

The ATA also modified its long-standing recommendation that patients routinely undergo

radioiodine ablation (RAI) after surgery for thyroid cancer. With this treatment, patients swallow a capsule of radioactive iodine that destroys any residual thyroid cancer cells. With evidence suggesting RAI is not necessary for all patients, the ATA now advises that adults with low-risk tumors measuring less than 1 cm do

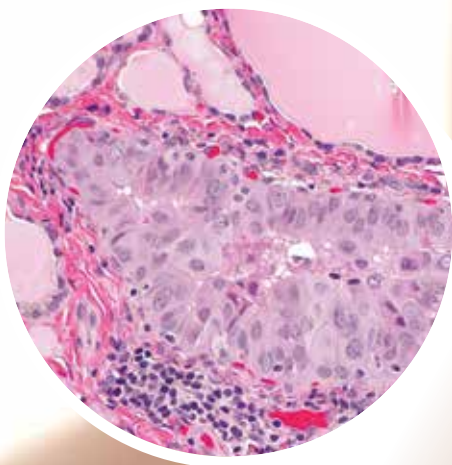
not need RAI, although it may be considered for those with tumors 1 to 4 cm with aggressive histology or vascular invasion.

This recommendation opened the door to more individualized approaches to treatment for thyroid cancer.

In 2020, the American Association of Endocrine Surgeons confirmed this "less is more" approach through a clinical guideline published in the prestigious *Annals of Surgery* (2020;271[3]:e21-e93).

This treatment philosophy has been embraced by the endocrine team at Englewood Health, Dr. Kim noted. "My goal is to make sure that a patient gets through surgery safely, and they get surgery only if they need it," he said.

For patients with smaller low-risk tumors, Dr. Kim often performs a lobectomy. In those with very small tumors of less than 1.5 cm, he and his colleagues sometimes recommend active surveillance. With this approach, patients undergo routine ultrasonography to monitor for any changes in their cancer rather than undergoing a surgical procedure. Patients, their families and their care team make the call together to select active surveillance. "That communication is vital," he said.



Debilitating Hand Disease Now Corrected With In-Office Injection

Dupuytren's disease, also known as Dupuytren's contracture, affects the fascia just beneath the skin of the palm. With Dupuytren's disease, strands of cord-like fibers in the fascia tighten and thicken into nodules, eventually contracting, which causes the fingers to bend forward into the palm. Although it can affect the entire hand, Dupuytren's disease usually affects just the ring and pinkie fingers.

Dupuytren's disease is often confused with the more common "trigger finger" because they both result in finger curling, explained Damien I. Davis, MD, an orthopedic surgeon at Englewood Orthopedic Associates and a member of the Englewood Health Physician Network, who specializes in treating injuries and medical conditions of the hand, wrist, elbow and shoulder. The difference is that the curled trigger finger can be pulled straight by the patient, while Dupuytren's contracture will not straighten without the intervention of an orthopedic surgeon.

With Dupuytren's disease, the finger remains bent. "Even if you push on it, even if you pull on it, it will always stay flexed," Dr. Davis said. "You can never fully extend it, and it cannot be manually straightened without treatment."

Dr. Davis was an early advocate of a noninvasive procedure that did not require open surgery performed in the hospital.

The injection of collagenase enzymes in his office has been a "game changer" for the treatment of debilitating Dupuytren's disease, Dr. Davis said.

The worldwide prevalence of Dupuytren's disease is 8.2%, according to a 2020 analysis of 85 studies involving 6.6 million patients (*J Orthop Surg Res* 2020;15:495). That occurrence rate is also true for the United States, Dr. Davis said. "It's more common than people think."

Because of its similarity to trigger finger, Dupuytren's contracture is not easily diagnosed. "I

get a lot of people coming in with Dupuytren's who were misdiagnosed with trigger finger," Dr. Davis said.



Damien I. Davis, MD
Orthopedic Surgery

Patients also may present with a small nodule in their hand that may not have progressed yet to a contracture. "That's much less commonly diagnosed," he noted.

