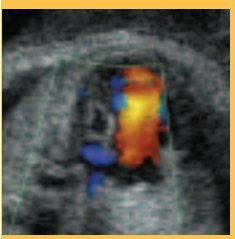
fall 2005

healthpoints

ALL THE POSSIBILITIES OF MODERN MEDICINE

Columbia University Medical Center
Department of Surgery
NewYork-Presbyterian

Also In This Issue:



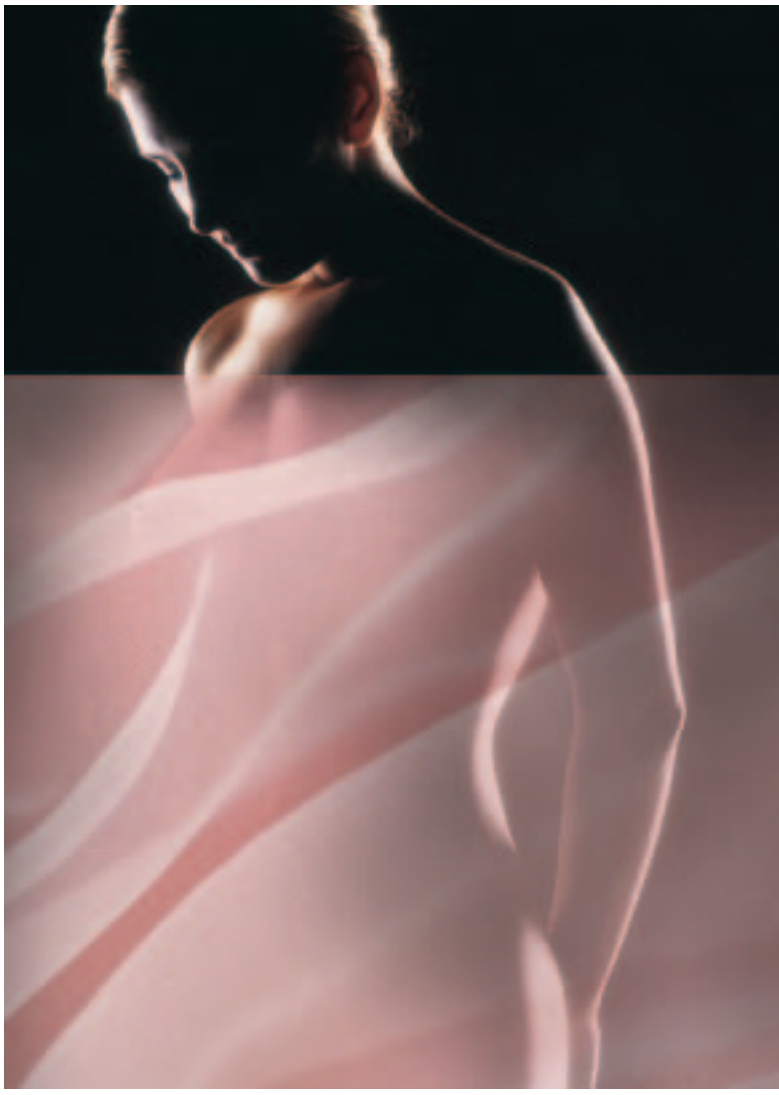
Breast Reconstruction

Patients have a new cosmetic option

When a woman is diagnosed with breast cancer, her first concern is to get rid of the tumor and be free of the disease. But as she discusses her treatment with her physician, she will also want to know what type of surgery is likely to give her the best cosmetic results.

A new discipline called oncoplastic surgery addresses both of these concerns, combining the goals of oncology (treatment of cancer) with plastic surgery (reconstruction of the breast).

"As surgeons, we want to take out as much tissue as possible to be sure we've gotten all the cancer," explains **Laura A. Klein, MD**, *Instructor in Clinical Surgery* at Columbia University College of Physicians and Surgeons. "At the same time, we want to leave as much tissue as possible in order to conserve the breast. Both aims can be achieved with this approach."



