

A vertical strip on the left side of the page features a microscopic image of intestinal tissue, showing the characteristic folds and villi. The image is in shades of purple and blue, creating a textured, organic background for the text.

Transforming

MEDICAL  
EDUCATION

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Multidisciplinary

PATIENT-CENTERED  
CARE

---

Recognized

PANCREATIC  
RESEARCH

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Pioneering

MICROBIOME  
EXPLORATION

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# Gastroenterology and GI Surgery

2015

**YEAR IN REVIEW**

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## Dear Colleagues and Friends:

We are delighted to share with you this report on the achievements of the combined efforts of NYU Langone's Division of Gastroenterology and the Department of Surgery in addressing benign and malignant GI disease.

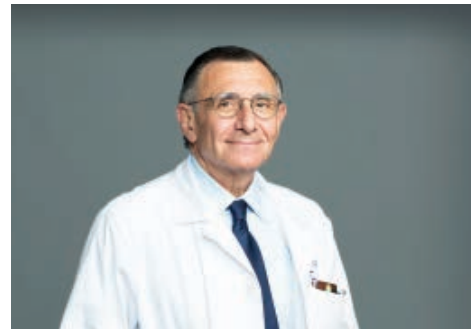
Over the past year, we have advanced our research, clinical, and education missions as well as our tradition of outreach and service to our community and its underserved populations. We have worked collaboratively to help forge a better future with more effective options in the screening, prevention, diagnosis, and treatment of esophageal, gastric, hepatic, pancreatic, intestinal, and colorectal diseases.

In research, we have built on a robust foundation in basic, translational, and clinical investigation. One of our major areas of focus is the human microbiome and its role in numerous disease states—including obesity, inflammatory bowel disease, colorectal cancer, and pancreatic cancer—to reveal mechanisms and markers that can be targeted for intervention. In other studies, we are evaluating new technologies to increase adenoma detection and investigating techniques to improve the diagnosis and treatment of conditions, such as Barrett's esophagus, pancreatic cysts, and gastrointestinal bleeding.

In the clinical arena, our mission is to deliver world-class, integrated, patient-centered, multidisciplinary care. In addition to providing state-of-the-art medical and surgical services, we have implemented coordinated care pathways to address the needs of patients who are particularly at risk, including those with inflammatory bowel disease who are transitioning from pediatric to adult care and those who are considering pregnancy. For another population at increased risk, those who struggle with obesity, we offer a comprehensive program of medical and surgical weight loss options, including the newly FDA-approved intragastric balloon procedure.

Building on a tradition of excellence in education, we have developed nationally recognized educational approaches that focus on professionalism, interpersonal communication, and a humanistic approach to medicine in addition to clinical knowledge and expertise. Two such examples include our "Gastroenterology Fellowship Program Director's Toolkit," which in collaboration with the American College of Gastroenterology will be made available nationwide in 2016, and our curriculum on surgical professionalism and interpersonal communication, which has been incorporated into the national surgical curriculum of the Surgical Council on Resident Education.

We are proud to work with our colleagues nationwide to contribute to the advancement of our scientific knowledge, the development of our future physician leaders, and ultimately the provision of advanced, state-of-the-art clinical care for patients suffering from complex and debilitating gastrointestinal and hepatobiliary conditions.



**H. LEON PACHTER, MD**

George David Stewart Professor of Surgery  
Chair, Department of Surgery



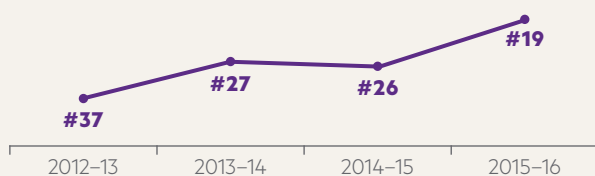
**MARK B. POCHAPIN, MD**

Sholtz/Leeds Professor of Gastroenterology  
Director, Division of Gastroenterology  
Vice Chair, Clinical Affairs  
Department of Medicine

# Gastroenterology and GI Surgery

**#19**  
in the U.S.

for Gastroenterology and GI surgery in *U.S. News & World Report's* Best Hospitals



**20+**  
practice  
locations

**20,000+**  
endoscopies  
annually




**156**   
gastroenterologists,  
hepatologists,  
and GI surgeons

including voluntary faculty

**93%**  
fellowship-bound  
graduating surgical residents

**>50%**   
in advanced fellowships  
or academic practice

based on gastroenterology fellows  
over the last seven years

**1 of 4**   
international trial sites  
comparing:

- standard colonoscopy
- full-spectrum endoscopy
- cuff-assisted colonoscopy
- ring-assisted colonoscopy

**> 90%**   
performing clinical  
or scientific research  
(as percent of surgical residents)

**1,200**  
applicants  
for  
**7 general surgical  
residency slots**



# NYU Langone Medical Center

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# #1

overall patient safety  
& quality for  
three years in a row

AND

ambulatory care quality  
& accountability

among leading academic medical centers  
across the nation that were included in the  
University HealthSystem Consortium 2015  
Quality and Accountability Study

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# Top 15

in *U.S. News & World Report*



# #12

**BEST HOSPITALS  
HONOR ROLL**



# #14

**BEST MEDICAL  
SCHOOLS FOR  
RESEARCH**

and nationally ranked in 12 specialties



**Tisch  
Hospital**

The University Hospital  
of NYU

# GROWTH AND TRANSFORMATION

## Research

### HIGH-INTEROBSERVER AGREEMENT SUPPORTS VALUE OF WATS BRUSH BIOPSY FOR DIAGNOSING BARRETT'S ESOPHAGUS

Diagnosis of Barrett's esophagus is based on both endoscopic and histologic examination, but traditional forceps biopsy can leave affected tissue unsampled. In addition, interobserver agreement among pathologists is poor with this technique. In a study conducted by Seth A. Gross, MD, associate professor of medicine and section chief of Gastroenterology at NYU Langone's Tisch Hospital and ambulatory network, and colleagues, wide-area transepithelial sampling (WATS) brush biopsy with computer-assisted tissue analysis—a minimally invasive technique that allows for sampling from a wider area of affected esophageal tissue—was shown to increase the detection of Barrett's esophagus. In another study conducted by Dr. Gross and colleagues and reported on in September 2015 in the *American Journal of Gastroenterology*, the WATS technique demonstrated high interobserver agreement for Barrett's esophagus and associated dysplasia. Four pathologists evaluated 149 Barrett's esophagus slides containing no dysplasia, low-grade dysplasia, or high-grade dysplasia. The overall mean kappa value for all diagnoses for all pathologists was 0.86 (95% confidence interval: 0.75–0.97). “The results indicate that brush biopsy has the potential to be an adjunctive sampling tool to the forceps biopsy when evaluating Barrett's esophagus,” says Dr. Gross.

▼ Seth A. Gross, MD



### DEEP ENTEROSCOPY CAN BE PERFORMED WITH A CONVENTIONAL COLONOSCOPE

Causes of bleeding in the small intestine can be evaluated with capsule endoscopy. But to perform tissue sampling or therapeutic interventions requires deep enteroscopy with a balloon-assisted device or a spiral overtube, a procedure that is offered at NYU Langone but that is not available everywhere. This procedure is time-consuming and requires special endoscopes and accessories. However, when Dr. Gross and colleagues conducted a retrospective study of the effectiveness of deep enteroscopy using equipment available to all endoscopists, they found that performing the procedure with a standard colonoscope and through-the-scope balloon catheter resulted in diagnostic yields and depth on insertion on par with the procedure performed with specialized equipment. The study results appeared in November 2015 in *Gastrointestinal Endoscopy*.

“These findings suggest that more physicians across the country may be able to offer their patients deep enteroscopy using a standard colonoscope when clinically appropriate,” says Dr. Gross.



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## Collaboration with ACG

### **GI FELLOWSHIP PROGRAM DIRECTOR'S TOOLKIT AVAILABLE THROUGH NYU LANGONE COLLABORATION WITH ACG**

The Division of Gastroenterology and the Division of General Internal Medicine's Program for Medical Innovations and Research have developed an online toolkit for evaluating the clinical, communication, and professional skills of gastroenterology fellows. In collaboration with the American College of Gastroenterology (ACG), this invaluable resource—"A Gastroenterology Fellowship Program Director's Toolkit: Utilizing Objective Structured Clinical Examinations (OSCEs) to Teach and Evaluate Fellows' Performance"—will be made available online at the ACG Education Universe website and other venues in 2016.

