

# healthpoints

ALL THE POSSIBILITIES OF MODERN MEDICINE

 COLUMBIA UNIVERSITY  
MEDICAL CENTER  
Department of Surgery  
NewYork-Presbyterian

## ALSO IN THIS ISSUE:

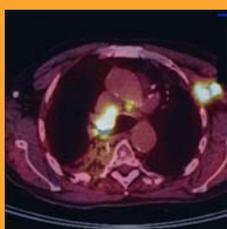
**INTEGRATIVE  
MEDICINE  
PROGRAM** *page 2*



**TUMOR  
IMMUNOTHERAPY  
FOR MELANOMA  
AND KIDNEY  
CANCER** *page 3*



**PET/CT  
IMAGING FOR  
LUNG CANCER**  
*page 4*



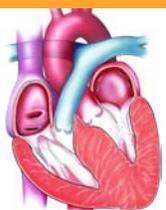
**OBESITY SURGERY  
FOR ADOLESCENTS  
FOR ADULTS** *page 6*



**NEW YORK  
THYROID CENTER**  
*page 8*



**ADVANCED  
CARDIAC CARE  
FOR HEART FAILURE,  
CARDIOMYOPATHY**  
*page 9*



**ESOPHAGEAL CENTER** *page 3*  
**PANCREAS CENTER** *page 7*

## Centers and Programs

### Clinical Excellence through Collaborative, Multidisciplinary Medicine

Throughout the Department of Surgery, distinct sections and divisions provide expert clinical care in areas such as organ transplantation and cardiac, thoracic, renal, endocrine, and breast surgery. These cornerstones of the department attract patients who know they can expect the best level of care, physicians and surgeons who want to practice and research on the frontiers of medicine, and medical students who wish to learn from the very best.

The primary surgical disciplines are necessarily complimented by additional disciplines including medicine, radiology, and rehabilitation, and are supported by outstanding research divisions that continually expand the horizons of each field. From a care perspective, it is important that all services be carefully coordinated and available in one location. The Department of Surgery provides this comprehensive, multidisciplinary care through its *programs and centers*, which draw upon specialized expertise from departments throughout Columbia University Medical Center in order to provide complete care for a disorder or disease area. They include the IL-2 Program, the Center for Adolescent Bariatric Surgery, the Center for Advanced Cardiac Care, and many others. Many of these units reflect the emergence of new understanding or technology that did not exist until relatively recently. Each relies on the collaboration of multiple specialties in an interdisciplinary fashion, an approach which yields great success in both patient care and research. They deliver specialized care to thousands of patients every year and are the source of some of the most cutting-edge medical research being done today. "The development of these multidisciplinary centers supports our primary mission: to provide the absolute best care to our patients," says **Eric A. Rose, MD, FACS**, *Chairman, Department of Surgery and Surgeon-in-Chief, Columbia University Medical Center*. This special issue of Healthpoints is devoted to introducing and exploring many of these unique services. 

For a complete list of the Department of Surgery's specialized programs and centers, visit [www.columbiasurgery.org/pat/index.html](http://www.columbiasurgery.org/pat/index.html), then click on "What's New" and "Centers."



# The Columbia Integrative Medicine Program

**R**eceiving a diagnosis of heart disease is quite stressful. It is very common to become increasingly anxious when dealing with any serious medical condition. In addition, when we experience significant stress, our bodies may react physically in the form of muscular tightness, restricted breathing, stomach upset, and more. These reactions result from the connection that exists between the mind and the body.

According to **Mehmet C. Oz, MD**, *Medical Director and Co-founder of The Columbia Integrative Medicine Program*, many supplemental mind-body therapies (also known as Complementary & Alternative Medicine, or “CAM”) can be integrated into your medical care to help ease stress, enhance the healing process, and promote physical and emotional health and well-being. “Using these techniques can be a powerful way to become an active partner in your medical care,” Dr. Oz explains. **The Columbia Integrative Medicine Program** offers five mind-body interventions to patients

undergoing heart surgery at NewYork-Presbyterian Hospital.

❖ **Health-Risk Reduction Counseling** supports the integration of healthy lifestyle behaviors into one’s daily life. Most of us already know that we should eat well, manage our weight, exercise regularly, stop smoking, relax more, and enjoy life. However, putting these changes into practice is often challenging. Developing mind-body skills and enhancing awareness can facilitate the realistic implementation of healthful choices.

❖ **Mindfulness Based Stress Management** teaches the practice of *mindfulness meditation*, which involves paying attention to the present moment without judgment. Calming our minds and developing greater awareness allows us to respond to stressful situations with poise and self-control. Basic mindfulness techniques aid in coping more effectively with stress, pain, illness, and the hectic pace of our lives. A weekly stress management class is offered to patients and family

members on the inpatient cardiac units. Individual instruction is also available.

