SOUTH JERSEY
MEDICAL REPORT™
ISSUE 17 ~ 2020
ADVANCED CARE AND DIAGNOSTIC NEWS FOR PHYSICIANS AND HEALTH CARE PROFESSIONALS

The Cooper Comprehensive Stroke Center: Unrivaled Expertise for the Highest Level of Stroke Care

Cooper is the first hospital in South Jersey to earn Comprehensive Stroke Center certification from the Joint Commission and the American Heart Association/American Stoke Association. This makes Cooper part of an elite group of hospitals. It's a big deal.

Tudor G. Jovin, MD, Chief of Neurology and Chairman of Cooper's Neurological Institute

"This national certification means that we have undergone rigorous scrutiny and met the highest standards for the full spectrum of stroke care, from the speed with which patients receive reperfusion therapies to the appropriateness of post-discharge care," explains Chief of Neurology and Chairman of Cooper's Neurological Institute, Tudor G. Jovin, MD.

"It's very different from the state definition of comprehensive stroke care, which requires a much less sophisticated system and infrastructure," he adds, "which explains why there are so many more state-designated stroke centers than Joint Commission-certified ones."

One significant difference is the depth and breadth of stroke-related specialty and subspecialty expertise that is available at Cooper 24/7.

"There may be other comprehensive stroke centers in the region, but they do not have the number of board-certified and -eligible vascular neurologists that we have," Dr. Jovin says. "We also have neuro-interventionalists, vascular neurosurgeons, neuroradiologists, and neuro-intensive care experts on site at all times. As a result, I can say with confidence that we are doing interventional procedures with greater efficiency and speed."

Speed is a critical factor in ensuring a successful outcome when ischemic stroke occurs.

"Restoring blood flow to the brain is exquisitely time sensitive," Dr. Jovin says, "and we have a very efficient system of throughput that other facilities performing thrombectomies can't come close to."

"This national certification means that we have undergone rigorous scrutiny and met the highest standards for the full spectrum of stroke care, from the speed with which patients receive reperfusion therapies to the appropriateness of post-discharge care," – Tudor G. Jovin, MD

The Joint Commission – National Quality Approval

American Heart Association
American Stroke Association
CERTIFICATION
Meets standards for
Comprehensive Stroke Center

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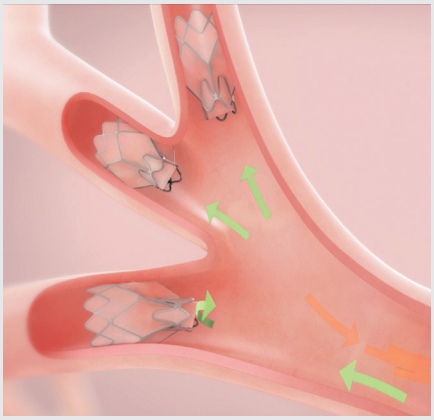


Cooper University Health Care

The Cooper Comprehensive Stroke Center: Unrivaled Expertise for the Highest Level of Stroke Care (continued)

In fact, since Dr. Jovin took the helm of Cooper's Neurological Institute earlier this year, the stroke team has been consistently achieving door-to-puncture (DTP) times of 20 minutes in the vast majority of cases. DTP is the time it takes from arrival at the endovascular center to the start of the thrombectomy procedure in the neuro-angiography suite. It includes the time it takes to perform a neurological evaluation, complete the imaging studies, treat the patient with intravenous tPA if applicable, transport the patient to the neuro-angiography suite, and prepare the patient for the intervention. To put that number in perspective, current Get With The Guidelines®- Stroke, the American Heart Association's performance improvement program, calls for a DTP time of 90 minutes.

"No other comprehensive stroke center or thrombectomy-capable center in this region comes close to what we are doing in terms of door-to-puncture times," Dr. Jovin emphasizes. "And what we are doing translates into better outcomes."

Dr. Jovin is one of the nation's first interventional neurologists and a world-renowned expert in both interventional and noninterventional treatment of stroke and cerebrovascular disorders. He is internationally recognized for his research activities, having recently served as principal investigator for two landmark studies (REVASCAT and DAWN) published in the New England Journal of Medicine in 2015 and 2017, respectively. These studies not only dramatically affirmed the clinical efficacy of mechanical thrombectomy but also were instrumental in expanding the time window for this endovascular treatment of acute stroke beyond the traditional 8-hour time window.

