



The Institute for Patient Blood Management & Bloodless Medicine and Surgery

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4 Steady Beat



Mario and Elena Medina

In less than a month, Mario Medina experienced a wide range of heart services at Englewood Hospital and Medical Center. Through it all, one thing stood out: the medical team's unwavering commitment to honor his desire for bloodless care.

Mario, a 70-year-old retiree from Barnegat, New Jersey, has never been one to ignore his health. During his more than three-decade career with a major health insurer in New Jersey, he took to heart the importance of regular screenings and checkups. As he got older, he developed several chronic conditions that affect millions of Americans—high blood pressure, high cholesterol, and diabetes—but he was conscientious about managing them. Despite Mario's attention to self-care, the risk factors of heart disease, including a family history of heart attack, were present. That didn't make the news that he had coronary artery disease (CAD) any easier to hear.



Ramin Hastings, MD

Put to the Test

In December 2016, Mario's primary care physician told him his heart disease risk factors merited seeing a cardiologist for a stress test. Familiar with The Institute for Patient Blood Management and Bloodless Medicine and Surgery at Englewood Hospital, Mario called for a recommendation and was connected with Ramin Hastings, MD, interventional

cardiologist at Englewood Hospital. Dr. Hastings ordered an exercise stress test on a treadmill, which measures the heart's function during exertion. Mario took the test on December 20.

"The results of Mario's stress test were quite abnormal," Dr. Hastings says. "There were signs his heart was struggling, which could indicate blockages in the arteries. To definitively diagnose them, we performed an angiogram nine days later."

For the angiogram—a procedure that introduces contrast dye into the arteries so blockages will be visible in X-rays—Dr. Hastings inserted catheters through Mario's wrist instead of the more traditional route of the groin, an approach that carries less risk of bleeding. The images showed obstructions in all three of the major arteries of Mario's heart.



Adam Arnofsky, MD

"I was awake during the procedure, and when Dr. Hastings said, 'Mario, you have three blocked arteries,' I was stunned," Mario says. "I could see the evidence, though, because my heart was beating on the monitor in front of me."

A Big Decision

The question for Mario and Dr. Hastings was how to treat the blockages. They had two options: insert stents in the arteries to reopen them, or reroute blood flow around the obstructions using coronary artery bypass grafting (CABG), a type of

open-heart surgery. The day after Mario's angiogram, Dr. Hastings introduced him to Adam Arnofsky, MD, Director of Cardiac Surgical Services at Englewood Hospital, to discuss CABG.

"Patients who have multivessel CAD benefit more from bypass surgery compared with those who have stents or balloon angioplasty," Dr. Arnofsky says. "They experience more reduction of chest pain and do better at staying out of the hospital. They also tend to live longer. Mario fit right into that patient population."

After weighing the risks and benefits of surgery, Mario agreed to undergo the CABG procedure. Something Dr. Arnofsky told him helped clinch the decision.

"Dr. Arnofsky said, 'Mario, we want you to be able to walk into the hospital for this procedure rather than have to be taken in on a stretcher in an emergency," Mario says. "That really struck a chord with me. Why would I wait for a catastrophic event to happen if I could go ahead and fix the problem?"

A New Start for the Heart

As they do with all bloodless patients, Dr. Arnofsky and his team followed proven protocols to ensure they could care for Mario without using blood products.

"Our approach to caring for patients like Mario begins preoperatively, when we do all we can to optimize their blood volume with medications so we have more of a safety net to work with during the operation," Dr. Arnofsky says. "During the procedure, we use meticulous surgical techniques to avoid excessive blood loss. After surgery, we closely monitor patients for anemia."

On January 17, 2017, Dr. Arnofsky operated on Mario's heart, which he found to be in greater danger than the angiogram had revealed. Mario needed five bypasses, not three. Using blood vessels from Mario's chest wall and legs, Dr. Arnofsky created new pathways for blood to reach the heart. The surgery was a success, and Mario left the hospital less than a week later. He rebuilt his stamina with 12 weeks of cardiac rehabilitation in the spring, and by early summer, he was able to return to playing golf, one of his favorite pastimes. He continues to exercise and feel good.