❖ **Imagery & Self-Hypnosis** link the mind and the body, utilizing the power of the mind to evoke positive physical responses, such as reducing anxiety, minimizing post-operative pain, fatigue, or depression, and returning to life after surgery with a renewed sense of health and well-being. Once learned, these techniques can be practiced on one’s own.

❖ **Therapeutic Massage** is designed to reduce stress and tension and to promote healing. Every cardiothoracic surgery patient is entitled to one 15-minute complimentary massage following surgery. Sessions of massage are available on a fee-for-service basis for other patients.

❖ **Cardiac Yoga & Stretching** promotes comfort and relaxation through the use of gentle movements and breathing techniques derived from yoga postures. These techniques are valuable tools for stress reduction that can be utilized by patients before or after a surgical procedure. Weekly classes are offered for patients and family members. Individualized sessions are also available.

“The future of medicine requires that we challenge preconceptions and biases about good medical practice and healing,” says Dr. Oz. “These techniques should broaden your views of yourself and the healing process. Working together, we can make this a rewarding path on the journey to wellness.”

To best enhance medical care through the use of complementary and alternative therapies, the Columbia Integrative Medicine Program is committed to rigorous scientific research to determine their

continued on page 10



## Esophageal Center

The Center for Esophageal Disorders at Columbia University Medical Center, under formation in 2007, will advance the level of care for patients with esophageal cancer, achalasia, Barrett's esophagus, gastroesophageal reflux, and other esophageal disorders. According to **Marc Bessler, MD**, Director of Laparoscopic Surgery at NewYork-Presbyterian Hospital, the center will offer the full spectrum of treatments including dietary advice, medical interventions, endoscopic procedures, and surgery, with an emphasis on laparoscopic surgery whenever possible. Collaborating leaders of the new center include **Joshua R. Sonett, MD**, Chief of General Thoracic Surgery, **Charles J. Lightdale, MD**, Director of Clinical Gastroenterology, and **Peter D. Stevens, MD**, Director of Endoscopy, Department of Medicine.

As an innovator of minimally invasive surgical techniques, Dr. Bessler has pioneered important methods of performing bariatric and abdominal surgeries. He now looks forward to bringing this expertise to the treatment of esophageal cancer: "Not many hospitals offer minimally invasive esophageal procedures," he explains. This new multidisciplinary center will incorporate the specialized expertise of gastroenterologists, nurse practitioners, surgeons, abdominal and thoracic surgeons, oncologists, radiation oncologists, and specialists in minimally invasive surgery. 

To learn more call 201-346-7001.

## IL-2

### Immunotherapy for Advanced Melanoma and Kidney Cancer

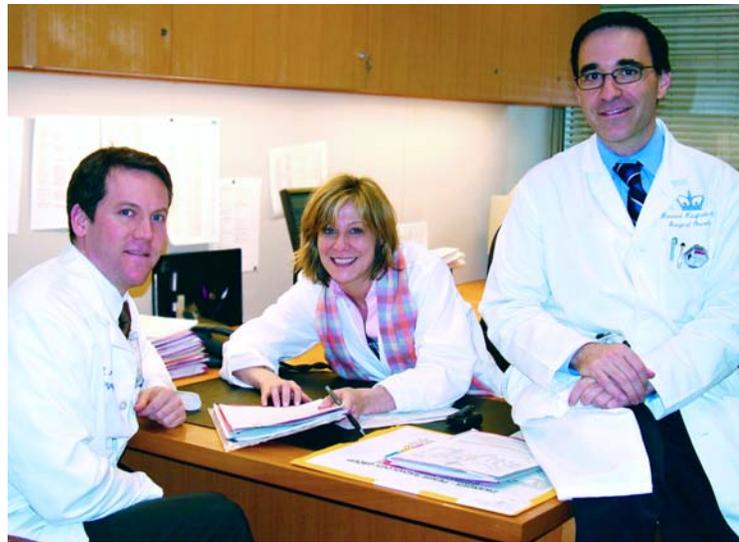
For patients with advanced melanoma and kidney cancer, traditional therapies such as surgery, chemotherapy, and radiation simply may not be enough. Fortunately, the list of treatment options has grown longer in recent years, thanks to rigorous study by teams of dedicated researchers. Their efforts have produced, among others, new systemic approaches that can essentially harness the body's natural immune system in its fight against the deadly cells. Called *immunotherapy*, this approach can dramatically reduce tumors in patients with melanoma and kidney cancer.

The **Interleukin-2 Unit of the NewYork-Presbyterian Tumor Immunotherapy Program at Columbia University Medical Center** uses *Interleukin-2*, or IL-2, to treat patients who have malignant melanoma and advanced kidney cancer. IL-2 represents one of the best treatment options for patients with advanced melanoma and kidney cancer. The largest such center in New York City, this multidisciplinary unit includes a dedicated team of specially trained physicians, nurses, pharmacists, social workers, and nutritionists.