"No other comprehensive stroke center or thrombectomy-capable center in this region comes close to what we are doing in terms of door-to-puncture times. And what we are doing translates into better outcomes."
– Tudor G. Jovin, MD

"We demonstrated that in selected patients with large vessel occlusion, the benefit from treatment with mechanical thrombectomy can be seen up to 24 hours," Dr. Jovin notes. "But that doesn't mean we can be complacent and take our time," he stresses.

"In fact, we don't even base patient selection [for thrombectomy] on time anymore," he continues. "Each patient has an individual window based on their physiological characteristics. And—most important—regardless of how long it has been since the onset of a patient's stroke symptoms—earlier treatment leads to better outcomes."

He goes on to explain that the efficacy of thrombectomy can be measured by the metric of NNTT—the number of patients needed to treat to reduce the disability level from an ischemic stroke from high to low.

"If we take all patients with large vessel occlusion, whether they are in an early or late time window, the number needed to treat is three," Dr. Jovin says. "To put that in context, giving IV tPA has an NNTT of 9, while angioplasty and stenting for a STEMI is 29.

"So mechanical thrombectomy for stroke is ten times more potent than percutaneous coronary intervention for STEMI," he adds. "There are few treatments in medicine that have such a strong therapeutic effect."

It all underscores why seeking care for stroke at a Joint Commission-certified Comprehensive Stroke Center such as Cooper's is the right choice.

"Just as trauma centers are ranked by the complexity of patients they can handle, I believe stroke centers should be also," Dr. Jovin says, "so patients with severe stroke and at risk of high deficit are directly transported to a comprehensive stroke center so they receive thrombectomy in the timeliest manner possible."

Similarly, patients with hemorrhagic stroke have timely access to neurosurgeons with specialized vascular expertise.

"Here at Cooper, we have the entire gamut of stroke care resources available under a single, integrated umbrella," he adds. "We can offer patients what is truly the highest level of stroke care." ■

Hamza A. Shaikh, MD, Co-Director, Neurointerventional Surgery, performs a thrombectomy on a stroke patient in the Cooper Catheterization Labortatory.

For more information on Cooper's Comprehensive Stroke Center, or to refer a patient, please call Dr. Tudor Jovin at 412.726.9974.

New Bronchoscopic Lung Volume Reduction Procedure Helps Patients with Advanced Emphysema Breathe Easier

Cooper is the first and, to date, only hospital in New Jersey to offer bronchoscopic lung volume reduction (BLVR) therapy for patients with severe COPD/emphysema and hyperinflation. This minimally invasive procedure has been shown to help appropriately selected patients to experience less dyspnea, be more active and energetic, and enjoy a significantly improved quality of life compared with patients who receive medical management, the current standard of care.

Wissam Abouzgheib, MD, Division Head, Interventional Pulmonology

"Until the availability of these implanted endobronchial valves, all we could do for most patients with severe COPD/emphysema was give them inhalers, start them on home oxygen, and refer them for lung transplantation," says Wissam Abouzgheib, MD, Division Head, Interventional Pulmonology.

"Or, in selected patients with upper lobe-predominant emphysema and a low baseline exercise capacity, we could perform lung volume reduction surgery in which the surgeon would remove the upper lobes of both lungs," he continues. "That's a very invasive procedure, and these patients are compromised to begin with, so open surgery was associated with high risk."

With BLVR, however, tiny valves are placed in the airways to occlude the most diseased part of the lungs and reduce hyperinflation. This helps the healthier parts of the lungs to expand, lifting pressure off the diaphragm—decreasing shortness of breath, making breathing easier, and enabling patients to be more active.

"The valves are placed via bronchoscope passed through the mouth to the lung," Dr. Abouzgheib explains. "It's much less invasive than traditional lung volume reduction surgery, and patients are hospitalized for only four days, just for observation."

"The most serious potential side effect with BLVR is pneumothorax, which can happen right after the procedure, so that's why we keep patients for that length of time," he adds. Conversely, he notes, open surgery requires a much longer stay and the placement of chest tubes on both sides, and he notes, "sometimes patients did not do well."