Dr. Klein is among a select group of surgeons trained in this emerging field. "We want to provide the patient with the best possible outcome, and also ease the emotional trauma associated with breast cancer surgery," she says.

The two options for breast cancer patients are a mastectomy that removes the entire breast, and a lumpectomy that only removes the tumor, leaving the

continued on page 2

lymph nodes and surrounding breast tissue in tact.

Traditionally, women with smaller breasts (B-cup or less) have chosen mastectomy followed by cosmetic reconstruction because they felt this would give them the most natural appearance. Many assumed that a lumpectomy would not leave them with enough breast tissue for cosmetic purposes. After surgery to excise the cancer, mastectomy patients may receive a prosthetic breast implant. Or they may undergo a procedure that uses a portion of their own abdominal fat and muscle to fashion a replacement breast.

Patients requiring extensive surgery to remove their cancer may have immediate reconstruction. This cosmetic repair is usually performed by plastic surgeons at NewYork-Presbyterian.

Left, a woman diagnosed with DCIS. Right, the patient after oncoplastic surgery.

ONCOPLASTIC SURGERY

Today, Dr. Klein is able to offer women requiring more moderate surgery immediate cosmetic repair. Patients with a non-invasive cancer called DCIS (ductal carcinoma in situ), in particular, can benefit from her innovative approach.

DCIS is the most rapidly growing breast cancer diagnosis affecting nearly 60,000 women each year. DCIS patients have a nearly 100 percent survival rate after their cancer is surgically removed.

More news for women with DCIS

In recent years, surgeons have recommended sentinel node biopsy to patients with a non-invasive breast cancer called DCIS (ductal carcinoma in situ). The idea was to remove the lymph nodes closest to the tumor, then check to see if any cancer cells were present. If these nodes tested positive in the pathology lab, the patient faced another round of surgery to remove additional nodes under the armpit. An oncologist might then recommend chemotherapy or hormonal treatment, or both. All of these things were done with the goal of keeping the patient cancer-free and giving her the best possible outcome. But researchers at New York-Presbyterian and Columbia University Medical Center have asked the $64,000 question: Does this approach really help?

Mahmoud B. El-Tamer, MD, *Associate Professor of Clinical Surgery and Director of the Breast Fellowship Program*, followed the progress of DCIS patients who had their axillary nodes removed in the customary way. All nodes that were considered tumor-free by the conventional methods of staining, were re-examined using newer methods. In this study, the incidence of finding foreign cancer cells in the axillary lymph nodes increased by six percent. Yet a finding of positive cells in the lymph nodes had no long-term effect on the patients' life expectancy. The bottom line, says Dr. El-Tamer, is that most women with DCIS will not benefit from this approach.

As a result of El-Tamer's work, the practice of assessing axillary lymph nodes in women with DCIS has been reconsidered. "The old staining methods showed positive nodes in one percent of these cases," adds Dr. El-Tamer. "We now have much more precise ways to identify abnormal cells that have spread to the lymph nodes. Some studies have found positive nodes in 23 percent of DCIS patients. But our research shows that these cells will have no impact on the woman's long-term survival."

A surgeon extracts a sentinel node for biopsy.

"Our goal is always the safety of the patient," says Dr. El-Tamer. "We believe that sentinel node biopsy surgery should be reserved for a limited group of DCIS patients." Sentinel node biopsies should not be routinely performed on all women with DCIS, Dr. El-Tamer notes. It may lead to over-treatment and may also result in unnecessary trauma for the patient.

Finding even one cancer cell in the lymph nodes is significant if a woman has invasive breast disease, however. When treating DCIS patients, sentinel node biopsy should be reserved for those with any question of invasive disease, those with a palpable lump, and those with extensive DCIS that may require removal of the entire breast.

But since DCIS is distributed throughout the ductal system, the surgeon may have to take out a substantial amount of breast tissue. Dr. Klein uses a variety of reconstructive techniques to ensure that these patients will look as good as they did before their cancer surgery. After removing the DCIS, she artfully works with the patient's remaining tissue to create a natural looking breast. "The beauty of this approach is that it can be accomplished without the aid of implants and without taking tissue from somewhere else in the body," she says.