For 200 years, the sole treatment to restore full use of the affected finger was the procedure initiated by Baron Guillaume

Dupuytren: surgically cutting the strands causing the finger to bend. In 2010, the FDA authorized the repurposing of the collagenase enzyme for injection (collagenase *Clostridium histolyticum*; Xiaflex, Endo Pharmaceuticals) to treat Dupuytren's disease.

When injected, the enzyme dissolves the abnormal collagen, explained Dr. Davis, who began practice as an orthopedic surgeon at the time of the approval and was an early adopter of the procedure.

"The injection is an in-office procedure, which is a significant change compared with the surgery that used to be done," Dr. Davis

said. The patient returns to the office one or two days later. "That's when we do the finger extension procedure where we numb the finger with lidocaine and straighten it out. The entire procedure is very safe."

Dupuytren's contracture is not painful, Dr. Davis said, but the finger's inflexible position can be very inconvenient. The impact of the disorder can be extensive, with limitations to activities like personal care and dressing, and to reduced quality of life, in which self-esteem, among other factors, is affected (*J Hand Surg Am* 2013;38[6]:1209-1214).

A single-center study of 83 patients (incorporating 89 hands and 120 treated fingers) who received the collagenase injection found a successful treatment rate of 73% three years after the procedure (*Acta Orthopaedica* 2019;90[6]:517-522).

Most patients will choose the collagenase injection, Dr. Davis said. "If you give people all of the pros and cons and the risks and the benefits, they usually tend to opt for the less invasive option." ●



Dupuytren's contracture can now be addressed with a simple in-office injection.

Reconstructive Surgery at Englewood Is Primed for the Present Moment

The newly named chief of plastic surgery, Troy Callahan, MD, is focused on three elements for surgical excellence: improving patients' preoperative health, obtaining state-of-the-art surgical equipment and adjusting to the hospital staff's changing needs.



Troy Callahan, MD
Chief, Plastic Surgery

"We want to optimize our patients before their surgery to ensure the best possible results."

—Troy Callahan, MD

Tobacco use by patients is another concern for plastic surgeons. Among patients undergoing aesthetic procedures, smoking leads to a greater incidence of infection and delayed healing (*J Plast Reconstr Aesthet Surg* 2018;71[5]:624-636). Dr. Callahan encourages patients to quit smoking and get active, both before and after surgery. He focuses on the goal of getting patients to walk 5,000 steps daily, saying: "Even if you are a smoker, obese or diabetic, this is helpful. If you can walk 5,000 steps, you are going to improve your outcomes and reduce your risk for complications." He also routinely refers patients to the Englewood Health Graf Center for Integrative Medicine's smoking cessation program to provide help for them with kicking their nicotine habit.

Patient care is also improved by the availability of advanced technology in the operating room. A grant through Englewood Health Foundation's Physicians Innovation Fund helped the department buy a

An integral part of breast cancer care provided at Englewood Health is reconstructive surgery. Studies show that an obese reconstructive patient faces a significantly greater risk for surgical complications and a higher rate of reoperation than a patient with a normal body mass index (*Aesthet Surg J* 2021 Nov 20. doi:10.1093/asj/sjab397). This is why addressing obesity, and other forms of "prehabilitation," have become a key component of preoperative care.

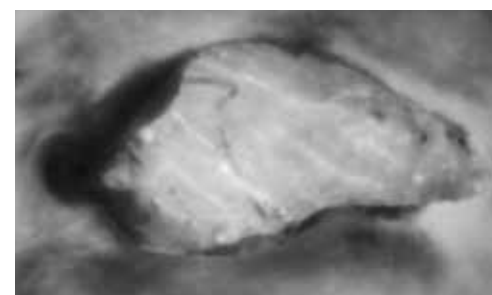
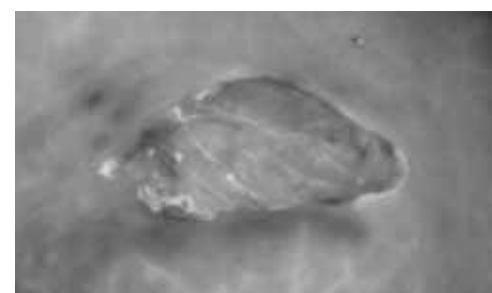
"Obese patients will always have a higher complication rate, so we continuously encourage them to try to get control of their weight, including referring them to our bariatric colleagues who can develop a weight loss plan that may be surgical or medical, depending on their needs," Dr. Callahan said. "We want to optimize our patients before their surgery to ensure the best possible results."

state-of-the-art SPY imaging device (Stryker). The SPY Elite fluorescence imaging system allows for the intraoperative visualization of microvascular blood flow and perfusion in tissues.