Dr. Abouzgheib also points out that the BLVR procedure is reversible. "If necessary, the valves can be removed the same way they were placed, via bronchoscope," he says.

Two companies were granted FDA approval in 2018 to market the bronchial valves in the United States for treating severe emphysema: Pulmonx® Corp. for its Zephyr® Endobronchial Valve System and Olympus for its Spiration Valve System. Each was deemed "a breakthrough technology… that offers significant clinically meaningful advantage over the current standard of care." Before they received FDA approval, the devices were studied in multiple randomized, controlled clinical trials, and they have been used to treat thousands of patients outside the United States.

Zephyr Valve, image courtesy of Pulmonx Corp.

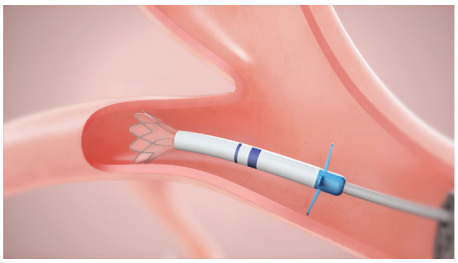
This minimally invasive procedure has been shown to help appropriately selected patients to experience less dyspnea, be more active and energetic, and enjoy a significantly improved quality of life compared with patients who receive medical management, the current standard of care.

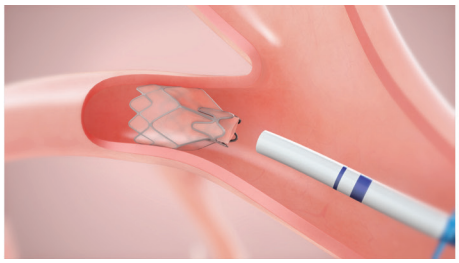
Cooper began offering BLVR in July and was the first hospital in the state to do so. As of mid-September, Dr. Abouzgheib had performed the procedure on eight patients.

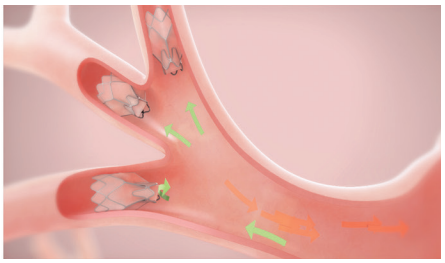
"Most are feeling significantly better when it comes to shortness of breath," he says. "They're able to do more activities during the day and to walk farther without having to stop. Some also are reporting they use their home oxygen less."

"If you have a patient with advanced emphysema who wants to be more active, we encourage you to refer them for initial screening to see if they're a candidate for BLVR," Dr. Abouzgheib says to community physicians. "We want to partner with you to help your patients feel and breathe better.

"It's very gratifying to be able to change a patient's life in this way," he adds. ■







For a physician to physician consultation email Abouzgheib-Wissam@CooperHealth.edu.

Cooper Launches Formal ECMO Program

As a respected Center of Excellence in caring for patients with acute respiratory distress syndrome (ARDS), Cooper is home to South Jersey's only formal extracorporeal membrane oxygenation (ECMO) program—giving the region's residents access to this lifesaving therapy closer to home.

"We take more than 7,000 transfers from area hospitals each year since we're a regional referral center for critical care," says Nitin K. Puri, MD, Co-Director of Critical Care Services at Cooper. "We normally will put between 10 and 20 of these patients a year on ECMO, and now, with our dedicated program in place, we can keep these critically ill patients here versus sending them over the river."

Nitin K. Puri, MD, Medical Director, Cooper ECMO Program Division Head, Critical Care Services Associate Professor of Medicine Cooper Medical School of Rowan University

Dr. Puri explains that there are two types of ECMO: cardiac and respiratory.

"Because of our expertise in ARDS, we made the decision to focus on respiratory ECMO," he says. Also referred to as veno-venous extracorporeal membrane oxygenation (VV-ECMO), respiratory ECMO is a form of short-term pulmonary life support that circulates blood outside the body with a mechanical pump. It infuses oxygen into the blood, removes carbon dioxide, and provides hemodynamic support. Importantly, it enables damaged or injured lungs to rest and heal.