▼ Elizabeth H. Weinschel, MD (right) with standardized patient (left) and gastroenterology fellow Max Pitman, MD (center)



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## New Recruits

### **BRIAN B. BOSWORTH, MD, APPOINTED CHIEF OF MEDICINE**

Dr. Bosworth brings to NYU Langone a wealth of experience and expertise, particularly in the treatment of complex IBD and in the training and education of the physician leaders of tomorrow. Dr. Bosworth previously served as associate professor of medicine at Weill Cornell Medical College, where he was a member of the Jill Roberts Center for Inflammatory Bowel Disease. His leadership roles included director of the Gastroenterology and Hepatology Fellowship Program, associate program director of the Medicine House Staff Training Program, director of the physiology and pathophysiology course for medical students, member of the Clinical Studies Evaluation Committee, and physician director of the Gastroenterology and Hepatology Clinic.

### **DAVID P. HUDESMAN, MD, NAMED DIRECTOR OF THE INFLAMMATORY BOWEL DISEASE PROGRAM, TISCH HOSPITAL AND AMBULATORY NETWORK**

Dr. Hudesman specializes in the treatment of complex Crohn's disease and ulcerative colitis and is conducting research on inflammatory bowel disease (IBD) and the gut microbiome. He serves on the Research Committee of the American College of Gastroenterology and on the Medical Advisory Committee and the Fellows Education Committee of the Crohn's and Colitis Foundation of America's New York City chapter. Under Dr. Hudesman's leadership, the IBD Program's clinical care, research, and education missions will be expanding and integrated across the entire NYU Langone practice network.

### **ALEC KIMMELMAN, MD, PHD, NAMED CHAIR OF RADIATION ONCOLOGY**

An internationally renowned clinician-scientist and radiation oncologist, Dr. Kimmelman and his laboratory have made seminal contributions to medicine's knowledge of the biological underpinnings of pancreatic cancer, the fourth-leading cause of cancer death in the United States.

## Education and Training

### NEW NIH T32 RESEARCH TRAINING GRANT FOR ASPIRING PHYSICIAN-SCIENTISTS IN GI CANCER

George Miller, MD, associate professor of surgery and cell biology, is principal investigator on a new T32 research training grant from the National Institutes of Health for physician-scientists in GI oncology. Dr. Miller is also director of the S. Arthur Localio Laboratory. The program will offer trainees a two-year hiatus from clinical activities to engage in intensive training in GI cancer research. Three new postdoctoral candidates will be enrolled annually. The trainees will be drawn from NYU Langone's clinical fellowship programs in medical oncology and gastroenterology and its residency programs in radiation oncology and surgery. Armed with this rigorous research training, these investigators will be prepared to lead the next generation of physician-scientists in translational research, as well as to investigate critical issues in the delivery of cancer care.

### NYU LANGONE TO HOST CME COURSE ON COMPLEX ISSUES IN IBD

The NYU Post-Graduate Medical School in conjunction with the Division of Gastroenterology and the Department of Surgery will host a continuing medical education (CME) course entitled "Focus on Complex Inflammatory Bowel Disease" on March 4, 2016 ([www.med.nyu.edu/cme/ibd](http://www.med.nyu.edu/cme/ibd)). Guest speakers from around the country will offer the most up-to-date perspectives on complex issues in the management of IBD, including:

- Pregnancy in IBD
- Transitioning from the pediatric to the adult IBD practitioner
- Managing IBD in elderly patients
- Using immunosuppressants and biologic agents for IBD in patients with a history of malignancy
- Managing dysplasia in IBD
- The microbiome and bacterial therapy
- Optimizing biologic therapy

### ADVANCED ROBOTICS COURSE

In June 2016, NYU Langone faculty will again teach a multispecialty CME course on robotic surgery, led by Mitchell A. Bernstein, MD, associate professor of surgery and director of the Division of Colorectal Surgery, Steven M. Cohen, DO, assistant professor of surgery, and Elliot Newman, MD, professor of surgery and section chief of GI Surgical Oncology. The course will have a special track on robotic general and colorectal surgery.

## Expansion

### PERLMUTTER CANCER CENTER EXTENDS REACH

NYU Langone's Laura and Isaac Perlmutter Cancer Center has increased the options for outpatient services, with the opening of a new location in the Midwood section of Brooklyn, NY. Current New York locations include sites in midtown Manhattan; Rego Park, in Queens; and Lake Success, on Long Island.

### NEW SERVICES FOR PATIENTS WITH PELVIC FLOOR DISORDERS

Collaboration continues to grow among several NYU Langone departments, including Surgery, Urology, Obstetrics and Gynecology, and Gastroenterology, creating a virtual center that provides comprehensive, leading-edge, and customized care to patients with disorders of the pelvic floor, as well as to patients with functional bowel and bladder disorders. One of the few initiatives of its kind in the tri-state area, the virtual center encompasses the multidisciplinary expertise of gastroenterologists, urogynecologists, urologists, colon and rectal surgeons, physical medicine and rehabilitation physicians, nurses, radiologists, and physical therapists. This integrated team strategy provides patients with a comprehensive, individualized approach to the evaluation and management of their complex conditions.

## Accreditation

### WEIGHT MANAGEMENT PROGRAM ACCREDITED FOR CARE OF ADULTS AND ADOLESCENTS

NYU Langone's Weight Management Program, whose surgeons' extensive experience in performing laparoscopic adjustable banding makes them among the best in the nation, earned accreditation from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP). The Weight Management Program is now designated a MBSAQIP Accredited Center—Comprehensive with Adolescent Qualifications, as awarded by the American College of Surgeons and the American Society for Metabolic and Bariatric Surgery.



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## Awards and Recognition

- **Russell S. Berman, MD**, associate professor of surgery, was elected to the executive council of the Society of Surgical Oncology. He was also elected U.S. chair of the International Surgical Oncology Curriculum Committee. He is chair of the Society of Surgical Oncology SCORE Committee and a member of the Surgical Oncology Board of the American Board of Surgery.
- **Jonathan Cohen, MD**, clinical professor of medicine, was named chair of the Training Committee for the American Society for Gastrointestinal Endoscopy.
- **Fritz François, MD**, associate professor of medicine and chief medical officer and patient safety officer for NYU Langone, received the HEAL Haiti 2015 Humanitarian Award from the Health Education Action League for Haiti.
- **Ioannis Hatzaras, MD**, assistant professor of surgery, is associate editor of *BMC Cancer*.
- **Seth A. Gross, MD**, associate professor of medicine and chief of Gastroenterology at NYU Langone's Tisch Hospital and ambulatory network, was named vice chair of Educational Affairs for the American College of Gastroenterology and incoming treasurer of the New York Society for Gastrointestinal Endoscopy.
- **H. Leon Pachter, MD**, the George David Stewart Professor of Surgery and chair of the Department of Surgery, was chosen by the executive committee of the Society of Black Academic Surgeons as the 2015 Honorary Fellow in recognition of both his efforts to promote diversity in the department and his contributions to surgery.
- **James S. Park, MD**, assistant professor of medicine, director of transplant hepatology, and director of the Asian Liver Health Program was named secretary general of the Korean American Medical Association of New York and New Jersey.
- **Mark B. Pochapin, MD**, the Sholtz/Leeds Professor of Gastroenterology and director of the Division of Gastroenterology, was named secretary of the American College of Gastroenterology (ACG). He is also a director and the treasurer of the ACG and American Society for Gastrointestinal Endoscopy's collaborative GIQuIC quality initiative. He is on the steering committee of the National Colorectal Cancer Roundtable, which is seeking to increase the use of colorectal screening with its "80% by 2018" initiative.
- **Pareesh C. Shah, MD**, clinical professor of surgery, vice chair of Quality and Innovation in the Department of Surgery, and chief of the Division of General Surgery, is on the Board of Governors of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and the society's appointed AMA House of Delegates Representative.