The SPY device enables the monitoring of blood flow in real time, giving vital information that directly affects decision making in the OR. The surgeon can make adjustments during surgery, and implement post-operative treatments to further monitor and augment the delivery of oxygen to tissues that have been identified as being at risk for wound healing problems. "We have already seen a direct impact on patient outcomes with the use of SPY imaging. It has become an important tool for us in the operating room."

There is strong evidence that the use of SPY devices in post-mastectomy native skin flap breast reconstructions improves patient outcomes. Results from a study that examined more than 900 mastectomy/breast reconstruction cases showed a statistically significant reduction (odds ratio, 0.54) in the occurrence of tissue necrosis caused by perfusion-related complications when SPY was used compared with procedures performed solely with the aid of clinical observation (*Plast Reconstr Surg Glob Open* 2019;7[4]:e2060).

"In plastic surgery, it's all about manipulation of healthy tissue, and this device allows us to see that the blood flow is actually adequate for what we are doing, thereby improving patient outcomes," Dr. Callahan said. "In particular, it aids in the breast reconstruction that Englewood specializes in. It helps us determine that the tissues are actually viable and allows us to deliver the best reconstructive surgery in a safe and efficient way." ●



Photos courtesy of Stryker

Meditation Program Relaxes Surgery Patients

Englewood Health has offered guided meditations to patients for more than a decade, but it recently started meditations specifically for patients undergoing surgery.

"We had our meditation specialist record guided meditations in English and Spanish so patients can practice the meditation leading up to surgery," said Tracy Scheller, MD, the medical director of the Graf Center for Integrative Medicine at Englewood Health. "We are educating surgeons about the benefits of patient meditation especially prior to surgery."

Preoperative meditation is a form of surgical prehabilitation, an emerging concept that includes interventions to potentially reduce postoperative complications. Ideally, patients will listen to the meditation two weeks before surgery and continue up to the day of surgery, as well as during recovery.

"Meditation is simply being present—it helps people pay attention to their body and focus on their breathing," Dr. Scheller said. "They are guided to take a deep breath in through the nose, hold their breath and then exhale." The meditations also talk about relaxing different parts of the body.

Sessions include soft music and nature sounds in the background.

"Guided meditations are very helpful in reducing cortisol, which is our primary stress hormone," Dr. Scheller said. "Certainly, anytime you undergo surgery, you are a little more stressed and might be anxious. Reducing cortisol has been shown to help patients do better during surgery, have a quicker recovery and require less pain medication" (*Clin Endocrinol* 2018;89[5]:554-567).

Meditation can help lower blood pressure and heart rate, and "there is even some data that meditation can potentially minimize bleeding complications," Dr. Scheller said (*J Am Heart Assoc* 2017;6. doi:10.1161/JAHA.117.002218).

Dr. Scheller believes Englewood is unique in offering surgery meditations, which ties in to the Graf Center's holistic and integrative medicine approach. "There has been a lot of positive feedback," said Dr. Scheller, who noted there are no risks or side effects from meditation.

The Graf Center also offers pre- and post-operative acupuncture; relaxation techniques,

including massage, Reiki and essential oils; and nutritional counseling with a registered dietitian, for patients who are overweight or obese. Dr. Scheller reported that more insurance plans are covering acupuncture and nutritional counseling.

Dr Scheller is a board-certified obstetrician-gynecologist in private practice for more than two decades. When she decided to stop practicing obstetrics, she earned a master's degree in nutrition from Columbia University. This step led her to the Andrew Weil Center for Integrative Medicine fellowship program at

the University of Arizona. This program taught her the science behind natural modalities, such as meditation and acupuncture, and the great impact that healthy habits have on our overall wellness.