One of Dr. Klein's patients was recently diagnosed with DCIS in the lower half of her breast. The problem with removing tissue from this area is that the woman is often left with an indentation or deformity around her scar. Using a technique called the "advancement flap," Dr. Klein rotated the patient's own breast tissue to fill in this gap. "It takes about fifteen minutes longer to suture the underlying layers of tissue together, but the end result is worth it," she says. At the same time, Dr. Klein was able to give the woman a slight breast lift.

When necessary, a plastic surgeon can also reshape the woman's other breast to give her a more balanced appearance.

Dr. Klein has been performing this innovative surgery since 2003 with the elegant stitches of a Paris couturier. "My aunt was a good seamstress so this skill runs in my family," she says. "And I'm happy to see my patients so pleased with their results."

Increasingly, cancer patients have begun to ask about breast conservation. Oncoplastic techniques are a welcome addition to the surgeon's arsenal. Says Klein, "Our goal is not only to remove the cancer but to keep the woman whole while she's moving toward her cure."

For more information on oncoplastic surgery, call 212.305.0456

Putting People First

Diane Amato creates a healing community

Diane Amato prepares a patient for upcoming heart surgery.

As Administrator of Columbia's Division of Cardiothoracic Surgery, **Diane Amato** plays a dual role: She uses her business acumen to keep the office running smoothly, streamlining billing procedures, and managing a staff of 22 health care professionals. In addition, she serves as an outreach coordinator for **Craig Smith, MD,** Chief of the division, providing medical information, practical support, and a good old-fashioned dose of TLC for all those in his care. "This is a passion, not a job," she says. "People are my number one priority."

Columbia's heart surgeons have a reputation for innovation and are among the best in the nation. "We also treat our patients like family members," Amato adds. "We're available 24 hours a day to guide them through some of the most challenging moments of their lives."

On orientation day, Amato presents patients with a tote bag and a navy warm-up suit to be worn on the morning of their surgery. Patients also receive an information packet, with a DVD explaining their procedure. Amato then tells patients and their families what to expect from surgery. From that moment on, she's available to answer questions, field problems, and provide moral support.

Cynthia Agerup was recovering from a hysterectomy when she found out that her husband, Dennis, needed surgery for an aortic aneurysm. "Dennis was only 55 and had no symptoms, so we were in a state of shock," she says. "Dr. Smith calmly explained our options then introduced us to Diane, who saw that I was teary. She put her arms around me and from that moment, I knew I had a friend."

A few days after Dennis Agerup was discharged, Cynthia was concerned about her husband's response to a blood-thinning medication. Amato immediately set up an appointment with Columbia **Physician Assistant, Joseph Costa**. "You can stay here for monitoring, or go home and call me if you feel worse," Costa told the Agerups, "I'll meet you here any time, even if you call at 3 AM."

"This gave us tremendous peace of mind," Cynthia says. "In the last five years I'd dealt with a lot of hospitals and whenever I needed help, I got stuck with a telephone recording."

Amato also referred the Agerups to the *Heart-of-Hearts* support group run by Columbia health educator **Lisa Mainieri, MPH, MSW.** "We talk about the psychological effect of heart surgery, as well as nutrition, exercise, and other activities post-op," says Mainieri.

On the one-year anniversary of Dennis Agerup's bypass, Cynthia had this to say: "Diane and all the doctors at Columbia gave us something money can't buy. At every turn, they offered us their hearts."