Interleukin-2 is a natural protein called a cytokine that is produced by the body. Part of the immune system, IL-2 stimulates white blood cells to grow and divide. When given in high doses, IL-2 takes on a heroic quality of sorts, helping the immune system to recognize and destroy cancer cells.

IL-2 therapy is administered in a specially designed hospital unit. Typically, two treatment cycles are given, each of which lasts five to seven days. A month after these first two cycles, a CT scan is taken to determine how well patients have responded to the therapy, and depending on their results, additional cycles may be recommended. Among patients with advanced kidney cancer and melanoma, high-dose IL-2 turns back the disease in 15% to 20% of cases. About 6% to 8% of these patients experience lasting or complete regression of all disease.

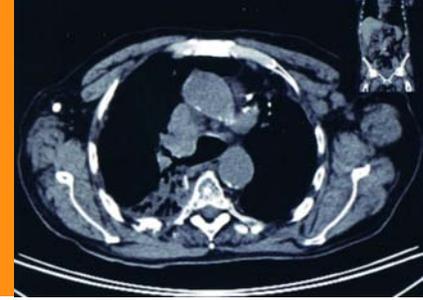
Directed by **Howard L. Kaufman, MD**, this center also offers innovative biotherapy and vaccine treatments that use the body's natural defenses to treat patients with cancer. The Tumor Immunotherapy Program conducts groundbreaking research in vaccines to treat cancers of the breast, colon, kidney, lung, pancreas, prostate, and others. In addition to these critical trials of cancer vaccines, other studies are investigating interferon (another cytokine therapy) alone and in combination with IL-2, chemotherapy and surgical excision. "Although we still have a lot to learn about how the immune system controls cancer," states Dr. Kaufman, "it is heartening when it works and we can give people back their lives." 



**Bret Taback, MD, Gail de Raffelle, RN, and Howard L. Kaufman, MD of the Tumor Immunotherapy Program**

Learn more about the IL-2 Unit at [www.tumolvaccines.com](http://www.tumolvaccines.com) or call 201.346.7001.

# PET/CT Imaging Hones in on Lung Cancer



Lung cancer is the most common form of cancer in the United States, with more than 200,000 new cases each year. It is also the leading cause of death from cancer. If left untreated, lung cancer may spread to distant organs including the brain, liver, adrenal glands and bones. Early detection may dramatically improve survival. Often the disease is well advanced at the time of diagnosis. Lung cancer usually begins in one lung and can spread to other parts of the chest, which, in addition to the other lung, can include the pleura (membrane around the lungs), the chest wall, the diaphragm and the structures of the *mediastinum* (the area between the lungs).

Identifying the exact location of a cancerous growth without an invasive procedure requires a sophisticated imaging technique. One such approach is PET/CT, which combines the detecting devices of CT and PET into one imaging system that can obtain a CT and a PET scan concurrently.

PET/CT imaging plays an important role in examining the extent of lung

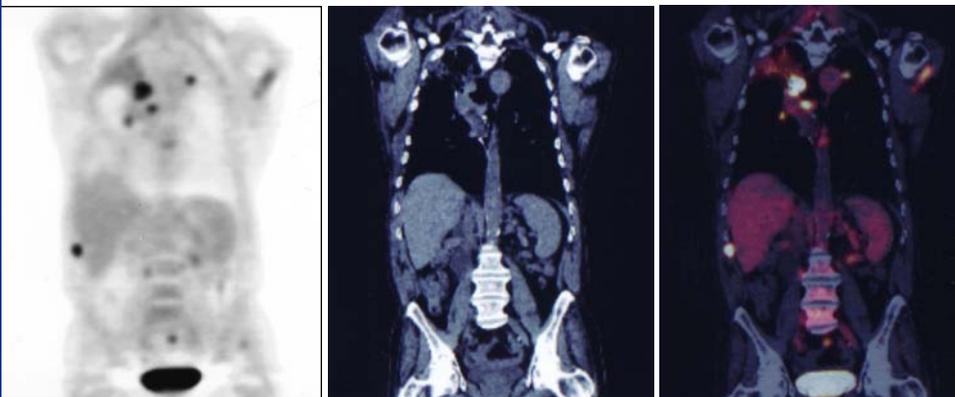
cancer in the chest area and throughout the body, an analysis called *staging*. Staging is conducted at the time of diagnosis and also after treatment with radiation therapy, chemotherapy or surgery, in which case it is called *restaging*.

The combination of PET (positron emission tomography) and CT (computed tomography) in a single scanner yields individual scans that can be presented separately or as a single, overlapping, “fused” image. PET and CT show different types of information: PET shows metabolic or chemical activity as bright areas (known as “hot spots”); CT shows anatomical structures. PET/CT’s value in lung cancer staging comes from the technology’s ability to distinguish and localize cancer in regions of complicated anatomy containing multiple structures such as organs, muscles, bones, lymph nodes, air and fluids in close proximity.