Dr. Scheller also schedules one-on-one integrative medicine consultations. "People want to learn how to improve their overall health with some of these natural modalities."

The Graf Center offers free weekly classes for many different populations: meditation in Spanish only; meditation for stress, anxiety and depression; meditation and movement in a chair for seniors; and meditation for prenatal mothers.

Daily meditations can be accessed on Zoom, Facebook and Instagram. Each session lasts about 10 minutes. In addition, small cards with QR codes for scanning meditations via mobile devices are being distributed at Englewood physicians' offices, in the hospital and on the Graf Center's website.



Tracy Scheller, MD
Medical Director, Graf Center
For Integrative Medicine



"Meditation is simply being present—it helps people pay attention to their body and focus on their breathing."

—Tracy Scheller, MD

Photo: Englewood Health

Englewood Health Providers Featured in This Issue

- Adam Arnofsky, MD**
Chief, Cardiothoracic Surgery
- Thomas Bernik, MD**
Chief, Vascular Surgery
- Steven T. Brower, MD**
Chief, Surgical Oncology
- Troy Callahan, MD**
Chief, Plastic Surgery
- Jeffrey Cohen, DPM**
Chief, Podiatry
- Vinnidhy Dave, DO**
Director, Palliative Medicine
- Damien I. Davis, MD**
Orthopedic Surgery
- Steve Elias, MD**
Director, Center for Vein Disease
- Barry Ettinger, MD**
Anesthesiology
- Robert Ferrante, MD**
Cardiothoracic Surgery
- Nathan Fox, MD**
Co-Director, Maternal-Fetal Medicine Center
- Maz Ganat, MD**
Program Director, Urologic Oncology
- Jenna E. Gillen, DO**
Breast Surgery
- Richard S. Goldweit, MD**
Chief, Interventional Cardiology
- Yakov Gologorsky, MD**
Neurosurgery
- Alandra Greenlee, DPM**
Podiatric Surgery
- Bryan Ho, MD**
Chief, Otolaryngology
- Margit Kaufman, MD**
Medical Director, Institute for Patient Blood Management and Bloodless Medicine and Surgery
- Peter Kaye, MD**
Colorectal Surgery
- Vishal A. Khatri, MD**
Orthopedic Surgery, Spine Surgery
- Ki Won Kim, MD**
Endocrine Surgery
- Jonathan Lee, MD**
Orthopedic Surgery, Spine Surgery
- Rachelle Y. Leong, MD**
Breast Surgery
- Gregg Lobel, MD**
Chief, Anesthesiology
- Michael Magrino, MD**
General Surgery
- James McGinty, MD**
Chief, Surgery and Surgical Services
- Violet M. McIntosh, MD**
Chief, Breast Surgery
- Nimesh Nagarsheth, MD**
Director, Robotic Surgery
- Kirten Parekh, DPM**
Podiatric Surgery
- Andrei Rebarber, MD**
Co-Director, Maternal-Fetal Medicine Center
- Jay S. Reidler, MD, MPH**
Orthopedic Surgery, Spine Surgery
- Celines Morales-Ribeiro, MD**
Bariatric Surgery
- Ritchard Rosen, DPM**
Podiatric Surgery
- Adam Sagarwala, DO**
Vascular Surgery
- Tracy Scheller, MD**
Medical Director, Graf Center for Integrative Medicine
- Michael Scherl, MD**
ENT Surgery
- Molly Schultheis, MD**
Cardiothoracic Surgery
- Anna Serur, MD**
Chief, Colon and Rectal Surgery
- Asit K. Shah, MD, PhD**
Chief, Orthopedic Surgery
- Jingjing Li Sherman, MD**
Bariatric Surgery
- Christos Stavropoulos, MD**
Director, Thoracic Oncology
- Omar N. Syed, MD**
Neurosurgery
- Michael Wilderman, MD**
Vascular Surgery
- Kevin Yao, MD**
Chief, Neurosurgery

To contact any of these providers, please call 833-234-2234 or visit englewoodhealth.org.