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## Appointment

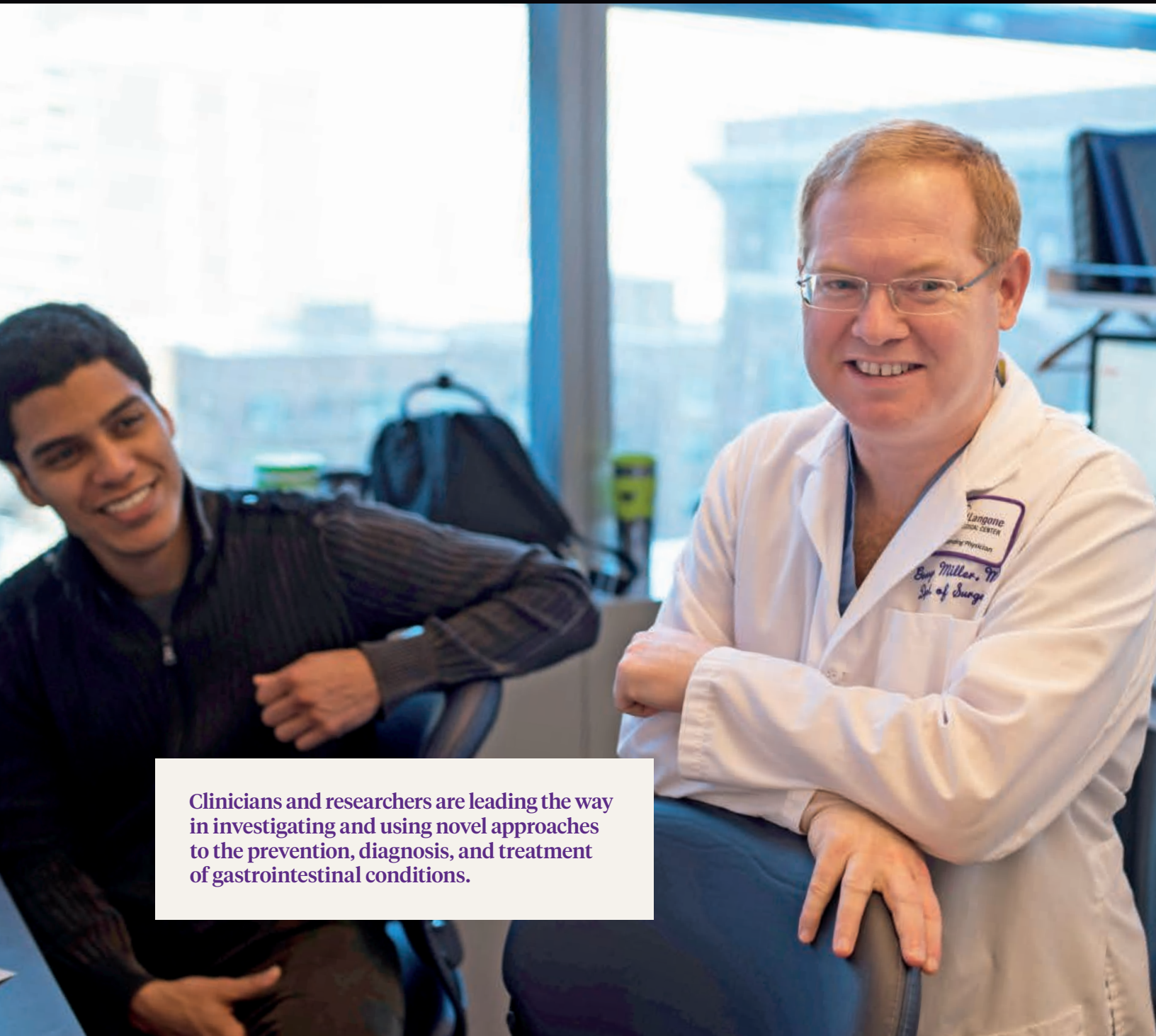
Martin J. Blaser, MD, the Muriel G. and George W. Singer Professor of Translational Medicine, professor of microbiology, and director of the Human Microbiome Program, was appointed chair of the Presidential Advisory Council on Combating Antibiotic-Resistant Bacteria, a new federal group that will advise the Department of Health & Human Services, the Department of Agriculture, and the Department of Defense on ways to detect, prevent, and control the growing threat from antibiotic resistance. The group met for the first time in September 2015.

### NYU LANGONE MEDICAL CENTER NEWS

## Groundbreaking Face Transplant Exemplifies Expertise and Multidisciplinary Collaboration

In August 2015, surgeons at NYU Langone Medical Center performed the most complex face transplant to date. The patient, former firefighter Patrick Hardison, had lost all of the skin around his entire face, scalp and neck, including his eyelids, ears, lips, and nose, while trapped in a burning building. Led by Eduardo Rodriguez, MD, DDS, the Helen L. Kimmel Professor of Reconstructive Plastic Surgery and chair of the Hansjörg Wyss Department of Plastic Surgery, the successful 26-hour operation—the first to include transplantation of eyelids capable of blinking as well as functional ears, among other milestones—involved more than 100 physicians, nurses, and technical and support staff. More than a dozen departments contributed to the planning and execution of the procedure, or to postoperative care.

# CREATIVE COLLABORATIONS



Clinicians and researchers are leading the way in investigating and using novel approaches to the prevention, diagnosis, and treatment of gastrointestinal conditions.

# Lessons from the Human Microbiome

Rapidly accumulating evidence shows that the trillions of microorganisms that reside in the body, outnumbering the body's cells by 10 to 1, have wide-ranging effects on health, making the human microbiome one of the most intense areas of biological research today.

Gut function relies on contributions from a variety of microbes whose populations fluctuate with environmental factors such as a changing diet, smoking, and use of antibiotics or other medications. Martin J. Blaser, MD, the Muriel G. and George W. Singer Professor of Translational Medicine, professor of microbiology, and director of NYU Langone's Human Microbiome Program, has pioneered this emerging field and attracted a multidisciplinary team of physicians and scientists to his program. Emerging research from this initiative is providing evidence that certain bacterial species are indeed associated with the relative risk of developing GI cancers.

## EXPLORING THE LINK BETWEEN THE ORAL MICROBIOME AND PANCREATIC CANCER

The association between periodontal disease and poor health has been understood for some time. Now, Jiyoung Ahn, PhD, RD, associate professor of population health and environmental medicine and associate director of Population Sciences for the Perlmutter Cancer Center, and colleagues are exploring the association between certain gram-negative oral bacteria and the risk of pancreatic cancer. By sampling the oral and pancreas microbiome through genomic sequencing in a case-control study, Dr. Ahn and her team have found that these same bacteria are also present in the human pancreatic duct.

To establish causality, Dr. Ahn's group is recruiting patients with pancreatic cancer who are having their pancreas removed and taking samples from the mouth and the pancreas to determine whether the same bacteria are found in both locations. This National Institutes of Health-supported study will be the first to use genomic sequencing techniques to comprehensively survey the bacteria found in the pancreas and the mouth of pancreatic cancer patients.

## FIBER, COLON CANCER, AND THE MICROBIOME

The usefulness of dietary fiber in cancer prevention has been controversial; some studies have suggested a high-fiber diet can be preventive, and others, such as the Harvard Nurses' Health Study, have found no statistically significant connection. But until now no one had considered that fiber feeds more than human appetites; it also feeds beneficial *Clostridia* microbes in the gut. And that could explain the long-elusive fiber-cancer prevention connection.

Unlike the dangerous species that produces botulism toxin, the beneficial *Clostridia* species uses fiber for fuel and, in the process, produces potentially anticarcinogenic short-chain fatty acids. Dr. Ahn hypothesizes that a diet high in fruits and vegetables provides an environment conducive to these beneficial bacteria, which may in turn reduce cancer risk. In a small pilot study with 82 participants, her research team established an association between greater fiber intake and a greater abundance of beneficial *Clostridia* and *Actinobacteria* species. The team also found a significant relationship between body mass index and overall gut microbiome composition in women but not in men. Overweight women tended to have less diversity and fewer beneficial microbes in their gut, suggesting a link between obesity, diet, and potential cancer risk. These findings, published in *PLoS One* in 2015, provide clues that dietary fiber might reduce cancer risk by feeding "good" bacteria.

The study complements Dr. Ahn's December 2013 report published in the *Journal of the National Cancer Institute*, which showed that patients with colon cancer have fewer beneficial bacteria and more harmful bacteria than people without the disease.

Now, Dr. Ahn has launched a prospective, five-year cohort study of 400 healthy adult volunteers from the New York City area with pilot funding from NYU Langone and the Perlmutter Cancer Center. The researchers will evaluate participants' diet and track the presence of microbial communities in the gut over time to evaluate disease risk. Ultimately, they hope to collect data from 10,000 to 20,000 individuals and ask whether the microbial composition in the gut differs in people who subsequently develop colorectal cancer.



## HUMAN MICROBIOME

▶  
Martin J. Blaser, MD,  
Lea Ann Chen, MD,  
and Ilseung Cho, MD



#### INVESTIGATING MICROBIOME CHARACTERISTICS IN IBD

The pathogenesis of inflammatory bowel disease (IBD) involves an aberrant immune response to intestinal microbiota, making microbiome research particularly relevant to this disease. NYU Langone researchers are conducting several studies not only on the role of the microbiome in disease onset but also on how gut microbiome characteristics might guide clinical decision-making.