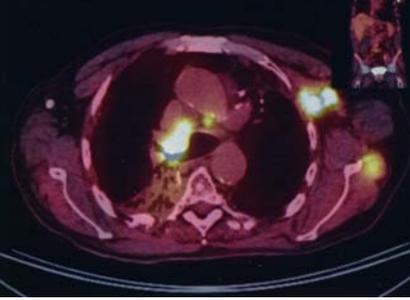
In a PET/CT scan to stage lung cancer, the PET portion of the scan can detect metastasis through its sensitivity to cancer cells, and if metastasis has

occurred, the CT images can pinpoint its location within the body’s structures. The sophisticated fusion technology of today’s PET/CT machines enables accuracy of within one millimeter. According to **Lyall A. Gorenstein, MD**, *Assistant Professor of Surgery* in the Section of Thoracic Surgery at Columbia University College of Physicians and Surgeons, patients whose cancer has not spread beyond the lung in which it originated typically benefit from surgery. Patients with more advanced cancer that has spread beyond the lung into the lymph nodes between the lungs, but not to distant organs, may require *trimodality* treatment with radiation and chemotherapy to shrink the tumor, followed by surgery. PET/CT assists the physician in deciding which treatment option to take or whether additional evaluation is still needed to make a treatment decision.

PET/CT scanning can be valuable as a complement to invasive staging techniques in patients with non small cell cancers in the lung and in the mediastinum, says Dr. Gorenstein. The technology aids the practitioner in pinpointing the precise location of cancerous tissue so that exploratory instruments can be directed to the appropriate place. These staging techniques include *mediastinoscopy*, insertion of a scope through a small incision above the sternum into the chest in order to view the mediastinal structures (including the heart and its vessels, the lymph nodes, trachea, esophagus and thymus gland) and obtain a biopsy; or a *bronchoscopy*, insertion of a scope through the mouth and windpipe



From left to right: PET, CT, and fused PET/CT scans of a patient with recurrent lung cancer after treatment. Both the PET and fused PET/CT scans reveal multiple areas of increased glucose metabolism in the right lower ribcage, mediastinum, and thoracic spine, consistent with recurrent disease.



Far left: CT and Left: fused PET/CT scans of a patient with recurrent lung cancer after treatment, showing areas of increased glucose activity in the mediastinum and left chest wall, representing tumor recurrence.

to examine the airways, collect secretions and obtain a tissue biopsy.

In addition to the technology's value in localizing lung cancer in a number of areas in the chest, PET/CT of the whole body can allow the physician to check for possible recurrence of lung cancer beyond the immediate chest area. The combination of the two scanning technologies enables the physician to verify non-malignancy of structures throughout the body that might resemble cancer on either CT or PET alone—such as scar tissue, which is not cancerous.

“PET/CT is a revolutionary technology that, although still in its infancy, is already impacting significantly on the initial and follow-up management of lung cancer,” says **Ronald L. Van Heertum, MD**, *Professor of Radiology and Director, Columbia Kreitchman PET Center*.

**Medicare coverage is available for all types of lung cancer. For PET and PET/CT scans of small cell lung cancer, patients can receive Medicare coverage through participation in the National Oncologic PET Registry (NOPR). Non-small cell lung cancer is routinely covered by Medicare. To learn more, go to [www.columbiapet.org](http://www.columbiapet.org)**

**If you are a physician and would like to refer a patient for an oncology PET or PET/CT scan, please call the Columbia Kreitchman PET Center at 212-923-1555. If you are a patient and would like to get a PET or PET/CT scan, please discuss a referral with your physician.**

## COLUMBIA THORACIC ONCOLOGY PROGRAM

Promoting close collaboration among pulmonologists, oncologists and thoracic surgeons, the Columbia Thoracic Oncology Program offers patients with cancer of the organs of the chest cavity easy access to all relevant disciplines. Program practitioners meet weekly to discuss patients under their care, determine the best type of therapy, and ensure each patient is offered all appropriate options. “The program gives patients access to all disciplines, as well as expertise in the areas of pulmonary rehabilitation and radiology,” says Dr. Gorenstein. Not only is having clinical consultation and all treatments available under one roof convenient for the patient, but increased collaboration and communication among practitioners enhances the quality of care.

### THE FUTURE:

#### DETERMINING PROGNOSIS WITH PET

Tumors consume glucose to feed their rapid growth, and some consume more than others, standing out on the PET scan as brighter hot spots. Research has shown that there may be a correlation between the intensity of a lung tumor on a PET scan and its propensity to spread to regional lymph nodes, or to other organs outside of the chest. PET scanning may therefore be valuable in evaluating prognosis of a cancer. Early studies have indicated that a relationship does exist between brightness of the hot spot and the aggressiveness of the tumor, but further studies are necessary to confirm these preliminary findings. This relationship may ultimately help select patients with otherwise early stage cancers who would benefit from systemic therapy. 