GLOBUS SURGERY

CONTINUED FROM PAGE 1

currently possible, which will translate into shorter patient recoveries and better outcomes.”

Spinal fusion requires highly accurate placement of metal screws to be successful, explained Asit K. Shah, MD, PhD, the chief of orthopedic surgery at Englewood Health.

“With ExcelsiusGPS, however, there is this total paradigm shift with regard to image guidance and required surgical invasiveness,” Dr. Shah said. “Excelsius integrates seamlessly, and will increase both speed and efficiency in the operating room.”

The ExcelsiusGPS offers surgeons unique, real-time information both before and during procedures, enabling them to use robotic navigation to place screws with unmatched precision in

“This technology takes us to the next era of spine surgery. It will facilitate even more precise and more minimally invasive spine surgery than is currently possible, which will translate into shorter patient recoveries and better outcomes.”

—Kevin Yao, MD

spine procedures anywhere from the cervical to sacroiliac regions. In a study by Globus Medical on human cadavers, the platform demonstrated improved screw placement accuracy, increased both the length and diameter of screws, and reduced the number of fluoroscopic images taken and procedural times.

All-in-One Imaging Capability

Consolidating cone-beam CT, fluoroscopy and digital radiography into a single unit, Excelsius3D eliminates the need for multiple imaging devices during a specific procedure and provides enhanced visualization of patient anatomy. In addition, haptic-touch response and position memory streamline setup and transport to minimize workflow disruptions during surgery. The accuracy of screw placement is confirmed with another 3D image before the patient leaves the OR.



Kevin Yao, MD, and
Asit K. Shah, MD, PhD.

Photo: Englewood Health



Kevin Yao, MD
Chief, Neurosurgery



Asit K. Shah, MD, PhD
Chief, Orthopedic Surgery



Yakov Gologorsky, MD
Neurosurgery



Vishal A. Khatri, MD
Orthopedic Surgery,
Spine Surgery



Jonathan Lee, MD
Orthopedic Surgery,
Spine Surgery



Jay S. Reidler, MD, MPH
Orthopedic Surgery,
Spine Surgery



Omar N. Syed, MD
Neurosurgery

Excelsius3D technology captures an image similar to a CT scan and then generates a 3D view of the patient's spine, which effortlessly integrates with the robotic system during the procedure. "This technology allows us to precisely place spinal instrumentation with minimal disruption to the patient's normal anatomy," Dr. Yao said. "As an example, many spine surgeries that traditionally required large incisions will now be performed through slit-like minimal openings. This is beneficial for patients, allowing them to mobilize more comfortably and sooner."

"It is important that each surgeon have the ability to tailor surgery to the individual patient based on clinical findings," said Omar N. Syed, MD, a neurosurgeon at Metropolitan Neurosurgery Associates and Englewood Health. "Having the ability to use the latest technology, such as image-guided surgery with navigation and now robotics, gives us the opportunity to do the best surgery, and safest surgery, for each patient."

"Englewood Health," he added, "has positioned itself to be at the forefront of spine

surgery and is committed to bringing the most cutting-edge technology to its health system."

Advancing Surgical Capacity

The technology will be rolled out in several phases, according to Yakov Gologorsky, MD, a neurosurgeon at Metropolitan Neurosurgery Associates and Englewood Health. "The first phase is the state-of-the-art intraoperative imaging system, Excelsius3D, which works beautifully with its complementary robotic system."

"With this imaging, it is like seeing through the body," Dr. Gologorsky said. "It allows for less muscle disruption, and the system supports robotic minimally invasive surgery, which results in even shorter lengths of stay and faster returns to functionality."

Dr. Gologorsky employs novel motion preservation approaches for disk replacement surgery. These procedures were designed for young, active patients (e.g., firefighters, military personnel, professional

CONTINUED ON PAGE 32



Photo: Globus Medical Inc.