People with IBD are at increased risk for *Clostridium difficile* infection, and they have a 20 to 30 percent infection recurrence rate. In collaboration with the Johns Hopkins School of Medicine, NYU Langone's Lea Ann Chen, MD, assistant professor of medicine, investigated the gut microbiome of children with *C. difficile* infection treated with fecal transplant. *C. difficile* infection was eradicated in all patients, both with and without IBD, and all patients had an immediate increase in gut bacterial diversity that matched their donor's bacterial diversity. However, by six months, patients with IBD had lost that diversity, whereas those without IBD retained it. "This difference in microbiome diversity may help explain the increased risk for recurrent *C. difficile* infection in patients with IBD," says Dr. Chen.

Dr. Chen and her colleagues are also collaborating with NYU Langone colorectal surgeons and pathologists to examine microbiome characteristics of patients with Crohn's disease. In a study of patients with Crohn's

disease undergoing ileocectomy, stool samples were collected before and after surgery. The researchers found a significant fluctuation in the gut microbiome of patients with Crohn's disease over time, whereas healthy controls retained a relatively stable gut microbiome despite day-to-day variations in diet. Further studies will attempt to determine the cause of the instability and whether it is indicative of IBD or secondary to disease activity or medications.

#### IDENTIFYING EPIGENETIC MECHANISMS IN THE PATHOGENESIS OF COLORECTAL CANCER

Funded by the Doris Duke Charitable Foundation, Ilseung Cho, MD, assistant professor of medicine, is leading a study investigating the role of the gut microbiome in the development of colorectal cancer. The hypothesis is that the microbiome may cause hypermethylation of specific DNA repair genes, impairing the body's ability to repair damaged cells and leading to precancerous and cancerous lesions. Dr. Cho and his colleagues are using cutting-edge technologies, such as the Illumina MiSeq and Infinium Methylation 450K platforms, to perform sequencing and microarray studies on cancer specimens. The goal is to identify epigenetic mechanisms by which microbes can trigger carcinogenesis. "Ultimately, studies such as this will improve our understanding of cancer biology and may lead to improved methods for detecting and even altering an individual's risk for colon cancer," says Dr. Cho.



# Innovative Technologies for Pancreatic Disease

NYU Langone surgeons and gastroenterologists combine evidence-based medicine, cutting-edge technologies, and high-quality tailored care for patients with pancreatic disease.

## PROMISING APPROACH FOR LOCALLY ADVANCED PANCREATIC CANCER

Approximately 40 percent of patients with pancreatic cancer present with locally advanced (stage III) unresectable disease, which is associated with poor survival despite treatment with radiation and chemotherapy. Irreversible electroporation (IRE), a nonthermal ablation modality, may offer some hope to these patients. NYU Langone is among the leading multidisciplinary pancreas programs studying the new IRE technology and its impact on outcomes in pancreatic cancer, and the program has recently begun using it.

With IRE, probes inserted into the tumor deliver pulsed, high-voltage direct current, which creates nano-sized pores in the cell's membrane and disrupts intracellular homeostasis. Because IRE does not rely on thermal energy (in contrast to radiofrequency ablation and microwave ablation), surrounding structures are unharmed.

## WEAKNESS EXPOSED IN COMMON CANCER GENE

NYU Langone researchers have found a biological weakness in the workings of the most commonly mutated gene involved in human cancers, known as mutant K-Ras, which they say can be exploited by drug chemotherapies to thwart tumor growth. In their study, the researchers discovered how a commonly used chemotherapy drug could be much more effective in killing K-Ras cells when the cells' ability to check their DNA for damage was blocked—by cutting off the activity of two related genes, H-Ras and N-Ras. The results were reported on February 10, 2014, in *Cancer Cell* by researchers in the lab of senior study investigator Dafna Bar-Sagi, PhD, professor of biochemistry and molecular pharmacology, and medicine, senior vice president and vice dean for Science, and chief scientific officer; and lead study investigator Elda Grabocka, PhD.

## CONFOCAL ENDOMICROSCOPY TO VISUALIZE PANCREATIC CYSTS

Pancreatic cysts detected on computed tomography or magnetic resonance imaging present a diagnostic challenge, largely because cytology from follow-up endoscopic ultrasound (EUS)-guided fine needle aspiration (FNA) has low predictive value for determining the type of cyst and the potential for progression. A new approach, needle-based confocal laser endomicroscopy (nCLE), could potentially be more useful for distinguishing different types of pancreatic cysts. In nCLE, a high-speed flexible microscope is threaded inside a 19-gauge needle during the EUS-FNA procedure, allowing for real-time visualization of the cyst wall. "Using EUS-FNA, we typically are able to capture only cells floating in the cystic fluid," says Seth A. Gross, MD, associate professor of medicine and section chief of Gastroenterology at NYU Langone's Tisch Hospital and ambulatory network. "Yet, we know that the cyst architecture is within the wall. With the endomicroscopy technology, we can potentially probe the wall, identify the cyst type, and determine the cyst's capacity to progress to malignancy, in real time."

Several small studies have shown promise for improved diagnosis and assessment of pancreatic cysts with the nCLE technology. Now, Dr. Gross and colleagues are participating in a multicenter pancreatic cyst registry, with the aim of further evaluating the effectiveness of the nCLE approach for differentiating between types of cysts and determining the cysts' potential to progress, or not progress, to cancer.



▲ Paresh C. Shah, MD

# Tackling Colon Cancer

NYU Langone gastroenterologists and GI surgeons are working to improve colon cancer screening technologies, increase screening rates by reaching out to underserved communities, and ensure that people diagnosed with colorectal cancer receive state-of-the-art care.

## NYU LANGONE TO PARTICIPATE IN INTERNATIONAL TRIAL TO COMPARE COLONOSCOPY TECHNOLOGIES

Although colonoscopy remains the gold standard in colon cancer screening and prevention, it is not a perfect test. Flat or hidden lesions and polyps can be missed. For this reason, endoscopy quality metrics and continuous enhancement of colonoscopy techniques are critical. Three innovative technologies to improve visualization during colonoscopy have been shown to reduce the rate of missed adenomas when compared separately with standard colonoscopy. But these technologies have not been compared to each other until now.

NYU Langone, which has expertise in all three new technologies, is one of four sites in an international four-arm comparison trial that aims to identify the effect on adenoma detection rates of the following devices, compared to standard colonoscopy:

### → Full-spectrum endoscopy

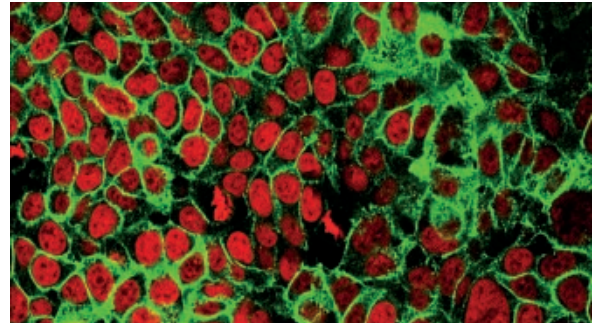
Traditional colonoscopy provides a 170-degree view of the colon. The new full-spectrum endoscopy technology allows for a 330-degree visual field. This expanded optical view enhances the endoscopist's ability to spot potentially hidden polyps and thus increase polyp/adenoma detection rates.

### → Endoscopic cuff-assisted colonoscopy

With endoscopic cuff-assisted colonoscopy, a soft, flexible projection is attached to the end of the colonoscope. During withdrawal of the colonoscope, the tiny flexible fingers of the cuff grip the colon wall to mechanically flatten folds and enhance visualization of potentially hidden polyps.

### → Endoscopic ring-assisted colonoscopy

With endoscopic ring-assisted colonoscopy, a device with silicone rings on a cuff is attached to the colonoscope. The rings stretch colon folds to allow for visualization of potentially hidden polyps.



▲ Colon cancer cells

“These technologies offer great promise in allowing us to do an even better job in the early detection and prevention of colon cancer,” says Mark B. Pochapin, MD, the Sholtz/Leeds Professor of Gastroenterology and director of the Division of Gastroenterology. “With this research, we will learn which, if any, of these innovations, is more effective.”