He notes that the ECMO program at Cooper treats adults only. "We will get pediatric patients started on ECMO if it's indicated," Dr. Puri says, "but we'll send them to Nemours/Alfred I. duPont Hospital for Children for ongoing management."

He also points out that "we will put patients on cardiac ECMO on a case-by-case basis" and encourages community physicians to contact the Cooper Critical Care team at any time with questions about the appropriateness of ECMO for a specific patient.

"We have a critical care attending in the hospital 24/7," he says.

Although this technique is still considered rescue therapy, the knowledge and technology behind respiratory ECMO have improved significantly. In fact, studies show that outcomes in patients with adult ARDS are significantly improved when patients are cared for at a specialized ARDS center, such as Cooper. Dr. Puri believes that one of the things that makes Cooper Critical Care unique is its internationally recognized critical care training program, which is the oldest in the region. The program continues to attract thought leaders in critical care, and their insight allows us to give residents of the Delaware Valley the best possible chance of survival with ARDS."

He also notes that the chance of survival improves if severe respiratory failure is treated with ECMO before the seventh day of ventilation because ECMO allows the lungs to heal before the effects of ventilator-induced lung injury and the consequences of hypoxia occur.

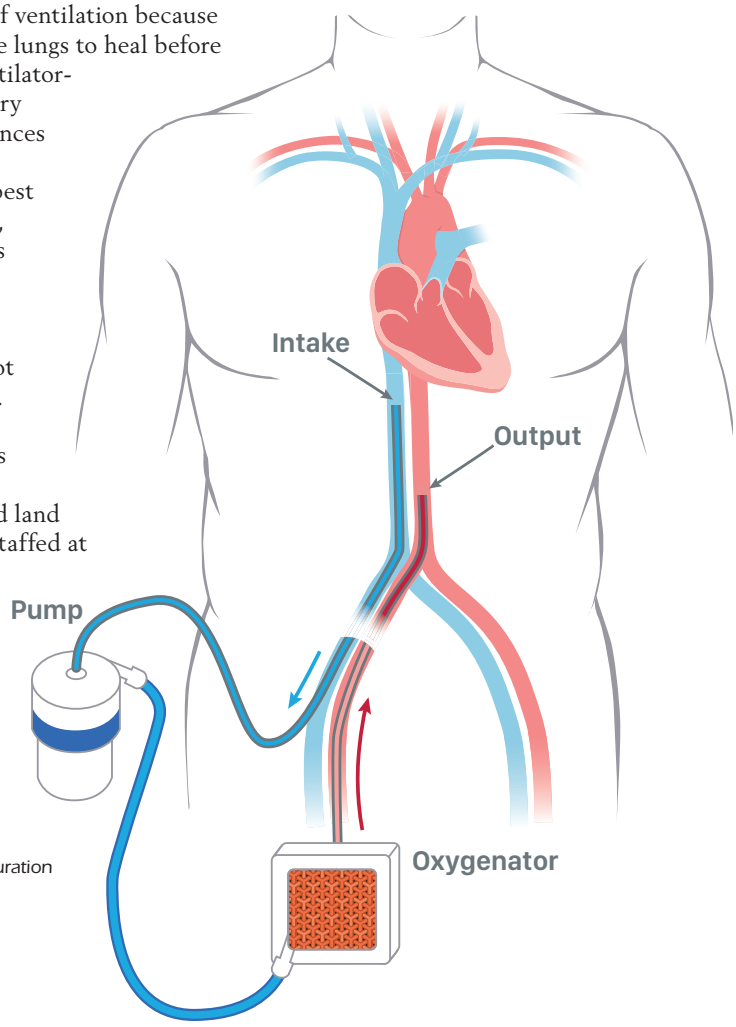
"So, for the best patient outcomes, we urge clinicians to call us as soon as it is apparent that advanced approaches are not working," he says.

The Cooper Transfer Center is available 24/7 to coordinate air and land transport and is staffed at all times by a transfer nurse coordinator.