For more information about the Division of Cardiothoracic Surgery, call 212.305.8312

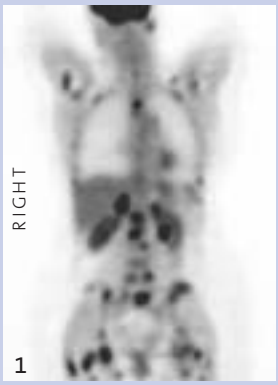
Advancing Women's Health
PET for Breast, Cervical, and Ovarian Cancer

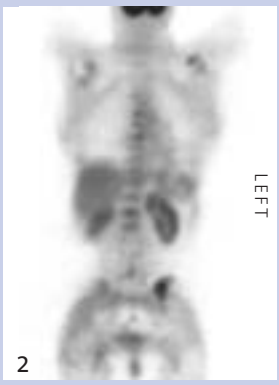
For many women, the greatest health fear is developing a "women's disease," such as breast, cervical, or ovarian cancer, as they have witnessed their mothers, sisters, and friends battling these conditions. According to the American Cancer Society (ACS), breast cancer is the most common form of cancer for women, with 211,240 new cases expected in 2005. Cervical cancer ranks fourth at an estimated 40,880 new cases. Ovarian is less common, with 22,220 estimated cases for 2005, but accounts for greater than 50 percent of gynecologic cancer deaths.

Fortunately, advances in diagnosis and treatment have improved the overall survival rates for these malignancies. The ACS estimates that in 2005 more women will die from lung cancer than from breast, cervical, and ovarian cancer combined. As with most cancers, early detection and accurate staging are critical to successful treatment. PET and PET/CT can play a key role in determining the extent of these diseases as well as gauging the response to therapy.

PET, or positron emission tomography, is a nuclear imaging technique. Prior to undergoing a PET scan, patients receive a tracer known as FDG that the body easily absorbs and eliminates. This tracer highlights glucose (sugar) consumption within the body. In order to sustain their rapid growth, tumor cells consume more glucose for energy than healthy cells. These areas of increased consumption appear as "hot spots" on the PET scan.

PET technology has recently been combined with CT imaging into a single, dual-purpose scanner. CT (computed tomography) provides detailed information about the body's structure or anatomy. "By combining two imaging modalities in a single scanner, PET/CT allows us to view the body in two ways at once," says **Ronald L. Van Heertum, MD,** *Director*, Columbia Kreitchman PET Center and *Professor of Radiology*, Columbia University College of Physicians and Surgeons. "PET reveals metabolic activity or glucose consumption, while CT captures the anatomical detail. This information helps us to better determine whether a suspicious spot is an active tumor site."





BREAST CANCER

In the summer of 2004, a 65-year-old woman with metastatic breast cancer was referred for a PET scan. The scan (image 1) **revealed diffuse metastases to the bone, as well as bilateral metastases to the adrenal glands. A follow-up scan taken a year later** (image 2)**, showed significant resolution following chemotherapy.**

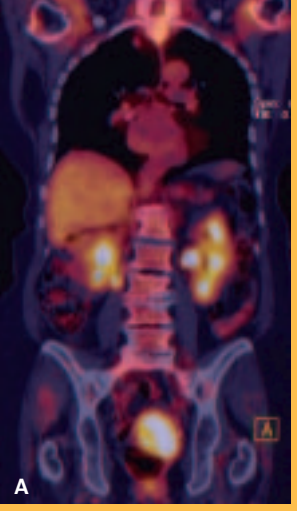
BREAST CANCER

"PET/CT is a very good tool for detecting metastatic breast cancer," explains **Mahmoud B. El-Tamer, MD**, *Associate Professor of Clinical Surgery*. "When compared to the current modality of CT scan alone, PET/CT appears to be superior in discerning chest metastases and equally efficient in finding metastases to the bone and abdomen."

"PET/CT is also quite reliable for detecting a recurrence of breast cancer," Dr. El-Tamer continues. "If a spot appears on a breast mammogram or in the chest wall after mastectomy, a follow up PET/CT scan may help us to discriminate between a malignancy versus scarring or other radiation changes."

Since PET and PET/CT are more expensive than mammography, and since they are less effective at detecting microscopic disease or small tumors, they are not typically used as screening or initial diagnostic tools. However, for assessing larger tumors (two centimeters or greater), PET may be very reliable as it offers 92 percent sensitivity and 93 percent specificity. Sensitivity is the ability to detect disease, while specificity is the ability to determine whether a suspicious lesion is malignant (cancer) or benign.