"It is important that each surgeon have the ability to tailor surgery to the individual patient based on clinical findings... Having the ability to use the latest technology, such as image-guided surgery with navigation and now robotics, gives us the opportunity to do the best surgery, and safest surgery, for each patient."

—Omar N. Syed, MD

GLOBUS SURGERY

CONTINUED FROM PAGE 31

athletes) who need to quickly return to work after a disk replacement.

“We’ve been pushing the envelope and adapting technology that was designed for young people with one-level disease and applying it to the general population, with really stunning results,” Dr. Gologorsky said. Among the innovations is the implantation of disks that self-adjust to movements of the cervical spine. He recently reviewed his experience with multilevel cervical arthroplasty in a letter to *World Neurosurgery* (2022;164:116).

Advancements from the Excelsius Ecosystem intraoperative imaging platform are not limited to spinal procedures. Englewood Health’s orthopedic surgeons are also incorporating this latest robotic technology into orthopedic clinical practice to optimize patient outcomes and boost recovery times.

Minimally Invasive Means Major Benefits

Englewood Health’s physicians are an integral part of every patient’s care journey, tailoring decisions to meet each person’s specific needs, whether or not their care includes surgery. “I focus on personalizing patient care because no two people are the same in terms of the type of problem they have,” said Vishal A. Khatri, MD, an orthopedic surgeon and a member of the Englewood Health Physician Network who specializes in spine procedures at Englewood Orthopedic Associates and Englewood Health. The high degree of precision enabled by the Excelsius Ecosystem platform ensures that all procedures are truly personalized.

Englewood Health strives to return patients to their normal lives quickly, safely and pain-free, which is why surgeons use minimally invasive techniques whenever possible. “Getting somebody back to work in one week versus four or eight weeks is a huge improvement,” Dr. Khatri said.

The surgical goal is to achieve the maximum benefit that causes the least disturbance to a patient’s body and life, and to reduce reliance on narcotic analgesia.

“That could mean a lot of different things,” said Jay S. Reidler, MD, MPH, an orthopedic spine surgeon at Metropolitan Neurosurgery Associates and Englewood Health. “Sometimes it means using a tubular retractor system—a small tube that allows you to peer in toward the spine, minimizing disruption of spinal musculature which is dilated around it. When you take the tube out, the muscles just fall back into place. The effect is somewhat like working on a ship inside a bottle.”

Traditional surgery often requires a patient to be hospitalized for three to four days, but after a lateral lumbar interbody fusion, patients are often ready to leave within a day or two, Dr. Reidler said.

“It’s extremely gratifying to be able to have an effect on people’s lives,” Dr. Reidler said. “They might come in with many years of suffering and feel like they can no longer work and can no longer enjoy time with their families because they are constantly thinking about their pain. To be able to remove that feeling and help give them back their lives is a tremendous thing.”

“With the Excelsius system there is an additional layer of checks and balances for the surgeons, and it ensures the best possible outcome for each patient,” said Jonathan Lee, MD, an orthopedic surgeon at Englewood Orthopedic Associates and a member of the Englewood Health Physician Network. “The system gives us additional layers of information to enhance patient safety and improve accuracy.”

The excellence of the spine program at Englewood has not gone unnoticed. “In 2021, Englewood Health again received the Joint Commission’s Gold Seal of Approval for Spinal Fusion Certification,” Dr. Syed said. To earn the certification, the hospital had to comply with national care standards, use evidence-based guidelines and have an organized approach to quality and performance improvement. “This national quality rating for spinal fusion surgery provides external validation of our safety and quality, which patients can rely on when choosing a hospital for spine surgery. Our team is providing top-notch spine care, day in and day out, and every member of the team is to be commended on this achievement.”



Photo: Globus Medical Inc.

“With this system there is an additional layer of checks and balances for the surgeons, and it ensures the best possible outcome for each patient. You can see on a screen exactly where the hardware you’re placing in the spine is going. The system gives us additional layers of information to enhance patient safety and improve accuracy.”

—Jonathan Lee, MD

THORACIC

CONTINUED FROM PAGE 1



Christos Stavropoulos, MD
Director, Thoracic Oncology

Treatment and Wellness Center at Englewood Health.