## EVALUATING SAME-DAY COLONIC IRRIGATION FOR COLONOSCOPY BOWEL PREP

Because many patients find the oral bowel preparation regimen for colonoscopy difficult to tolerate, NYU Langone researchers are investigating the use of same-day colonic irrigation prior to colonoscopy. The colonic irrigation is administered via a closed system in which warm water cleanses the colon.

With a grant from the Steven & Alexandra Cohen Foundation, Dr. Pochapin and colleagues are comparing colonic irrigation and a traditional oral preparation in terms of effectiveness and patient satisfaction. “Our hope is that colonic irrigation can become an option for patients who have difficulty tolerating the oral prep, cannot take the oral prep for medical reasons, or have an insufficient cleanse after taking the oral prep,” says Dr. Pochapin.



▲ Joseph E. Ravenell, MD, offering customers free blood pressure screenings at a Harlem barbershop

#### **A HAIRCUT AND A HEALTH MESSAGE: PROMOTING COLON CANCER SCREENING TO AFRICAN AMERICAN MEN**

Joseph E. Ravenell, MD, assistant professor of population health and medicine, focuses on barriers to care in the African American community. In his Men's Health Initiative, Dr. Ravenell demonstrated the effectiveness of nontraditional approaches to delivering important health messages, such as the need for colon cancer and hypertension screening, to black men living in low-income urban areas. For the study, funded by the National Institutes of Health and the Centers for Disease Control and Prevention, Dr. Ravenell and his team visited barbershops and places of worship in New York City. He chose barbershops because he remembered going there as a child with his father and listening as the men discussed a wide range of issues, including health concerns.

Dr. Ravenell's team raised awareness about colorectal cancer in 218 barbershops, churches, and mosques, reaching nearly 7,600 black men aged 50 and older and enrolling 1,191 participants into two randomized controlled trials.

More than 85 percent of colorectal surgeries at NYU Langone are performed with minimally invasive techniques—compared to a national average of only about 30 percent.

#### **NYU LANGONE IMPLEMENTS COMPREHENSIVE PERIOPERATIVE PROTOCOL TO IMPROVE COLORECTAL SURGERY OUTCOMES**

As part of an institution-wide initiative aimed at increasing safety, quality, and value for patients, the Department of Surgery along with a multidisciplinary team from across the Medical Center implemented an Enhanced Recovery after Surgery (ERAS) protocol for patients undergoing elective colorectal surgery. NYU Langone was among the first group of medical centers to incorporate the ERAS protocol into a "colon pathway" that is embedded in the electronic health record. By hardwiring the process, care of these patients starts before they enter the hospital and continues throughout their hospitalization. This creates greater consistency of care and helps to streamline documentation and analysis.

Following a successful pilot program, the ERAS initiative, spearheaded by Mitchell A. Bernstein, MD, associate professor of surgery and director of the Division of Colorectal Surgery, was extended to encompass all patients undergoing elective colorectal surgery by NYU Langone's colorectal surgeons, surgical oncologists, and general surgeons.

Colorectal surgery can cause physiological stress and postoperative bowel dysfunction, which can delay recovery. Using evidence-based best practices, the ERAS protocol guides clinical decision-making by all members of the multidisciplinary healthcare team at all stages (preoperative, intraoperative, and postoperative) to ensure the best possible outcomes. Patient education starts in the surgeon's office and continues prior to surgery, as nurses provide patients with information they need to actively participate in their own recovery. The pathway provides guidance to anesthesiologists about fluid management and use of anesthetic and pain medications aimed at optimizing recovery. Patients begin walking (with assistance at first) and eating early in the postoperative period.

"With the colon pathway, patients know what to expect from pre-hospitalization through recovery and discharge. We streamline their care, so that patients' days in the hospital are minimized," says Dr. Bernstein. Since the colon pathway was implemented, average length of stay and average 30-day readmission rates have been significantly reduced. Ultimately, the system is more efficient for care providers and a better experience for patients.

# Transforming the Lives of Patients with IBD with Innovative Care and Research

The multidisciplinary team of specialists in NYU Langone's Inflammatory Bowel Disease Program takes a personalized and compassionate approach to patient care.

In addition, clinical and basic science and research are contributing to the promise of more effective treatment strategies in the future.

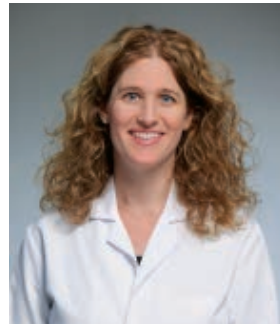
## NEW PROGRAM TO SMOOTH TRANSITION FROM PEDIATRIC TO ADULT CARE

The onset of inflammatory bowel disease (IBD), including Crohn's disease and ulcerative colitis, is generally between 15 and 30 years of age, meaning that patients who are diagnosed and start treatment under the care of a pediatrician must eventually switch to an adult healthcare provider. The transition from pediatric to adult care has been identified as a particularly vulnerable time for people with all types of chronic medical conditions.

"Adolescents have a lot going on in their lives as they leave home, go to college, and take on adult responsibilities, and beginning to manage their own healthcare in collaboration with unfamiliar care providers can be very stressful," says Lisa B. Malter, MD, assistant professor of medicine and director of the Inflammatory Bowel Disease Program at Bellevue Hospital Center. Dr. Malter and her colleagues at NYU Langone discussed how to optimize the transition from pediatric to adult care specifically for patients with IBD in an article published in April 2015 in *Practical Gastroenterology*.

"Without successful transitions, patients with IBD may get lost to follow-up or not feel confident about their new healthcare provider and may experience more disease flares or worsening of their condition," says Dr. Malter.

For this reason, NYU Langone's Inflammatory Bowel Disease Program features a transition-of-care initiative in which adult gastroenterologists collaborate with pediatric gastroenterologists, social workers, and nutritionists. Under the leadership of David P. Hudesman, MD, assistant professor of medicine and director of the IBD Program at Tisch Hospital and ambulatory network, these specialists set up a meeting with the patient and family to introduce them to the adult IBD specialist and provide the patient and family with the psychosocial support and essential health information needed to ease this transition.



▲ Lisa B. Malter, MD



▲ David P. Hudesman, MD

"We believe this is an effective approach to foster patient empowerment and ensure continuity of treatment for patients with IBD who are transitioning from pediatric to adult care," says Dr. Hudesman.

## PRECONCEPTION EDUCATION AND CARE TO OPTIMIZE MOTHER AND FETUS HEALTH DURING PREGNANCY

Because diagnosis of IBD in women most often occurs during the reproductive years, patient education about appropriate treatment during preconception and pregnancy is critical. Many women are concerned that their IBD treatment will pose a risk to a successful pregnancy. In fact, for women with IBD, maintaining disease remission is the most important factor in optimizing maternal health and pregnancy outcomes.

In addition to the transition-of-care initiative (described earlier), NYU Langone's IBD Program features a preconception care program, in which gastroenterologists, obstetricians, and other specialists work together to provide education and optimal treatment for IBD in the context of the potential effects of the disease and treatments on fertility, pregnancy, and overall health.

"Working in partnership with our patients, we emphasize the importance of using appropriate IBD treatments to achieve remission prior to conception and to maintain remission throughout pregnancy," says Dr. Hudesman.



#### HARNESSING THE MICROBIOME TO GUIDE CLINICAL CARE

Martin J. Blaser, MD, the Muriel G. and George W. Singer Professor of Translational Medicine, professor of microbiology, and director of the Human Microbiome Program, and other NYU Langone researchers are on the forefront of research on the interaction of the gut microbiome and IBD. Although it is known that IBD results from an abnormal immune reaction to microbes in the gut in genetically susceptible people, the exact pathogenic mechanisms and role of the microbiome are yet to be elucidated. NYU Langone researchers are seeking to understand both the role of the microbiome in disease onset and the impact of microbiome characteristics on IBD therapy. For example, Lea Ann Chen, MD, assistant professor of medicine, and her colleagues, David P. Hudesman, MD, and Lisa B. Malter, MD, are looking at the interaction between anti-tumor necrosis factor (anti-TNF) therapy and the gut microbiome in patients with IBD. “Early results suggest that the microbiome composition changes to reflect disease activity,” says Dr. Chen. With further investigation, the researchers hope to identify gut microbial predictors of clinical response to anti-TNF medications.