PET and PET/CT can also be used to assess response to therapy. For example, if a patient is undergoing chemotherapy prior to surgery, the physician may order a PET/CT scan to determine whether the chemo is having an impact on the disease. Based on those findings, the treatment plan may then be adjusted. In the future, Dr. El-Tamer hopes new tracers will be developed enabling PET to highlight smaller levels of disease—allowing for even earlier detection, more



CERVICAL CANCER

PET/CT scan (image A) **of an 85-year-old female reveals a very FDG-avid (high glucose consumption) cervical tumor. The tumor extends into the body and fundus (base) of the uterus.** Image B **shows a transverse (cross-section) view of the tumor.**

accurate staging, and perhaps even use of PET as a diagnostic tool.

CERVICAL CANCER

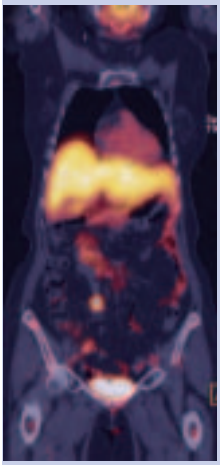
The Centers for Medicare and Medicaid Services (CMS) recently approved PET as an imaging modality for cervical cancer. As with breast cancer, PET and PET/CT is most often used with cervical cancer patients to evaluate for metastases. Once the disease has been diagnosed through a Pap test followed by a cervical biopsy, a PET or PET/CT scan is used to determine if the cancer has spread, and to what areas.

"PET/CT is very beneficial. It is now being incorporated into initial evaluation of advanced cervical cancer," says **Bhavana Pothuri, MD,** *Assistant Professor of Obstetrics & Gynecology* in the Division of Gynelogical Oncology. "Traditionally, we relied on CT scans alone to look for metastases, but those scans may not pick up lymph node metastases, especially if they are less than one centimeter in size. When we overlap the CT images with the PET scan, we can better identify tumor sites. Based on what we learn, we can adjust the treatment plan, for example, extending the radiation field if needed. We can also utilize scans after chemotherapy or radiation therapy to assess the response to therapy. PET/CT is also helpful in evaluating distant disease prior to performing pelvic exenteration, a radical curative surgery for recurrent cervical cancer."

Since combined PET/CT is a relatively new imaging technique, very little data exists regarding its sensitivity and specificity for cervical cancer. Dr. Pothuri is working on a research study of FDG-PET/CT scans validated by laparoscopic pelvic lymphadenectomy and para-aortic lymph node sampling to detect lymph node positivity in advanced cervical cancer. "If PET/CT can be demonstrated to provide highly accurate information on lymph node status," Dr. Pothuri says, "it may help to better define radiation treatment fields and eliminate the need for surgical biopsies."

OVARIAN CANCER

While a relatively rare disease, accounting for only three percent of cancers in women, ovarian cancer unfortunately ranks fourth as a cause of female cancer deaths. This high morbidity level has changed little over recent years and stems largely from the fact that the disease is often not detected until it has reached an advanced stage. As with breast and cervical cancer, the hope is that better imaging techniques will contribute to earlier diagnoses and more accurate staging, thereby leading to more tailored treatment plans and improved patient outcomes.



OVARIAN CANCER

A PET/CT scan of a 61-year-old woman reveals a primary ovarian tumor with multiple metastases. The patient had a "central line," or IV placed in the chest, which appears as a hot spot on the scan.

In women recently diagnosed with ovarian cancer, PET/CT is typically used as a staging tool to determine the extent of disease. It can also be employed to search for recurrent disease. "The dual nature of a PET/CT scan is of particular benefit for ovarian cancer patients, since the ovaries are relatively small and located in a part of the body with a complicated anatomy," says Dr. Van Heertum.