“Surgeons who are experienced with the robotic platform understand its obvious benefits,” he said. “The visualization, precision and dexterity of robotic-assisted surgery are all superior to other approaches.”

Despite robotic surgery becoming more mainstream, patients

still need more information when considering it as a treatment method, particularly for lung resection, Dr. Stavropoulos said. However, patients’ apprehensions quickly dissipate when they realize that the robot is not actually performing the surgery. Instead, an expert surgeon is controlling the device with a precise instrument, just a few feet away.

Treating lung cancer, particularly anatomic lung resections, is the primary focus of Dr. Stavropoulos’ robotic experience.

High-definition 3D imaging, recently incorporated into the procedure, enables doctors to better see and more accurately operate on tissue in a manner that is not possible with any other surgical modality (*Curr Oncol Rep* 2018;20[12]:98). This ability further strengthens robotic-assisted thoracic surgery as the technique of choice for a wide range of procedures, including esophagectomy, paraesophageal hernia repair, esophageal myotomy, removal of esophageal diverticula and treatment of mediastinal tumors like thymoma.

Another benefit of thoracic robotics is less bleeding. A recent study of 338 major lung resections using this technique found that only 1.1% of cases were converted to open surgery due to bleeding (*Ann Cardiothorac Surg* 2019;8[2]:292-295).

Because of the many advantages of robotic-assisted thoracic surgery, Englewood Health’s surgeons are committed to expanding the program to enable more patients to benefit from this treatment option. “Our goal is to eliminate all unnecessary open-chest surgery in the future,” Dr. Stavropoulos said.

The technology has advanced by leaps and bounds in such a short period of time, and there’s little doubt that it will continue to do so,” he said. “This will surely result in enhanced surgical capacity and, of course, improved patient outcomes.” ●

The Importance of Screening

Although a lobectomy may be done to treat people with tuberculosis, emphysema, bronchiectasis and fungal infections, it’s mainly performed on patients with lung cancer, for whom advanced screening is vital to identify candidates for surgery and prevent the spread of disease. According to the U.S. Preventive Services Task Force, annual lung cancer screening with low-dose CT (LDCT) is recommended for people who:

- have a 20 pack-year (or greater) smoking history;
- smoke now or have quit within the past 15 years; and
- are between 50 and 80 years of age.

Recent research has shown that among high-risk individuals, lung cancer mortality was significantly lower for those who underwent LDCT screening than those who had no screening (*N Engl J Med* 2020;382[6]:503-513). Additionally, a separate study showed a relative reduction of 20% in lung cancer deaths among former and current heavy smokers who underwent LDCT screening, compared with radiographic screening (chest x-ray). The trial also showed a 6.7% reduction in deaths from all causes, compared with chest x-ray screening (*N Engl J Med* 2011;365[5]:395-409).

Spotting lung cancer early, before it has metastasized, is the best way to improve one’s prognosis. The landmark National Lung Cancer Screening Trial found that annual LDCT in high-risk populations reduces cancer deaths by 20%. Medicare and most third-party insurers now cover annual LDCT for patients who qualify: Medicare Part B covers annual lung cancer screenings with LDCT once annually for patients:

- age 50 to 77 years;
- with no signs or symptoms of lung cancer;
- who are current smokers or have quit smoking within the last 15 years;
- who have a tobacco smoking history of at least 20 pack-years; and,
- with a physician’s prescription.

Annual LDCT is available at Englewood Health by appointment at any of the system’s imaging centers.

In addition, every November Englewood Health offers free lung cancer screening to current and former smokers who meet certain eligibility criteria. Also, as part of Englewood’s Graf Center for Integrative Medicine, its smoking cessation program is available for patients already diagnosed with lung cancer, as well as for those who have a high risk for the disease.

“It’s impossible to overstate the benefits of screening for lung cancer,” Dr. Stavropoulos said. “In addition to not smoking in the first place, prioritizing regular screening is the best advice that I can offer to achieve the best possible outcome. While I have no hesitation in saying that we can now do incredible things surgically, especially with the robot, prevention is nevertheless still the optimal route.”