"The tendency in the past has been to send these patients across the river if they need ECMO support. With our formal program in place, we can care for them here." – Nitin K. Puri, MD

A transfer requires physician-to-physician consultation, which the Transfer Center initiates. This single point of contact streamlines the entire transfer process.

"As we enter flu season, severe respiratory issues become more common, particularly among the elderly and immunocompromised patients," Dr. Puri notes. "The tendency in the past has been to send these patients across the river if they need ECMO support. With our formal program in place, we can care for them here." ■



Circuit Configuration of VV-ECMO.

For an ECMO consultation or referral, simply call 855.CUH.XFER (855.284.9337) to start the process and activate the Cooper Transport Team.

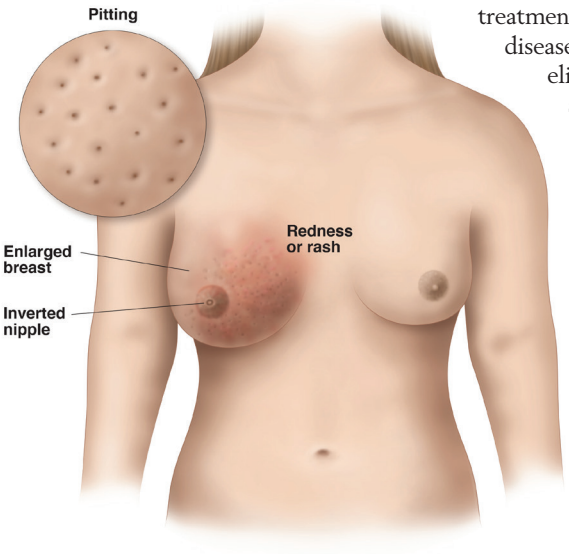
Cooper's Inflammatory Breast Cancer Program: Specialized Resources for an Aggressive Disease

"It's rapidly progressive and quite aggressive, and many women at the time of diagnosis already have lymph node involvement," says breast surgeon Catherine Loveland-Jones, MD, associate director of the Janet Knowles Breast Cancer Center at MD Anderson Cancer Center at Cooper. "To stop it in its tracks, it's important to move quickly."

"It" is inflammatory breast cancer (IBC), a rare form of breast cancer that affects 0.5% to 2% of women. It disproportionately affects African American women, and they tend to be diagnosed at a younger age.

"Unfortunately, IBC presents similar to mastitis, and a lot of women will see their primary care physician with symptoms such as skin redness, warmth and tenderness," Dr. Loveland continues. The skin may also have a thick orange-peel look.

Cooper's multidisciplinary IBC program provides streamlined access to all the specialty expertise a patient requires, including a breast surgeon, breast medical oncologist, radiation oncologist, genetic counselor and radiologist — all in one place.

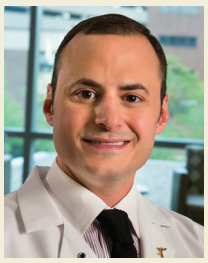


"While it's reasonable to do a brief course of antibiotic therapy, it's important to keep the possibility of IBC in mind," she advises. "If patients don't respond to a one-week course of antibiotics, the possibility of IBC grows stronger—and the patient should be seen by a specialist as soon as possible."

MD Anderson at Cooper has launched a multidisciplinary IBC program—the only one of its kind in South Jersey—to provide fast, specialized care for this aggressive cancer.

"Given our patient population here in South Jersey, we are particularly excited to offer this program," says MD Anderson at Cooper breast medical oncologist Kamel Abou Hussein, MD. "We deal with IBC as an emergency; patients generally can be seen by our team within 24 to 48 hours."

Catherine Loveland-Jones, MD, Associate Director of the Janet Knowles Breast Cancer Center at Cooper



Kamel Abou Hussein, MD, Hematologist/Oncologist

"Treatment then usually begins with upfront systemic therapy," Dr. Abou Hussein explains. "Historically we've used chemotherapy and sometimes add targeted therapy in combination, depending on what type of IBC we're dealing with—hormone receptor positive, triple negative or HER2-positive disease. If the cancer is locally advanced, this neoadjuvant treatment helps us get a good handle on the disease with the goal of reducing or even eliminating it. Then we move on to surgery."