## KREITCHMAN PET CENTER RESEARCH NEWS

Physician-scientists at the Columbia Kreitchman PET Center continually seek to expand PET's applications and to hone its accuracy. Among them, **Rashid A. Fawwaz, MD, PhD**, *Professor of Clinical Radiology* at Columbia University College of Physicians and Surgeons, is conducting research to further sharpen PET's diagnostic efficiency for lung cancer by eliminating potentially confusing patterns caused by inflammation.

Before undergoing a PET/CT scan, patients receive an injection of a radiolabeled tracer detectable by the PET portion of the scanner. For oncology scans, a glucose compound known as F-18-FDG is used. Inflammation, which occurs with many common health conditions, can also appear as a moderately bright hot spot on an FDG PET scan. This presents a dilemma, in some situations, because moderate hot spots could either be malignant or not.

Dr. Fawwaz has taken steps to remove this ambiguity altogether by investigating an alternative radiotracer called *Sigma-1 receptor analog*. The new compound, which is F18-Fluorine-based, hones in on lung cancer, but it does not concentrate in inflammation.

The Sigma-1 compound has proven safe and effective in initial research. Dr. Fawwaz and his team will be moving to human clinical trials in the near future.

# Obesity Surgery



## Hope for Teens at the Center for Adolescent Bariatric Surgery

The Center for Adolescent Bariatric Surgery at Morgan Stanley Children's Hospital is dedicated to helping obese teens lose weight and set a new course for a healthy lifestyle. This center has extensive experience in laparoscopic bariatric



surgery and long-term management of obese adolescents in a supportive and caring environment.

"If we can interrupt the progression of obesity and its detrimental effects in young patients before irreversible damage is done, we will have done a very good thing," says **Jeffrey L. Zitsman, MD**, *Director, Center for Adolescent Bariatric Surgery*.

The prevalence of childhood obesity has risen dramatically in the past several decades, and children who are obese are at risk for developing lifelong physical and emotional problems. These include type 2 diabetes, heart disease, high blood pressure, trouble breathing, difficulty sleeping, and degenerative joint disorders. Teenagers who have weight problems tend to have lower self-esteem and can develop depression, anxiety and other psychological issues. Studies also show that the majority of children and adolescents who are obese remain obese as adults.

"The Center for Adolescent Bariatric Surgery focuses on the total needs of the adolescent obesity surgery patient," explains Dr. Zitsman. Its dedicated team of experts in pediatric gastroenterology, endocrinology, nutrition, exercise physiology and physical therapy, psychiatry, surgery, anesthesiology, and other specialties offer both medical and surgical options for teenagers who suffer from severe obesity. Patients are followed

## Adult Program Earns Highest National Accreditation

In late 2006, the American College of Surgeons (ACS) accredited NewYork-Presbyterian Hospital as a Bariatric Surgery Center Network (BSCN) hospital with the highest possible designation (1A), in recognition of the Hospital's ability to offer patients the best care available. The top-level designation is a first for New York State and one of only seven nationwide at the time it was awarded.

Level 1A bariatric surgery centers, the highest of five designated levels, are defined by the ACS as providing complete specialized care for all patients, including those with the most challenging and complex conditions, in order to ensure the best outcomes. The designation also recognizes the use of a special outcome tracking database that allows continuous quality improvements and ensures continued excellent outcomes. Additionally, the center's highly credentialed bariatric surgeons handle a high volume of cases.

The bariatric surgery program at NewYork-Presbyterian is

led by **Marc Bessler, MD**, *Director of the NewYork-Presbyterian Center for Obesity Surgery*, and **Michel Gagner, MD**, *Director of the Weight-Loss Surgery Program at NewYork-Presbyterian Hospital/Weill Cornell Medical Center*. Pioneers in their field, they have helped develop some of the innovative procedures offered at NewYork-Presbyterian Hospital.

"Patients can expect privacy and personalized attention, from the time of their initial consultation through lifelong follow-up," says **Eric A. Rose, MD**, *Surgeon-in-Chief at NewYork-Presbyterian/Columbia*. "We pride ourselves on the individual care we are able to provide each patient, and we aim to have all patients feel comfortable and confident prior to surgery."

In addition to this ACS designation, the healthcare ratings organization *Healthgrades* gave NewYork-Presbyterian



## The Columbia University Pancreas Center

for at least six months to see how they do on a non-surgical weight management program. If they can lose more than 20% of their excess weight in a six-month period on medical therapy, they will not become candidates for surgery.

### LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

Laparoscopic adjustable gastric banding, or LapBand®, helps people lose weight by placing an adjustable band around the upper part of the stomach to reduce its capacity. Outside the United States, laparoscopic adjustable gastric banding is the most common surgical procedure used to treat obesity. The Center for Adolescent Bariatric Surgery is the first children's hospital-based program in the United States, and one of only three in the nation approved by the Food and Drug Administration, to perform the procedure in adolescents. It offers the procedure to candidates between the ages of 14 and 18 who have been obese for more than five years and who have not been able to lose adequate weight through diet and exercise under six months of care at the center. [👑](#)

**For an appointment or to learn more about the Center for Adolescent Bariatric Surgery, please call the Center's coordinator at 201.346.7001.**



**From left to right: Daniel Davis, MD, Beth Schrope, MD, William Inabnet, MD, Marc Bessler, MD, and Akuezunkpa Ude, MD**

Hospital the highest rating—five stars—for successful weight loss surgery performed on severely obese patients. The survey is the first of its kind for weight loss surgery, and it included surgeries performed during 2002-2004.

In assessing patient risk levels such as age and heart problems,

researchers found that patients in the five-star hospitals were 66% less likely to develop a medical complication following surgery compared to a one-star hospital. [👑](#)

**For information about the Center for Obesity Surgery, please visit [www.obesitymd.org](http://www.obesitymd.org) or call 201.346.7001.**

[www.columbiasurgery.org](http://www.columbiasurgery.org)

**T**hirty-five percent of people who develop pancreatic cancer are considered inoperable because the cancer invades blood vessels surrounding the pancreas, such as the portal vein. At many hospitals, patients are turned down for surgery even though their cancer has not spread to other organs. Yet surgeons at the **Columbia University Pancreas Center** have developed special surgical protocols that enable them to successfully operate on the vessels to completely remove these patients' cancer.

This is just one example of the innovative and compassionate care found at the Pancreas Center, which provides intensive protocols for the prevention, diagnosis, and treatment of pancreatic diseases. These include:

**Prevention** through risk stratification and screening: By identifying all evidence known to contribute to a person's risk of developing pancreatic cancer, practitioners can provide guidance and ongoing screening, and help high-risk patients avoid developing the disease. This is one of only a few risk-assessment programs nationwide that provide safe and accurate screening strategies to identify a patient's degree of risk for developing pancreatic cancer.

**Diagnosis:** Early detection can profoundly impact an individual's chances of surviving pancreatic cancer. The center has extensive advanced endoscopic and radiological expertise to visualize and biopsy pancreatic tissues. Techniques used at the center include abdominal ultrasound, MRI, CT scan, endoscopic retrograde cholangiopancreatography (ERCP), angiography, biliary and pancreatic manometry, endosonography-guided fine-needle aspiration (EUS-FNA), and laparoscopic examination.

**Treatment:** Specialists at the Pancreas Center have found ways to customize pancreatic surgery and preserve more healthy tissue, while still safely removing all traces of cancer tissue. Custom resections may combine elements of distal pancreatectomy, total pancreatectomy, and the Whipple procedure, allowing many patients to avoid total removal of the pancreas. The center's surgical mortality rate of less than 1% is significantly lower than the nationwide rate of 4%-15%. [👑](#)

**Learn more about the Pancreas Center at [www.pancreasmd.org](http://www.pancreasmd.org) or by calling 201.346.7001.**

# Endocrine Expertise

at the Thyroid and Parathyroid Surgical Program and the New York Thyroid Center

**T**hyroid disorders are extremely common in the United States, with over 20 million people undergoing treatment and an estimated two million others with an undiagnosed thyroid problem. Common thyroid conditions include hyperthyroidism (overactive thyroid), hypothyroidism (underactive thyroid), thyroid cancer, and goiters. The most common indication for thyroid surgery is thyroid nodules in symptomatic nodular goiters (a benign enlargement of the thyroid gland).

At NewYork-Presbyterian/Columbia, a longstanding clinic has evolved into what is now the renowned **New York Thyroid Center**. Originally established at Columbia over 15 years ago by the late thyroid and parathyroid surgeon **Paul LoGerfo, MD**, the surgical staff of the center have developed many approaches that minimize or eliminate the need for surgical treatment of endocrine disorders. These include the use of intraoperative ultrasound, intraoperative hormone monitoring, minimally invasive surgical techniques, the use of local anesthesia, and other advances not available in many hospitals.

Under the leadership of co-directors **William B. Inabnet, MD**, *Chief, Section of Endocrine Surgery and Associate Professor of Clinical Surgery*, and **Robert J. McConnell, MD**, *Professor of Clinical Medicine, Division of Endocrinology*, the New York Thyroid Center recently began seeing patients in the newly renovated Garden Center, located in the Irving Pavilion. This beautiful new space is specially designed as a collaborative environment, with consultation, exam, and procedure rooms complimented by central areas for specialists to meet and discuss the treatment plans for patients with thyroid and parathyroid disorders.

“Having the ability to provide compre-

hensive, multidisciplinary care to patients under one roof is truly a great advance, as we can now provide the most efficient and professional care to our patients,” says Dr. Inabnet. “Patients with complex thyroid and parathyroid disorders can now see the necessary specialists in the same location during one visit to our program, an approach that is very popular with patients,” he adds.