FEEL SOMETHING? SAY SOMETHING

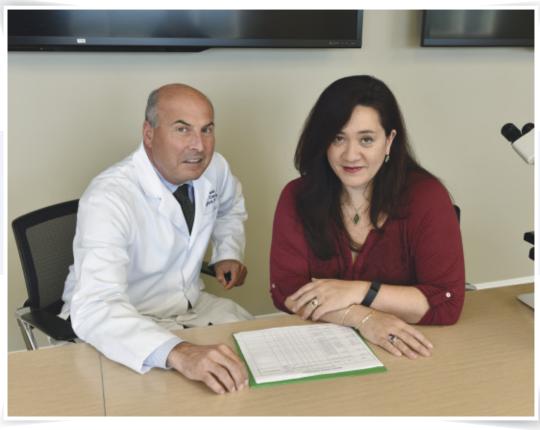
Coronary artery disease (CAD) often develops in silence, only offering a clue to its presence when a heart attack occurs, but that's not always the case. Before he was diagnosed, Mario Medina began experiencing shortness of breath, a common sign of CAD. Another is angina—pain or pressure in the chest that can feel like heartburn and may radiate to other parts of the upper body, including the arms, shoulders, and neck. If you experience symptoms of CAD, speak with your primary care physician or a cardiologist as soon as possible. Like Mario, you may be able to treat the disease before a heart attack occurs.

"The Bloodless Institute does amazing work," Mario says. "For me to have had five bypasses and be able to leave the hospital in four and a half days, that speaks for itself."

Dr. Hastings attributes the success of Mario's treatment to one factor: The Bloodless Institute's experience.

"Other physicians might have told Mario, 'You're a bloodless patient, so we'll do the least invasive procedure, even if it puts you at higher risk going forward," Dr. Hastings says. "Our comfort with open-heart surgery meant we were able to do what was best for him."

Visit www.bloodlessmed.org to learn how the team at The Bloodless Institute can use its expertise to help you.



Steven Brower, MD, and Sherri Ozawa, RN, Clinical Director of The Bloodless Institute

Personalized Pancer CARE

By combining state-of-the-art technology, passionate caregivers, and the highest level of cancer specialists and researchers, the Lefcourt Family Cancer Treatment and Wellness Center provides world-class cancer care at Englewood Hospital and Medical Center.

The past few decades have ushered in a revolution in cancer care. While conventional chemotherapy, radiation, and surgery provide the backbone for cancer treatment, innovative therapies and technologies—including personalized gene therapy, immunotherapy, advanced radiotherapy systems, and GPS-targeted navigation for surgery—are making treatment more precise and easier for patients than ever before. Englewood Hospital has embraced it all.

"For patients, it's really a new era for precision cancer treatment, and the changes are coming at a rapid pace," says Steven Brower, MD, FACS, Medical Director of The Lefcourt Family Cancer Treatment and Wellness Center at Englewood Hospital. "In just the last two years, we've seen dozens of new drugs gain FDA approval for targeting new pathways of cancer treatment. It's the most significant period of growth in a decade."

Leading the Way in Innovative Treatment

While most cancer can easily be diagnosed based on its primary location, each tumor has a unique makeup that can provide clues about how to most effectively treat it. This emerging field of medicine, known as immunotherapy, uses information about cancer's genetic patterns and

abnormalities to target the cancer with genespecific medications as well as medications that encourage the body's own immune system to fight back against the cancer. Precision medication—novel treatments that target key molecules that allow cancer to grow and spread—are also being used at Englewood Hospital for lung, breast, and kidney cancers, along with hematopoietic cancers that affect blood, bone marrow, and the lymphatic system.

"We participate in many clinical trials," Dr. Brower says. "As a result, we're able to use these new drugs for some of the most difficultto-treat cancers."