A Johns Hopkins Study presented at the Radiological Society of North America in 2002 found that PET/CT was better able to locate ovarian metastases than PET alone. The study looked at 28 patients with suspected metastases to the abdomen. The PET/CT scan found 14 true positives, 10 true negatives, and no false positives—versus two false positives for PET alone. The University of Pittsburgh School of Medicine found similar benefits for PET/CT versus CT in a study of 15 women with ovarian cancer. In 80 percent of cases (12 patients), PET/CT detected malignancies that CT or ultrasound alone did not find. These findings in turn altered the treatment plan for 11 patients.

The Centers for Medicare and Medicaid Services have approved PET scanning for all cancers, including ovarian, as part of its forthcoming national PET registry. To learn more about PET for breast, cervical, ovarian, or other forms of cancer, please contact the Columbia Kreitchman PET Center at 212.923.1555 or info@columbiapet.org

Ultrasound: A New Stethoscope for the

Ultrasound has made its way into the operating room, helping surgeons to locate especially small or hard-to-find tumors. This technology facilitates a "search and destroy" approach to cancer—allowing the surgical team to first identify, then treat, areas where the disease has spread.

Any woman who has had pre-natal ultrasound to check the condition of her baby is familiar with this technique. High-frequency sound waves—pitched too high for the human ear—are bounced off the patient's internal organs. Their echo is then used to create a picture on a nearby monitor.

Radiologists generally use ultrasound to diagnose a tumor. "Yet once surgeons get inside the body, we can obtain even more accurate information," says **Beth A. Schrope, MD, PhD**, *Assistant Professor of Surgery* at Columbia University College of Physicians and Surgeons. "We use even higher frequencies to obtain higher resolution. And we're also right on top of the organs we need to assess."

Intra-operative ultrasound is so precise it can pinpoint tumors that have failed to show up on more conventional tests such as magnetic resonance imaging scans (MRIs). It's especially useful in detecting tumors located in the stomach wall and those buried deep within the abdominal cavity. "The bowel can obscure our view of other organs," Dr. Schrope explains, "but we can move it out of the way and get the ultrasound probe behind it. This gives us a much clearer view." Surgeons obtain so much information using ultrasound, she adds, that it makes an operation "safer and more complete."

As Columbia's expert in intra-operative ultrasound, Dr. Schrope routinely uses this tool to investigate cancers of the liver, pancreas, colon, and kidney. "Ultrasound helps us to tell the difference between normal and abnormal tissue," she says.

(above) **Dr. Schrope in surgery,**
(left) **ultrasound shows a pancreatic lesion.**

In some cases, ultrasound can be a substitute for human touch. During minimally invasive operations, surgeons work with very small surgical instruments and are thus unable to reach in and feel a tumor. "Ultrasound then becomes an extension of our fingers, allowing us to get a better sense of a tumor's size and shape," says Dr. Schrope.

Ultrasound also guides the surgeon through potential problem areas. It can show, for example, if a tumor is too close to a blood vessel to be removed safely.

In addition, ultrasound helps the surgical team to deliver local therapies. "Using ultrasound we can zero in on areas where a cancer has spread. Then we can destroy these cells using electricity, radiofrequency ablation, or cryotherapy (freezing of the tissue)," says Dr. Schrope. "This way, we can save the patient a second treatment later on."

Ultrasound can help the surgeon repair a portion of the patient's anatomy. Dr. Schrope recently used it to assess a faulty pancreatic duct. "If the duct is scarred, it won't drain properly and the enzymes back up into the pancreas, causing inflammation," she says. "Ultrasound showed me the best place to create an alternative route for drainage."

Recently, ultrasound played a crucial role in the treatment of a 60 year-old

Surgeon

Intra-operative ultrasound is so precise it can pinpoint tumors that have failed to show up on more conventional tests such as magnetic resonance imaging scans (MRIs).

woman with an endocrine tumor. This woman was operated on at another institution, but surgeons couldn't locate her cancer, so they referred her to Dr. Schrope. "It can be a 'Where's Waldo?' task, trying to locate these tumors if they're very small," she explains. "With intra-operative ultrasound, you have a much better chance of succeeding and then getting the cancer out."