▲ Research in action in the laboratory of Martin J. Blaser, MD

#### PATIENTS AT NYU LANGONE OFFERED CLINICAL TRIALS OF PROMISING INVESTIGATIONAL IBD THERAPIES

Although the use of biologic therapies has revolutionized IBD treatment for many individuals, IBD remains a complex and challenging lifelong disease. At NYU Langone, numerous clinical trials on the prevention, diagnosis, and treatment of Crohn's disease, ulcerative colitis, and the potential complications of these conditions are under way. Three such clinical trials that are offered to patients at NYU Langone are those on:

- **Mongersen.** This oral medication for moderate Crohn's disease with a novel mechanism of action was shown in a phase II study to significantly increase rates of remission and clinical response compared to placebo. The drug, an oral SMAD7 antisense oligonucleotide, controls gut inflammation by keeping transforming growth factor  $\beta$  function normal. Phase III studies are under way.
- **Ustekinumab.** This biologic, an interleukin (IL)-12 and IL-23 inhibitor, which is FDA-approved for psoriasis, is under investigation in a phase III clinical trial for patients with refractory moderate to severe ulcerative colitis. The naturally occurring cytokines IL-12 and IL-23 are involved in inflammatory and immune responses.
- **EnteraGam®.** This prescription medical food is available for the management of irritable bowel syndrome and IBD. It binds to microbial components that upset the intestinal environment. A study is under way to evaluate EnteraGam in patients with mild Crohn's disease.

“By offering numerous clinical trials, we are seeking to provide our patients with the most promising investigational options—and, in doing so, to also contribute to our scientific knowledge and advancement in the treatment of IBD,” says Seymour Katz, MD, clinical professor of medicine and associate director of the IBD Program.

# Validating Outcomes of Bariatric Surgery and Embracing New Techniques

NYU Langone's Weight Management Program is one of the most highly regarded and experienced centers of its kind, with surgeons in the program performing a thousand bariatric surgeries annually.

## NYU LANGONE OFFERS MINIMALLY INVASIVE WEIGHT-LOSS SYSTEM

Adding to the array of options offered to patients, NYU Langone bariatric specialists, both surgeons and gastroenterologists, are offering a new, nonsurgical procedure. Christine J. Ren-Fielding, MD, professor of surgery and chief of the Division of Bariatric Surgery, was among the first physicians in the United States to be trained in the newly FDA-approved intragastric balloon system. In providing this innovative option, Dr. Ren-Fielding works with Bradley F. Schwack, MD, assistant professor of surgery, and gastroenterologists Seth A. Gross, MD, associate professor of medicine and section chief of Gastroenterology at Tisch Hospital and ambulatory network, and Violeta B. Popov, MD, PhD, assistant professor of medicine.

Offering the procedure to appropriate patients, NYU Langone is among the first centers in the country to offer the technique following the recent FDA approval, in which a soft silicone balloon is inserted endoscopically into the stomach and filled with saline solution. The intragastric balloon, which is removed after six months, is indicated for adults who are obese (BMI 30–40 kg/m<sup>2</sup>) and unable to lose weight through diet and exercise but who do not meet the criteria for bariatric surgery.

"For patients who are moderately obese, losing even 20 to 40 pounds can significantly improve their overall health," says Dr. Ren-Fielding.

Dr. Popov is one of the leading researchers investigating the efficacy of this procedure. She has presented on the endoscopic intragastric balloon system at national obesity and gastroenterology professional society conferences, and she is co-author of numerous publications, including a systematic review and meta-analysis of nine international randomized controlled trials, published online on

October 21, 2015, in *Surgery for Obesity and Related Diseases*. The results indicated that intragastric balloons are more effective than diet alone in inducing weight loss and should become an integral part of the multidisciplinary approach to the management of obesity.

## BARIATRIC SURGERY SHOWN TO IMPROVE NAFLD IN ADOLESCENTS

The prevalence of nonalcoholic fatty liver disease (NAFLD) is increasing among children and adolescents as a consequence of the rise in childhood obesity. NAFLD is considered to be the hepatic component of the metabolic syndrome.

In a study of adolescents 14 to 18 years of age undergoing laparoscopic adjustable gastric band surgery, George A. Fielding, MD, the J. Ira and Nicki Harris Family Professor of Surgery and Bariatric Medicine, and colleagues demonstrated significant improvements in NAFLD scores and metabolic syndrome rates. Published in the March-April 2015 issue of *Surgery for Obesity and Related Diseases*, the study included 155 adolescents, 56 of whom had evidence of fatty liver disease. One year after the surgery, the NAFLD fibrosis score (a validated noninvasive tool) had decreased by an average of 0.68, a significant improvement that was attributed to decreased weight and waist circumference. Of 17 patients who initially met the criteria for metabolic syndrome, only 1 continued to have this condition two years after surgery.

## ENDURING BENEFITS OF GASTRIC BYPASS

After more than two decades, Roux-en-Y gastric bypass remains one of the most widely used bariatric surgical procedures. Well-established outcomes after up to five years include significant weight loss and improvement in comorbidities such as type 2 diabetes. Published data on the sustainability of benefits beyond five years are limited. Using NYU Langone patient data, Dr. Ren-Fielding and associates analyzed outcomes in patients who had undergone Roux-en-Y gastric bypass 10 to 13 years earlier. Results of the study, published online in *Surgery for Obesity and Related Diseases* on April 23, 2015, indicated that weight loss was sustained, with a mean loss of excess weight of 58.9 percent. Improvements in comorbidities also endured for many patients. After 10 years, 46 percent of patients who had had presurgical hypertension, 46 percent of those who had had hyperlipidemia, and 58 percent of those who had had diabetes were in remission.

**22 pounds**

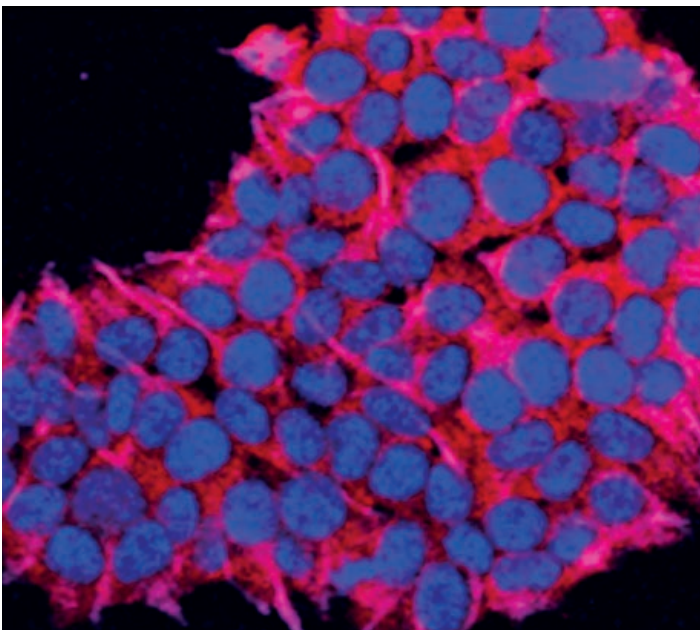
average weight loss  
after 6 months with  
intragastric balloon