But advanced treatment doesn't just stop with medication. Englewood Hospital's stateof-the-art technology-rated as "Excellent" by U.S. News & World Report—allows another opportunity for physicians to provide outstanding care. Advanced cancer technology in use at Englewood Hospital includes:

- MRI ultrasound fusion biopsy. During this two-step process, a radiologist reviews an MRI of the prostate and marks areas of concern, and the MRI image is then fused with real-time ultrasound. The physician can view the resulting 3-D images of the prostate while performing a biopsy.
- · Varian TrueBeam® Radiotherapy System. By integrating advanced imaging, motion management, and extreme precision, the Varian TrueBeam System can deliver radiation therapy with pinpoint accuracy. Combined with technology that allows the radiation beam to be shaped and synchronized to movement such as breathing, the system significantly reduces radiation damage to healthy tissue and allows for fewer side effects.
- · GPS-targeted navigation and imageguided surgery. These technologies, especially beneficial for brain and liver tumors, provide surgeons with GPS-like precision for operating within delicate structure, including the brain and liver. As a result, these procedures are safer and more accurate.
- Robotic surgery. The da Vinci® Surgical System, in use at Englewood Hospital for several years, allows specially trained surgeons to perform surgery with minimally invasive techniques and robotic technology to perform delicate procedures. Robotic surgeries generally have smaller incisions, less blood loss, fewer complications, and

a faster recovery, and are particularly beneficial for those with urologic, gastrointestinal, and gynecologic cancers. Dr. Brower estimates that Englewood Hospital's robotic surgery program for certain cancers, such as colorectal, is the busiest in the state.

Bigger Isn't Always Better

With all of its amazing technology, outstanding physicians, and dedicated staff members, why would you need to seek cancer treatment from another hospital? You don't. The same treatment protocols—which are determined by leading cancer organizations such as American Society of Clinical Oncology and The American Society of Hematology—are in use at Englewood Hospital and other world-renowned cancer facilities. And according to Dr. Brower, the outcomes are the same.

"We're a very data-driven and data-oriented cancer center, and we have graphs that compare our outcomes to other high-performing, national cancer centers," Dr. Brower says. "Our survivorship statistics are on par with theirs."

Five-year survival rates for all tumor sites, for example, are 71.6 percent at American College of Surgeons Commission on Cancer-accredited programs across the country. At Englewood Hospital, the five-year survival rate exceeds the national standard, with a slightly higher rate of 72.4 percent.

Looking Toward the Future

The Cancer Center has already made significant steps forward in 2018.

"So far this year, the Cancer Center recruited a new director of colorectal surgery and established an offsite subspecialty oncology clinic," says Christina Cancel, MBA, Business Manager of the Cancer Center. "The Center also created a multidisciplinary breast program and established a unique research relationship with the National Cancer Institute, looking at men and women who develop breast and colorectal cancer."

The Cancer Center will continue to expand its lung cancer screening program and its breast cancer program. Recruitment of new physicians is ongoing, with goals to recruit urological and breast surgical oncologists, as well as medical oncologists specializing in treatment of urological and breast cancers.

"We strive to recruit the best and the brightest of the next generation of cancer care," Dr. Brower says. "These physicians wouldn't choose to join a program like ours if we didn't have a full scope of programs that make us successful."

To learn more about The Bloodless Institute, visit www.bloodlessmed.org. For a referral to an oncologist with our blood management program, call 1-888-766-2566.

ONGOING. SUPPORTIVE CARE

According to Christina Cancel, MBA, Business Manager for the Cancer Center, Englewood Hospital provides support to cancer patients from diagnosis and treatment through survivorship. The Lefcourt Family Cancer Treatment and Wellness Center offers patients a wide array of cancer services, including:

- specialized oncology navigators and social workers
- consultations with a dietitian and pain team
- high-risk genetic testing and counselina
- services at the Graf Center for Integrative Medicine
- a personalized Survivorship Care Plan to outline ongoing health care, along with a summary of care they received

Because of its close relationship with The Institute for Patient Blood Management and Bloodless Medicine and Surgery, Englewood Hospital's Cancer Center is able to perform research that other cancer centers can't. Currently, a study group is evaluating pancreatic cancer patients to determine if patients in the Cancer Center's blood management program have better long-term success than those who receive blood products.