In conjunction with the New York Thyroid Center, Columbia’s Thyroid and Parathyroid Surgical Program provides state-of-the-art diagnostic care and minimally invasive surgical treatments of thyroid and parathyroid diseases. Together, these partners have unparalleled experience in the development and practice of minimally invasive thyroid surgery, and stand among the most active institutions nationwide in the research and care of endocrine disorders. Members of the multidisciplinary endocrine program include endocrinologists, surgeons, radiologists, pathologists, and ophthalmologists who are leaders in the classification, treatment, and identification of thyroid and parathyroid disorders.

According to **James A. Lee, MD**, *Director of the Adrenal Center*, the New York Thyroid Center is one of only a few endocrine-focused institutions in the world that consolidates the expertise and technology necessary to provide patients with comprehensive and compassionate care in one location. “This approach is so successful and effective that we are modeling our new Adrenal Center on this ideal,” says Dr. Lee.

While patients benefit from the expert care provided at the endocrine center, a robust slate of clinical studies continually broadens and enhances these therapeutic options. Current research includes:

➤ The utility of intraoperative insulin

assay for patients undergoing pancreatic resection;

- Determining the role of intraoperative nerve monitoring during thyroid surgery and reoperative parathyroid surgery;
- Studying the association of cognitive disorders (i.e. decreased memory, fatigue, depression, etc.) and hyperparathyroidism through the use of functional MRI and cognitive testing;



**A digital laparoscope and flat panel display provide excellent visualization during adrenal procedures like the one above.**

- Bariatric surgery as a cure for type 2 diabetes (non-insulin dependent diabetes);
- The association between osteoporosis and hyperparathyroidism;
- The association between cardiovascular disease and hyperparathyroidism;
- The advantages of laparoscopic adrenalectomy over conventional open adrenalectomy;
- The safety of local anesthesia and same day discharge in patients undergoing sutureless thyroidectomy. [!\[\]\(e04a2df4a948cc496cda3a868d1e74be\_img.jpg\)](#)

**For more information about the Thyroid Center or the Adrenal Center, please call 201.346.7001.**

# Center for Advanced Cardiac Care

Extending Life and the Quality of Life for End Stage Heart Failure Patients

Over five million Americans suffer from heart failure—a serious, chronic condition that occurs when the heart does not pump strongly enough to meet the needs of the body. If at least one chamber of the heart can not pump with adequate force, the body's tissues do not get enough oxygen. The heart has to work harder to make up for the inefficiency, and

plant program at NewYork-Presbyterian Hospital/Columbia University Medical Center is the top cardiac transplant program in the United States by volume. In conjunction with this program, the **Center for Advanced Cardiac Care** (led by *Medical Director Donna Mancini, MD, Division of Cardiology, Department of Medicine*), provides the most advanced

offers assist devices as a “destination therapy” for patients with end stage heart failure who are not eligible for a transplant.

## HEART FAILURE RESEARCH

Under Dr. Naka's direction, novel research is advancing new approaches to mechanical circulatory assistance. In particular, the center is investigating a range of new devices in an effort to provide patients with devices that are smaller, quieter, and more portable, fully implantable, or capable of providing biventricular support.

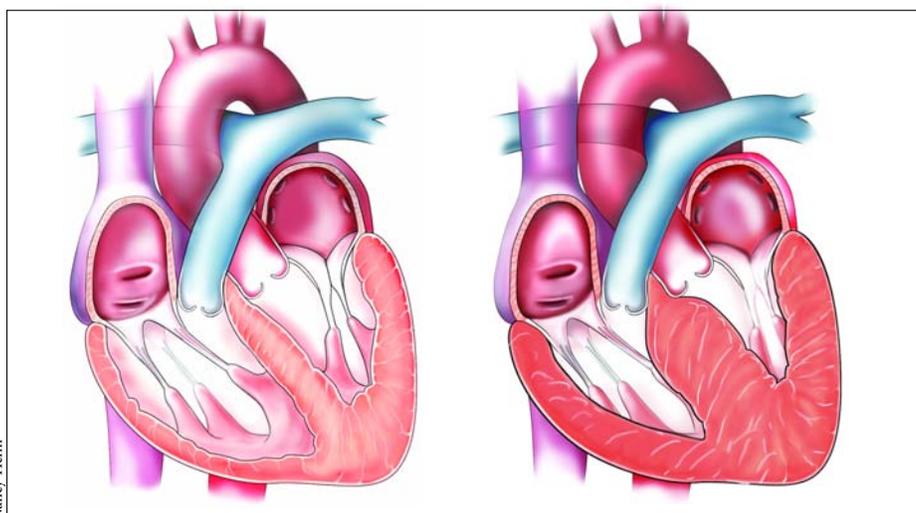
This builds on a long history of research in the field, a course that has been marked by outstanding progress.

► The landmark REMATCH trial, led by **Eric A. Rose, MD, FACS**, proved in 2001 that LVADs prolong the lives of patients with end stage heart failure. This led to Medicaid's historic decision in 2003 to cover the costs associated with LVAD implantation.