"Mastectomy is required, along with the removal of lymph nodes," Dr. Loveland-Jones says. "This is followed by radiation therapy, and we'll often do additional systemic therapy on the back end. It could include chemo, or anti-hormonal treatment, tailored to the biologic profile of the cancer."

Cooper's multidisciplinary IBC program provides streamlined access to all the specialty expertise a patient requires, including a breast surgeon, breast medical oncologist, radiation oncologist, genetic counselor and radiologist—all in one place.

"It's coordinated, timely care following the same practices and protocols at MD Anderson in Houston," Dr. Abou Hussein notes. "We also can give IBC patients access to clinical trials, knowing that the disease microenvironment and the potential targets are likely different for IBC compared to other types of breast cancer." In fact, Dr. Abou Hussein is the local principal investigator for a new study for patient with metastatic IBC.

Both doctors acknowledge that the 5-year survival rate for IBC is poor, and the recurrence rate is high—due, in part, to its aggressive nature—and that the best way to optimize outcomes is to ensure patients receive the correct course of treatment, which includes systemic therapy, surgery, and radiation.

"Because IBC is very fast growing, it's crucial that IBC be treated as quickly as possible and by specialized experts," says Dr. Hussein.

"Early referral is key, and we're able to see patients without delay," Dr. Loveland-Jones adds. ■

"We also can give IBC patients access to clinical trials, knowing that the disease microenvironment and the potential targets are likely different for IBC compared to other types of breast cancer." – Kamel Abou Hussein, MD

To discuss a patient or for a physician-to-physician referral, please call Dr. Loveland-Jones at 856.735.6207 or Dr. Abou Hussein at 856.735.6115.

The Cooper Center for Metabolic and Bariatric Surgery: Lifelong Multidisciplinary Care for People with Obesity

"Obesity is a complex chronic disease, and it's unlikely to be fixed in one session," says Rohit A. Patel, MD, FACS, Director of Cooper's Center for Metabolic and Bariatric Surgery. "That's why a team approach like ours is more likely to be successful."

This team includes three fellowship-trained and experienced bariatric surgeons—Dr. Patel, Brendan G. O'Connell, MD, FACS, and Harish Kakkilaya, MD, FACS, FASMBS—as well as advanced practice nurses, dietitians, a behavioral psychologist, patient coordinators, and administrative support staff.

Notably, the Cooper Center for Metabolic and Bariatric Surgery is the only facility of its kind in South Jersey that is part of a tertiary care center. Obesity puts patients at risk for multiple comorbid conditions—including diabetes, cardiovascular disease, hypertension, kidney issues, and certain cancers—and at Cooper, patients have streamlined access to advanced expertise in more than 75 specialties, should it be needed.

Cooper's Center for Metabolic and Bariatric Surgery is also distinguished by its commitment to lifelong care for patients who choose to undergo a weight loss procedure.

"Patient safety and after care are essential components of our program," Dr. Patel says. He continues, "We don't just take care of patients around the time of surgery, but we're committed to their well-being for the rest of their lives. We realize that bariatric surgery is just a first step in a patient's weight loss journey."

The Cooper team is also committed to helping providers to guide their patients to take that first step, when appropriate.

"Providers don't have to feel alone in counseling their patients with obesity," he says. [See sidebar for some tips on broaching the topic of weight with patients.]

Drs. Patel, O'Connell, and Kakkilaya offer Roux-en-Y gastric bypass and vertical sleeve gastrectomy, the two most common bariatric surgery procedures performed today.

"Both can be done minimally invasively most of the time," Dr. Patel notes.

As a high-volume bariatric surgery center, Cooper performs between 400 and 500 procedures a year—both routine and complex. This level of experience leads to outcomes that consistently exceed national benchmarks, and Cooper's program is recognized as a center of excellence.

The Center is accredited by the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP), signifying that it has met rigorous national standards for safe, high-quality surgical care that were jointly established by the American College of Surgeons and the American Society for Metabolic and Bariatric Surgery. Notably, the Center has received "Comprehensive Accreditation with Adolescent Qualifications," which means that it is designated to care for patients of all ages, at all levels of obesity, and with all comorbid conditions.