Ruth and Wolf Pacheco

AT ENGLEWOOD HOSPITAL, WE HAVE THE EXPERIENCE TO TAKE CARE OF BLOODLESS SURGICAL PATIENTS WHEN OTHERS CAN'T.

Jingjing Sherman, MD, general and bariatric surgeon with Englewood Hospital's Bloodless Institute

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Seeking a Solution

Wolf Pacheco spent months searching for the cause of his unexplained weight loss. He finally found answers at The Institute for Patient Blood Management and Bloodless Medicine and Surgery at Englewood Hospital and Medical Center.



Jingjing Sherman, MD



Ibrahim Ibrahim, MD

After dropping from about 180 pounds to 119 pounds during a five-month period, Wolf Pacheco, 54, a computer programmer from South Jersey, was at a loss about the cause. He was in the midst of an ongoing two-year battle with chronic fatigue, and his local doctors were perplexed about Wolf's sudden and severe weight loss and were focused on the potential of cancer. Wolf knew there was more to the issue.

Wolf sought yet another opinion, and this time he got the answer he had been waiting for: A gallstone was discovered lodged in the neck of the cystic duct in his gallbladder. He needed surgery.

"The first surgeon I saw made a big deal about the severe condition of my gallbladder and how a blood transfusion would likely be necessary," Wolf remembers. "It was at this time I was made aware of Englewood Hospital and Medical Center's reputation as a leader in bloodless medical care, and so I reached out to them."

He got an immediate response from The Bloodless Institute at Englewood Hospital, and Wolf, who hadn't been able to eat solid food for a month, scheduled an appointment right away with Jingjing Sherman, MD, a general and bariatric surgeon with Englewood Hospital's Bloodless Institute.

"We've never had a more positive experience at a hospital," Wolf's wife, Ruth, says. "From the surgeons, to the bloodless medicine office team, to the nursing staff, everyone showed such personal interest. It was the support we needed for such a stressful situation."

A Speedy Surgery

"Wolf's gallbladder had been blocked by the stone for so long that there was no bile present," Dr. Sherman says. "It was filled with mucus the gallbladder secreted, a sign that he had a persistent obstruction."

On September 28, 2017, a day after his initial appointment with Dr. Sherman, Wolf was medically cleared for surgery.

"We approach every operation like it's bloodless, because we know if we don't lose blood, transfusion isn't even a consideration," says Ibrahim Ibrahim, MD, general surgeon at Englewood Hospital and a passionate laparoscopist, who performed the surgery with Dr. Sherman. "Patients always recover better when they don't have a blood transfusion."

Wolf returned home the evening of his procedure, and he was able to eat solid foods again, with no pain, by the time he saw Dr. Sherman for a follow-up visit five days later.

"The level of care and personal interest from everyone, from the time you pick up the phone until you're laying on the table, was refreshing," Wolf says. "No other care compares."

To learn more about The Bloodless Institute, visit www.bloodlessmed.org. For a referral to a blood management physician, call 1-888-766-2566.



Dr. Richard A. D'Amico

Richard A. D'Amico, MD, FACS, a founding member of The Institute for Patient Blood Management and Bloodless Medicine and Surgery at Englewood Hospital and Medical Center, has spent decades providing plastic and postoperative reconstructive surgery to patients at the hospital.

In 1994, Dr. D'Amico was serving as the Associate Chief of Plastic Surgery at Englewood Hospital when he was approached by Sherri Ozawa, RN, a nurse who had been part of a series of meetings between Englewood Hospital and the Hospital Liaison Committee for Jehovah's Witnesses. The Witnesses, an underserved patient population, were having a hard time finding doctors and hospitals that would respect their wishes for bloodless medical care, and they reached out to Englewood Hospital to find a solution. Ozawa, who now serves as Clinical Director of The Bloodless Institute, was tasked with helping to develop the program.

"She had a vision and laid out the program for me," Dr. D'Amico says. "It was conceptually well thought out and implemented beautifully, which made it easier for me to buy in. What's not to like about not losing blood?"

When Dr. D'Amico came on board, Ozawa was navigating many hurdles, including skepticism from medical professionals and a legal system that was overflowing with litigation involving surgery.