**7 pounds**

average weight loss  
after 6 months with  
diet and exercise alone

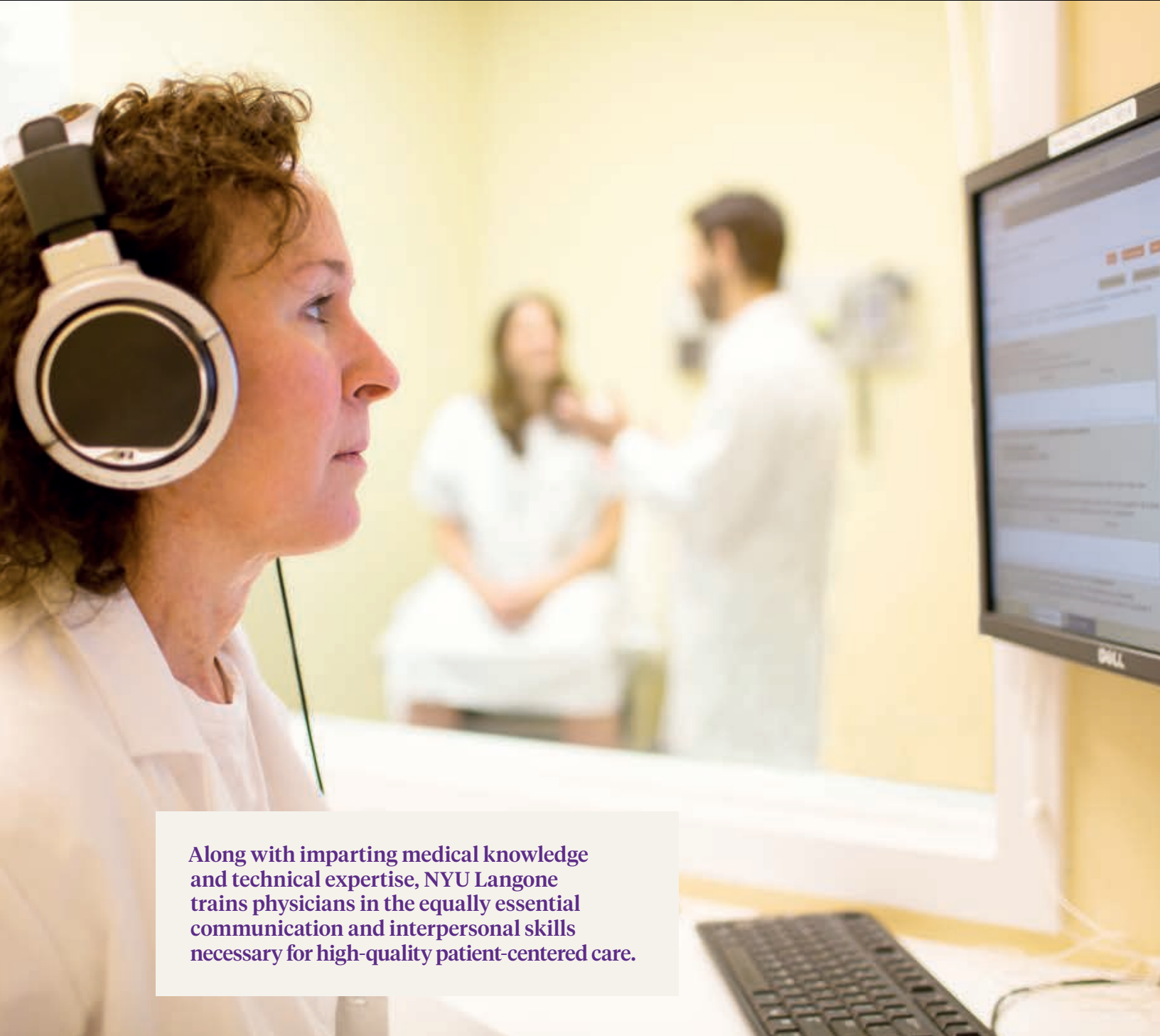
# Research Support Highlights

- American Gastroenterological Association–Takeda Pharmaceuticals International Research Scholar Award in Gut Microbiome Research  
11/1/15–7/31/18  
Lea Ann Chen, MD (Principal Investigator)  
*Microbial Predictors of Clinical Response to Biologic Therapy in IBD*
- American Liver Foundation Postdoctoral Research Fellowship Award  
7/1/15–6/30/16  
Alejandro Torres-Hernandez, MD (Principal Investigator),  
mentored by George Miller, MD  
*Role of GM-CSF in Liver Fibrosis*
- Bernard and Irene Schwartz Gastrointestinal Oncology Fellowship Program  
7/1/14–6/30/16  
Donnele Daley, MD (Principal Investigator)  
*The Role of Necroptosis in the Development and Progression of Pancreatic Cancer*
- Cancer Center Support Grant Developmental Projects Program (P30CA016087)  
9/1/15–8/31/16  
George Miller, MD (Principal Investigator)  
*Modulation of Tumor-Promoting Influences of  $\gamma\delta T$  Cells in a Phase Ib Clinical Trial Utilizing Novel Immunotherapy Regimens for Advanced Pancreatic Carcinoma*
- Doris Duke Charitable Foundation  
7/1/14–6/30/17  
Ilseung Cho, MD (Principal Investigator)  
*Hypermethylation as a Microbiome-Mediated Epigenetic Phenomenon in CIMP(+) Colorectal Cancers*
- Hirshberg Foundation for Pancreatic Cancer Research  
11/1/15–10/31/16  
George Miller, MD (Principal Investigator)  
 *$\gamma\delta T$  Cell Mediated Immune Suppression in Pancreatic Oncogenesis*
- National Institutes of Health (T32 CA193111-01)  
7/1/15–6/30/20  
George Miller, MD (Principal Investigator)  
*Research Training for Physician-Scientists in Gastrointestinal Oncology*
- National Institutes of Health (R01 CA164964)  
9/1/14–6/30/18  
Jiyoung Ahn, PhD (Principal Investigator)  
*Prospective Study of Oral Microbiome with Pancreatic Cancer*
- National Institutes of Health (R01 CA168611)  
4/1/13–3/31/18  
George Miller, MD (Principal Investigator)  
*Toll-like Receptor Regulation of Pancreatic Tumorigenesis*
- NYU Langone Medical Center Physician-Scientist Training Program  
7/1/15–6/30/16  
Alejandro Torres-Hernandez, MD (Principal Investigator),  
mentored by George Miller, MD  
*Syk Signaling in Liver Fibrosis*
- Society of Surgical Oncology Clinical Investigator Award  
4/1/15–3/30/17  
George Miller, MD (Principal Investigator)  
*Modulation of Tumor-Promoting Influences of  $\gamma\delta T$  Cells in Pancreatic Carcinoma in a Phase II Clinical Trial Utilizing Perioperative Gemcitabine + Nab-paclitaxel*



◀ A mesenchymal marker in pancreatic cancer cells

# UPHOLDING A TRADITION OF EXCELLENCE



Along with imparting medical knowledge and technical expertise, NYU Langone trains physicians in the equally essential communication and interpersonal skills necessary for high-quality patient-centered care.



# A National Leader in Medical Education

Supporting the overall mission of the NYU School of Medicine, the Division of Gastroenterology and the Department of Surgery have implemented inventive educational approaches, some of which have become national standards in medical education.

## **NYU LANGONE COLLABORATES WITH ACG TO MAKE GI FELLOWSHIP PROGRAM DIRECTOR'S TOOLKIT AVAILABLE**

The Division of Gastroenterology and the Division of General Internal Medicine's Program for Medical Innovations and Research have developed an online toolkit for evaluating the clinical, communication, and professional skills of gastroenterology fellows. As part of a collaboration with the American College of Gastroenterology (ACG), this invaluable resource—"A Gastroenterology Fellowship Program Director's Toolkit: Utilizing Objective Structured Clinical Examinations (OSCEs) to Teach and Evaluate Fellows' Performance"—will be made available nationally and internationally at the ACG's Education Universe website and other venues in 2016.

According to American College of Gastroenterology Medical Education (ACGME) requirements, simulation must be a part of the fellows' training in meeting key milestones and competencies. The toolkit includes challenging clinical scenarios and all needed instructions to allow users to organize and host OSCEs—a recognized form of educational simulation—for the fellowship programs at their institutions. Spearheaded by Elizabeth H. Weinshel, MD, professor of medicine, and colleagues in the Division of Gastroenterology, the toolkit was based on their successful series of OSCEs, designed to evaluate these key competencies of the GI fellows across New York City. As part of this effort, Dr. Weinshel and colleagues identified challenging clinical situations, such as delivering bad news to a patient or addressing a complication, as areas in which fellows could benefit from OSCE training. As part of the OSCE experience, fellows interact with actors,

who are rigorously trained to play the role of patients or healthcare providers. The standardized "patients" complete a scorecard on the fellows' performance, and faculty observers provide feedback on clinical knowledge and communication and interpersonal skills.

Dr. Weinshel and her colleagues have also created scenarios on obtaining informed consent, addressing health literacy issues, ensuring effective transitions of care in pediatric and elderly patients, and collaborating with other health professionals on issues such as inflammatory bowel disease (IBD) management in pregnancy, patient admission to the emergency department, and middle-of-the-night case management. Twenty clinical scenarios are included in the toolkit.

"In many ways, communication, interpersonal, and professional skills can be more difficult to evaluate and teach than clinical knowledge or technical proficiency in performing an endoscopy," says Dr. Weinshel. "But they are just as important."

## **A TRADITION OF LEADERSHIP IN SURGICAL EDUCATION**

NYU Langone is at the vanguard of surgical education, focusing as much on the art of surgery as on the craft. In 2007, Mark Hochberg, MD, professor of surgery, and H. Leon Pachter, MD, the George David Stewart Professor of Surgery and chair of the Department of Surgery, developed a curriculum for surgical professionalism and interpersonal communication education that rapidly attracted national interest from peer institutions. The Surgical Council on Resident Education (SCORE®), a consortium of U.S. surgical organizations that includes

the American Board of Surgery and the American College of Surgeons, incorporated the course in its national surgical curriculum, which is used by almost all American surgical residents. This weekly online core surgical curriculum delineates areas of competence expected of all surgical residents.