► In 2005, NewYork-Presbyterian/Columbia was awarded a \$17 million NIH grant to study the main problems associated with LVADs. Studies funded by this grant are leading to better understanding of, and methods to minimize, problems such as infection, bleeding, neurological problems, and device malfunction.

Patients who go on to have heart transplantation surgery will significantly benefit by research conducted by **Mario C. Deng, MD, Director of Cardiac Transplantation Research in the Department of Medicine, Division of Cardiology**. Instead of undergoing repeated endomyocardial biopsy (EMB), an invasive, uncomfortable, and potentially risky test for signs of organ rejection, heart transplant patients can now be routinely tested through a simple blood test. Only if the blood test shows

continued on page 10



Nancy Heim

Compared to a normal heart (left), the heart muscle of a patient with hypertrophic cardiomyopathy (right) is greatly thickened.

this in turn causes more damage.

Patients' symptoms depend on how weak the heart is and how well their heart failure is controlled. Many patients require several medications, including *ACE Inhibitors* to lower blood pressure and open the blood vessels; *Vasodilators* to lower blood pressure and relax the blood vessels; *Diuretics* to help expel extra water and salt; and *Digoxin*, which helps the heart pump better.

Although medical management is often successful in treating heart failure in earlier stages, *end stage heart failure* requires therapies beyond drugs. Previously, heart transplantation was the only hope for such patients. Founded over a quarter of a century ago, the heart trans-

medical and surgical options to patients with heart failure. Moreover, in an effort to overcome some of the limitations of transplantation (in particular, the long waiting lists for donor organs), Columbia's surgeons have helped to spearhead the international effort to develop and implement cardiac assist devices, which provide mechanical support to failing hearts.

**The Mechanical Circulatory Support Program**, led by **Yoshifumi Naka, MD, PhD, Director of the Cardiac Transplantation and Mechanical Circulatory Support Programs**, was founded in 1990 to provide a “bridge-to-transplantation” for patients requiring heart transplants—supporting their lives until a suitable donor heart became available. Today, this program also

**Center for Advanced Cardiac Care**

continued from page 9

definitive signs of organ rejection will patients need to undergo EMB. The development of this test was made possible by harnessing the knowledge gained by mapping the human genome. In other work, Dr. Deng and colleagues are investigating the relationship between the cardiovascular system and the immune system, and are examining the impact of mechanical circulatory support devices and heart transplantation on survival and quality of life. 

**Learn more about heart failure, mechanical circulatory assist devices, and heart transplantation at [www.columbiasurgery.org](http://www.columbiasurgery.org) or by calling 201.346.7001.**

**PEDIATRIC CARDIOMYOPATHY, HEART FAILURE, AND TRANSPLANTATION**

**Cardiomyopathy** is a chronic and sometimes progressive disease of the heart muscle. There are three main types of cardiomyopathy: Dilated cardiomyopathy, in which the muscle fibers stretch; Hypertrophic cardiomyopathy, in which the heart muscle thickens; and Restrictive cardiomyopathy, in which the heart muscle becomes stiff. In children, cardiomyopathy may be caused by metabolic disorders, a genetic mutation, or by other unknown causes.

The **Comprehensive Pediatric Cardiomyopathy, Heart Failure, & Transplantation Program** of the Morgan Stanley Children’s Hospital of NewYork-Presbyterian Hospital treats children with primary cardiomyopathy or those who have developed heart failure as a result of a congenital heart defect. Its team of specialists includes pediatric cardiologists, heart surgeons, nurses, geneticists, psychiatrists, neurologists, social workers and child life specialists, all with expertise in pediatric medicine.

“Our goal is to return children to their childhood, with as normal a lifestyle as possible,” says **Linda Addonizio, MD**, *Director* of the program.

**Learn more at [www.kidsheartfailure.org](http://www.kidsheartfailure.org) or by calling 201.346.7001.**

**The Columbia Integrative Medicine Program**

continued from page 2

safety, efficacy, and adaptability. Through collaboration with researchers within the University, nationally and internationally, the program has researched many areas of Integrative Medicine. Current research includes:

- ❖ Mindfulness-Based Stress Management for Patients with and at Risk for Heart Disease
- ❖ Study to Characterize the Relationship between Depression and Inflammation following Coronary Artery Bypass Graft Surgery (CABG)
- ❖ Effectiveness of a Yoga Program in Improving Pulmonary Function in Patients Living with Congestive Heart Failure
- ❖ Mindfulness-Based Cognitive Therapy for Smoking Relapse Prevention
- ❖ Effects of Lymphatic Drainage Massage Therapy in Reducing Edema in Patients Following Cardiac Surgery. 

**To learn more about the Columbia Integrative Medicine Program, please visit [columbiasurgery.org/cimp/index.html](http://columbiasurgery.org/cimp/index.html) or call 212.342.0002.**

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