"If you have a patient with a BMI of 35 with related comorbidities or with a BMI of 40 or greater, that patient is a candidate for bariatric surgery," Dr. Patel says. "We'd welcome the opportunity to partner with you to improve that patient's health." ■

Tips for Discussing Weight with Patients

Dr. Patel offers this guidance for broaching the topic of weight:

- Let patients talk first about the health issue that prompted their visit (if it's not specifically their weight).
- Ask open-ended questions to get them to talk about their general health, including weight.
- Aim to be neutral/nonjudgmental rather than labeling them by their condition.
- Describe obesity as a disease; a patient "has obesity" vs. "is obese."
- Assess their willingness to make lifestyle/behavioral changes.
- If they are an appropriate candidate, suggest that they attend one of our free, no-obligation monthly informational seminars to learn more about bariatric surgery.

"If we're not talking about weight with patients, we send a message to them that says, 'If my doctor doesn't think it's important, why should I?'" Dr. Patel says. "We need to communicate that it is important and that they have options."

For a physician-to-physician referral to metabolic and bariatric surgery at Cooper, please email Dr. Patel directly at Patel-Rohit@CooperHealth.edu.

Unique Cooper Patient Registry for Cancer and Pregnancy An "Invaluable Resource" for Physicians and Patients

"Only one in a thousand women are diagnosed with cancer when they're pregnant," says maternal-fetal medicine and cancer and pregnancy specialist Elyce H. Cardonick, MD, Director of Cooper's Cancer and Childbirth Registry. "In many cases, the patient's obstetrician never had a cancer patient and their oncologist never had a pregnant patient, so neither physician has a large number of patients on which to base care decisions."

Now, with the Cooper Cancer and Pregnancy Registry, they do. With more than 428 women and 464 children in its database to date, the registry is the only one of its kind in the U.S. and one of only two in the world (the other is in Europe). Breast cancer is by far the most common cancer seen in this patient population, but the registry also has collected information on women with Hodgkin and non-Hodgkin lymphoma, melanoma, and other cancer types.

"The purpose of our program is to pool information from this complex patient population and answer questions such as 'How do 200 women do in a particular situation versus one physician's experience with three women?'" Dr. Cardonick says. The registry serves as a resource for physicians as well as patients around the world. It is informing—and changing—the way pregnant women are treated for cancer.

Elyce H. Cardonick, MD, Director, Cancer and Childbirth Registry

Generosa Grana, MD, FACP, Director, MD Anderson Cancer Center at Cooper

"What we're learning is that most types of cancer don't require termination of pregnancy," she continues. "In fact, when I started the registry in 1997, 20% of doctors recommended termination; today, that's down to 12%. Plus, we've learned that preterm delivery is not always necessary. So we're able to reassure women that they don't necessarily have to terminate or choose their baby over themselves."

Dr. Cardonick also is doing long-term tracking of the children born to women in the registry—something no one else is doing.

"The data are showing us how women can have surgery, x-rays and, amazingly, even certain types of full-dose chemotherapy during pregnancy without harming their baby," she says. "By accumulating the data in one place, we're able to see patterns and trends—and reassure women and physicians about care decisions and the impact they have on child development, breastfeeding, and more."

"Dr. Cardonick is the country's leading expert on cancer and pregnancy, and this is the largest registry in the United States that collects data on women and children exposed to chemo during pregnancy," says Generosa Grana, MD, director of the MD Anderson Cancer Center at Cooper. "It's an invaluable resource for giving women and their doctors choices that they didn't have in the past."

"It's important not to be hasty in forcing termination or embarking on treatment without taking advantage of the knowledge available via this registry," she stresses. "Dr. Cardonick is always available to speak to community physicians or the patient herself dealing with this difficult and frightening situation."

"We appreciate the opportunity to enroll a patient in our registry, even if they're not seen here at Cooper, and regardless of their location," Dr. Cardonick adds. "And I'm happy to collaborate or consult with physicians anywhere, too, to share what we know about cancer and pregnancy."

She also can recommend patient support resources, including a virtual support group, Hope for Two, based in Buffalo, New York, that matches individual patients with others in a similar situation. ■

For more information, please contact Dr. Cardonick at 1.877.635.4499 or CancerInPregnancy@cooperhealth.edu.

Cooper University Health Care

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