Ultrasound is a no-risk, all-gain proposition for the patient, she adds. "It's not based on ionizing radiation like X-rays. In fact, it's so safe it's used on fetuses. The more surgeons use it, the more we will expand its long list of benefits."

For more information on the uses of intra-operative ultrasound, contact Dr. Schrope at 212.305.9441

Overcoming Anal Incontinence

New hope for patients

Most people are blissfully unaware of their pelvic floor and anal sphincter muscles—as long as they're working normally. These muscles provide valuable support for the rectum and the bladder, as well as the female reproductive organs. When they weaken, however, individuals may suffer from an embarrassing condition called anal incontinence. Symptoms range from the occasional involuntary passing of gas to daily fecal soiling. In extreme cases, people are afraid to leave their homes for fearing of having an accident.

"These patients are often afraid to confide in their spouses or their doctors," says **Daniel Feingold, MD**, *Assistant Professor of Surgery* at Columbia University College of Physicians and Surgeons. "Yet many can be helped by relatively simple therapies, and the majority will not require surgery."

Relief is now only a phone call away, at NewYork-Presbyterian/Columbia's Anorectal Physiology Laboratory (ARP Lab), a state-of-the-art center, and one of only a few in metropolitan New York to offer a full complement of diagnostic and therapeutic tools for anorectal disorders.

"Indirectly, we know that age-related incontinence is a major problem because of the amount of money spent on diapers and pads by the elderly every year," says Dr. Feingold. Population studies also show that between five and ten percent of American men and women over the age of 60 have some degree of incontinence, and as baby boomers age, the number of people in this category will increase.

The reassuring news is that anal incontinence can frequently be controlled with dietary modifications, pelvic floor exercises, antispasmodic medications, and binding agents like Imodium®. Eighty to ninety percent of these patients can be helped with these methods, according to Dr. Feingold.

"At the ARP Lab, we see a number of patients who think they have anal incontinence but who are actually suffering from Irritable Bowel Syndrome (IBS) or other gastrointestinal disorders," he adds. "They have abdominal cramping and difficult to control diarrhea, and they are worried that they'll need an operation to correct it. They are greatly relieved to find out

Biofeedback data helps the patient isolate and then strengthen the proper muscles to regain control.

that their problems can be addressed with medication, nutrition, and lifestyle changes."

Patients who do have anal incontinence and do not respond to medication or lifestyle changes, may benefit from biofeedback therapy, a retraining program that strengthens the pelvic floor muscles. Biofeedback is a non-invasive approach that teaches patients how to sense the presence of stool or gas, and retrains their muscles to function properly. A dedicated biofeedback nurse or physician guides the patient through these exercises over the course of six to eight weekly sessions.

The ideal biofeedback patient is self-motivated, like the middle-aged woman who said, "I'll do whatever it takes to get better. At this point, I can't go on vacation or go see my daughter graduate from college and I'm afraid to go out with my friends." This kind of patient wants very much to resume her usual activities, notes Dr. Feingold, "Biofeedback improves function about 50 percent of the time, depending upon the patients' condition and level of commitment."

If biofeedback fails, the individual may then be a candidate for the Secca procedure that applies radiofrequency energy to the sphincter muscles. By creating a small lesion on the anal muscles, Secca causes the tissue to contract. This increases the tone of the anal muscles and can help more than half of these patients regain control. "Those with age-related incontinence can get long-lasting benefits from a single treatment," says Dr. Feingold, "and there is a very low risk of side effects."

The Secca procedure is performed as an outpatient procedure and requires only light sedation. "There is very little post-procedure discomfort. It takes less than an hour and is fairly non-invasive. Patients recover quickly and return to their normal activities," Dr. Feingold reports.