Photo: Englewood Health

ROBOTICS

CONTINUED FROM PAGE 1

and manipulates instruments there, rather than over the patient. The robot translates the surgeon's hand movements in real time and serves to enhance the capabilities of a surgeon's hands and eyes.

Equipped with this robotic surgical system, the surgeon can carry out complex procedures through very small incisions, thereby avoiding open surgery and in most cases allowing the patient to go home the same day as the procedure. These patients also tend to experience less pain, thereby requiring fewer pain medications after surgery, and have a reduced risk for wound infections because of the smaller size of the incisions.

"Getting patients home sooner has been the real game changer in robotics for general surgery," said James McGinty, MD, the chief of surgery and surgical services at Englewood Health.

The da Vinci Surgical System was approved by the FDA in 2000. Soon thereafter, a woman in Virginia had her gallbladder removed by surgeons using the first-generation robotic system. The idea of robotic-assisted surgery was initially viewed with skepticism by surgeons. The original models were difficult to maneuver, and any advantage over the technique of a skillful surgeon seemed unlikely. Gradually, however, robotic technology improved and enhanced the abilities of skilled surgeons, and the use of robotics became synonymous with excellent care.

Over the last three decades, laparoscopic

"Getting patients home sooner has been the real game changer in robotics for general surgery."

—James McGinty, MD



James McGinty, MD
Chief, Surgery and Surgical Services
Bariatric Surgery



Michael Magrino, MD
General Surgery

surgery has become the standard for many common operations. But robotic-assisted surgery offers advantages over laparoscopy with its more precise instrumentation and better optics. The size of the incision used with robotic-assisted surgery has diminished below what would be possible with human hands alone.

The newer generation of the robot—the ones used at Englewood Health—provide the surgeon with a much greater range of motion, dexterity and visualization, and operative times have steadily grown shorter. The tiny instruments inside the patient have mechanical wrists, mimicking and exceeding the bending motion of a surgeon's wrist and making it easier to perform challenging tasks. The technology that provides imaging from within a patient during robotic surgery also has advanced, leading to 3D images and better depth perception during surgery.

"These technological advances made the robotic surgeries much more efficient," Dr. McGinty said.

Another innovation to the da Vinci Surgical System is a novel filter on the

endoscope that uses fluorescence to light up blood vessels and other critical structures after a dye is injected into a patient's bloodstream. This tool, called Firefly, helps surgeons spot key landmarks in the body and reduce the risk for complications, Dr. McGinty said.

More Minimally Invasive Hernia Repairs

Robotic-assisted surgery has become especially helpful in hernia repair, where surgeons now use the robot to fix inguinal, ventral/incisional, hiatal and flank hernias, said Michael Magrino, MD, a general and minimally invasive surgeon at Englewood Health.

Traditionally, hernias were repaired through an incision directly over the hernia, often requiring a relatively large incision, Dr. Magrino explained. A big incision increases the chances of an infection in either the wound or mesh that is implanted as part of many hernia repairs. In open surgery, it is sometimes difficult to see the underside of the abdominal wall, making it possible to miss smaller hernias that could become larger over time, he added. Not so with robotic surgery.





Robotic-assisted surgery is used in many specialties.

The robot allows surgeons to treat complicated hernias with a minimally invasive approach—reducing the risk for wound and mesh infections, and allowing surgeons to select more appropriately sized pieces of mesh compared with an open repair, Dr. Magrino said.

“The major benefit for patients is a more durable, longer-lasting hernia repair,” he said.

Every time a hernia recurs, the chances of successful repair decreases, he added. “So, it’s obviously best to do the most durable repair the first time.”

Most patients are candidates for robotic surgery. However, some people with cardiopulmonary medical conditions or who have had previous abdominal surgeries may not be suitable for a robotic procedure.

“If patients have any questions about which approach would give them the best outcome, we will be glad to meet them to give them further guidance,” he said. ●

“The major benefit [of robotic-assisted surgery] for patients is a more durable, longer-lasting hernia repair.”

—Michael Magrino, MD





Photo: Englewood Health