"She had an institution, Englewood Hospital, that was willing to take this on when most wouldn't," Dr. D'Amico says. "When I talked with surgeons at other hospitals, they asked me if I was kidding. I told them, 'No, there's actually a way to do this."

Dr. D'Amico, who served as President of the American Society of Plastic Surgeons in 2008, has also served on the Board of Directors of the Society of Plastic Surgery Skin Care Specialists and is a member of the American Society for Aesthetic Plastic Surgery's Innovative Technology Committee. He believes his background in plastic surgery lends itself perfectly to bloodless medicine.

"In plastic surgery, we're committed to being delicate with tissues, and part of being delicate with tissues is not losing any blood," Dr. D'Amico says. "That's who we are, and this was a way to take that dedication to a group of people who could benefit from our careful approach."

Career Advocate

A highlight of Dr. D'Amico's career has been learning more about the medical needs of the Jehovah's Witness population, and that greater understanding of bloodless medicine has helped him promote the program's benefits to a wide audience.

"I was speaking to military surgeons in China about trauma," Dr. D'Amico says. "Blood loss is one of the biggest concerns in trauma. I talked about our bloodless surgery program that was initiated to serve Jehovah's Witnesses but is now serving everyone."

Bloodless medicine also played an integral part during United States military operations in Iraq and Afghanistan, Dr. D'Amico says. When soldiers were airlifted to Landstuhl Regional Medical Center in Germany for emergency medical treatment, the principles of bloodless surgery helped save lives.

"There are lifesaving components to bloodless medicine that have spread out all over the world," Dr. D'Amico says.

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SUCCESS STORY

Richard A. D'Amico, MD, former Chief of Plastic Surgery at Englewood Hospital, speaks about the meaning of success at The Bloodless Institute.

"A patient was brought back for a bleeding vessel," Dr. D'Amico says. "As we operated, we simply concentrated on what we had to do in that moment. The bloodless medicine happened around us effortlessly, seamlessly, and silently. That's success."



The Institute for Patient Blood Management & Bloodless Medicine and Surgery

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For Cancer Treatment,

Bigger Is Not Always Better

Even though you take care of your health and that of your loved ones, an unexpected medical diagnosis may still present itself. Cancer, in one of its many forms, is probably one of the most feared.



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By Sherri Ozawa, RN, Clinical Director of The Bloodless Institute and Senior Director of Patient and Family Engagement at Englewood Hospital and Medical Center

The good news is that while cancer is still a dreaded diagnosis, huge advancements in early detection, understanding of the role of genetics, and truly groundbreaking therapies now allow many patients to suffer less and even be cured of their illness. But what about decisions regarding treatment once that diagnosis comes? How do you choose where and how to get care when there seem to be so many options?

You may have heard of large hospitals or treatment centers with programs that *specifically* diagnose and treat cancer and assume that any surgical or medical treatment would be better there. While many of these cancer specialty centers are excellent and full of qualified and competent specialists, you may be surprised to learn that treatment plans and approaches are fairly standard for most types of cancer. Treatments don't vary significantly from one facility to another, including smaller community hospital settings. Why is this the case?

The reality is that while an almost endless array of accepted medications and treatments are available, the recommendations for particular drug combinations or treatment approaches are not dictated by individual doctors or hospitals. Instead, national or international

organizations such as the American Society of Clinical Oncology and The American Society of Hematology constantly analyze and organize the huge amount of medical research being done in cancer diagnosis and treatment. Their findings are then published in journals, and doctors and others are taught the information at conferences and with many other learning tools. The organizations make recommendations—which are constantly changing—for the best evidence-based cancer treatments available. Access to this information is not limited to big cancer treatment centers; all physicians who treat cancer have access and can change their therapies based on the new information.

So what does all that mean when you have to decide where to have your cancer treated? It means that going to a large, "big name" cancer center does not necessarily mean that you will get different or better care than you would at a smaller or community-based medical center. As a patient, especially one who is concerned about the use of blood, you need to consider more than just the "big name" and look carefully at the commitment and experience of the entire institution. When it comes to cancer treatment, remember that bigger is not always better.