In a 2010 article published in the *American Journal of Surgery*, NYU Langone researchers led by Dr. Pachter and Dr. Hochberg showed that the communication and professionalism ACGME competencies could be successfully taught to surgical residents through a carefully crafted curriculum. Furthermore, results indicated that these newly learned competencies could positively affect surgical resident interactions with their patients.

The online professionalism modules address sensitivity to diverse populations and focus on the essential communication skills necessary to carry out professional responsibilities. Additional topics include admitting mistakes, delivering bad news, self-care, recognizing signs of stress, and team communication and respect. In the past, because of the pressure to become a masterful technical surgeon, surgical residents focused almost exclusively on surgical technique. This changed under Dr. Pachter's leadership, with the emphasis he placed on the equally important skill of clearly communicating with patients and their families. Dr. Hochberg sums up the Department of Surgery's view: "The goal of the curriculum is to make technically gifted surgeons equally adept in their patient communication."

#### GI FELLOWS BENEFIT FROM TRAINING IN EASING CARE TRANSITIONS FOR ADOLESCENTS WITH IBD

One component of the Gastroenterology Fellowship Program Director's Toolkit addresses competence in managing adolescent patients with IBD as they transition from pediatric to adult healthcare settings. Although pediatric GI fellows receive training in managing these transfers, GI fellows who are focused on adult care typically do not. To close this gap, the Division of Gastroenterology has initiated an OSCE session for GI fellows for managing the transitions of patients with IBD from pediatric to adult care.

This OSCE session presents GI fellows with simulated clinical scenarios such as the need to assess an adolescent or young adult patient's self-efficacy and explain the differences the patient will encounter in adult care. "Setting the patient's expectations is one of the most important things we can do, because the fear of the unknown is so great," says Lisa B. Malter, MD, assistant professor of medicine and director of the IBD Program at Bellevue Hospital Center.

A survey prior to the event indicated that GI fellows focused on adult care were less confident in their ability to counsel patients on transition of care and felt they would benefit from further training in this area. As part of the OSCE session, Dr. Malter and colleagues assessed the pediatric GI and GI fellows' performance during the OSCE. The results showed that all fellows performed equally well in the majority of metrics.

#### DURING TRANSITIONS TO ADULT CARE, PHYSICIANS NEED TO ASSESS:

##### The patient's knowledge of

- Medications
- Side effects
- Natural history of the disease
- Procedures performed

##### The patient's ability to

- Fill prescriptions
- Attend office visits alone
- Participate in care

##### The patient's familiarity with

- Support groups
- The impact of smoking, drugs, and alcohol
- The members of the treatment team
- The process of reaching out for help

#### PATIENT-CENTERED CARE CURRICULUM TO OPTIMIZE PHYSICIAN-PATIENT COMMUNICATION AND PATIENT EXPERIENCE

With patient-centered care a key component of NYU Langone's clinical mission, providing physicians with educational training in and resources for practicing the art of medicine is as important as training them in the science of medicine.

With support from entrepreneur and philanthropist J. Christopher Burch, Elizabeth H. Weinshel, MD, who is director of the Division of Gastroenterology's Faculty Development, Mentorship, and Leadership Program, and Sophie M. Balzora, MD, assistant professor of medicine and associate director of the program, created the Patient-Centered Care Curriculum for faculty. The curriculum consists of a number of educational activities, including lectures, roundtables, and educational OSCE

>90%

of surgical residents perform clinical or basic science research

93%

of graduating surgical residents go into fellowships

simulation sessions. One OSCE session, for example, was structured as part of an IRB protocol and was designed such that faculty interacted with actors as "standardized patients" in challenging clinical scenarios such as having to tell a patient she had colon cancer or needing to explain a procedure-related complication. The faculty members not only received feedback from the trained "patients" but also were able to review and evaluate their own performance privately, via videotape. Preliminary study results indicated that participants found the exercise beneficial for their clinical practice skills and also pointed to areas in need of further faculty development.

Mark B. Pochapin, MD, the Sholtz/Leeds Professor of Gastroenterology and director of the Division of Gastroenterology, was among the first faculty members to go through the exercise. "Reviewing my clinical performance was a powerful experience for me," says Dr. Pochapin. "After 20 years of practicing medicine, this was the first time I had ever seen myself from the perspective of the patient."



▲ Ambulatory Care Center



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# Locations

as of December 2015

- 1**  
NYU Langone  
Gastroenterology  
Ambulatory Care Center  
240 East 38th Street  
New York, NY
- 2**  
NYU Langone Hepatology  
530 First Avenue, Suite 4J  
New York, NY  
  
NYU Langone  
Colorectal Surgery  
530 First Avenue, Suite 7V  
New York, NY  
  
NYU Langone General  
and Pancreas Surgery  
530 First Avenue, Suite 6C  
New York, NY
- 3**  
NYU Langone Bariatrics  
Surgical Associates  
530 First Avenue, Suite 10S  
New York, NY  
  
Services also at: locations  
**6; 12; 15; 21; 22** and  
3453 Richmond Avenue  
Staten Island, NY  
  
682 Forest Avenue  
Staten Island, NY  
  
745 Route 17M  
Monroe, NY  
  
58 Medical Park Drive  
Pomona, NY
- 4**  
Laura and Isaac Perlmutter  
Cancer Center  
160 East 34th Street  
9th Floor  
New York, NY
- 5**  
Joan H. Tisch Center  
for Women's Health  
207 East 84th Street  
New York, NY
- 6**  
Preston Robert Tisch  
Center for Men's Health  
555 Madison Avenue  
2nd Floor  
New York, NY
- 7**  
NYU Langone at Trinity  
111 Broadway  
2nd Floor  
New York, NY
- 8**  
NYU Langone Ambulatory  
Care West Side  
355 West 52nd Street  
New York, NY
- 9**  
NYU Langone Transplant  
403 East 34th Street  
3rd Floor  
New York, NY
- 10**  
NYU Langone  
East 35th Street Practice  
245 East 35th Street  
New York, NY
- 11**  
NYU Langone  
Gastroenterology  
Associates—  
480 Second Avenue  
480 Second Avenue  
New York, NY
- 12**  
NYU Langone  
at Columbus Medical  
97-85 Queens Boulevard  
Rego Park, NY
- 13**  
NYU Langone  
Great Neck Medical  
488 Great Neck Road  
Great Neck, NY
- 14**  
NYU Langone  
Nassau Gastroenterology  
Associates  
1000 Northern Boulevard  
Great Neck, NY
- 15**  
NYU Langone  
Brooklyn Gastroenterology  
Associates  
1630 East 14th Street  
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and Ambulatory  
Surgery Center  
1630 East 14th Street  
Brooklyn, NY
- 16**  
NYU Langone  
Levit Medical  
1220 Avenue P  
Brooklyn, NY
- 17**  
NYU Langone  
Huntington Medical Group  
180 East Pulaski Road  
Huntington Station, NY



- 18**  
NYU Langone Brooklyn  
Gastroenterology Associates  
124 East 43rd Street, Suite 1  
Brooklyn, NY
- 19**  
NYU Lutheran Medical Center  
150 55th Street  
Brooklyn, NY
- 20**  
NYU Lutheran Associates—  
Medical Arts Pavilion  
8714 Fifth Avenue  
Brooklyn, NY

- 21**  
NYU Langone at  
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101 Broadway  
Suite 301  
Brooklyn, NY
- 22**  
NYU Lutheran Associates—  
Staten Island Surgery  
65 Cromwell Avenue  
Staten Island, NY

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\*Numbers represent FY15 (Sept 2014–Aug 2015)

**1,069**  
Total Number of Beds

**1,469**  
Full-Time Faculty

**611**  
MD Candidates

**3,800**  
Publications

**77**  
Operating Rooms

**1,392**  
Part-Time Faculty

**79**  
MD/PhD Candidates

**550,000**  
Square Feet of Research Space

**38,554**  
Patient Discharges

**2,627**  
Voluntary Faculty

**272**  
PhD Candidates

**\$178,000,000**  
NIH Funding

**1,216,428**  
Hospital-Based Outpatient Visits

**128**  
Endowed Professorships

**400**  
Postdoctoral Fellows

**\$295,000,000**  
Total Grant Funding

**5,766**  
Births

**2,740**  
Physicians

**1,063**  
Residents and Fellows

**2,900,000**  
Faculty Group Practice  
Office Visits

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Registered and Advanced  
Practice Nurses

**730**  
Allied Health Professionals







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