To find out if a patient is a candidate for biofeedback or has an anatomic defect requiring surgery, the ARP Lab may perform one or more of the following diagnostic tests:

- Transrectal ultrasound, a special type of ultrasound that provides anatomical images of the anal sphincter muscles
- Nerve conduction studies that determine whether nerve problems may be contributing to fecal incontinence
- Manometry, a test that measures the amount of pressure the sphincter muscles can exert

These tests are not required for all patients. "However, they can provide valuable information for the physician, helping us to identify individuals who may be treated with biofeedback, Secca, or surgical correction of the sphincter muscles," Dr. Feingold says.

Which people are most likely to benefit from surgery? First, younger women with obstetrical injuries. "Of millions of births each year in the United States, only a small percentage of women have tears from episiotomies or forceps injuries resulting in incontinence. Those who do may need corrective surgery," Dr. Feingold explains.

Second, surgery may help individuals who have had previous operations for either hemorrhoids or anal fistulas and now have weakened muscles. Patients in this category have a short-term response rate of 80 percent after corrective surgery. Yet five or ten years later, some may require a second procedure. "We think this may be related to nerve injuries," Dr. Feingold says, "but more research is needed to help us understand these cases."

Many patients treated in the ARP Lab end up with a new lease on life. "People can be reserved and embarrassed when they first come to see us," notes Dr. Feingold. "They may think there's no one to turn to and there's nothing that will help. I explain that the ARP Lab exists specifically for them."

For more information about the ARP Lab, contact the Section of Colorectal Surgery at 212.342.1155

Update on Cleft Care

Every year thousands of American children are born with cleft lip, cleft palate, and other complex facial deformities. Yet these children can now look as normal as their peers thanks to ongoing advances in craniofacial surgery. The following are before and after photos of a six year-old boy treated by **Jeffrey Ascherman, MD,** *Assistant Professor of Surgery* at Columbia University. The first picture shows an infant who was born with a severe cleft lip and palate on the right side of his face. Dr. Ascherman operated on this child when he was only six weeks old. After less than two hours of surgery, this young patient was headed toward a different life: he would soon be able to smile, eat, and drink like any other child. The second photo shows him two years following surgery. And the final photo shows the end results, five and a half years after the repair. "We use magnification loupes (lenses) and very fine instruments, and we pay meticulous attention to detail," says Dr. Ascherman. "Our instruments and techniques have improved in recent years and so have our results."

Five weeks

Two years

Five and a half years

To learn more about cleft care, call 212.305.4346

The Center for **PRENATAL PEDIATRICS**

Help for complex pregnancies

Parents-to-be who are worried about birth defects can now find out exactly what's happening to their babies in the weeks before delivery. Some are relieved to learn there's nothing wrong and they can proceed with a normal birth. Others will need help from a wide range of medical disciplines in the weeks ahead. *The Center for Prenatal Pediatrics* at Morgan Stanley Children's Hospital of NewYork-Presbyterian Hospital opened in January 2004 with the aid of a March of Dimes Community Grant and now offers a wide range of prenatal testing, specialty consultations, and pregnancy management. It also has a world-class team of pediatric and surgical experts who address major structural abnormalities at the time of birth.

"We are one of several centers in the country with the capacity to handle these difficult problems, taking care of both the mother and the baby," says **Lynn Simpson, MD,** *Medical Director* of the program who works closely with **Charles Stolar, MD**, *Chief of the Division of Pediatric Surgery*, as well as senior representatives from pediatric cardiology, neonatology, and genetics. The Center brings together leading specialists in a variety of departments to assure families the best possible outcome. "Our goal is to offer comprehensive evaluation in a single day," says Dr. Simpson, "and provide the finest follow-up care."

Today, one third to one half of all infants requiring surgery for congenital defects are diagnosed in the weeks before birth. This allows surgeons to prepare for rigorous procedures that can save a baby's life. "Twenty years ago, we saw only diaphragmatic hernias. These are abnormal openings in the diaphragm that allow part of the abdominal organs to migrate into the chest cavity," says Dr. Stolar. "Today we can identify at least fifteen other conditions needing immediate surgical repair." The most common problem is congenital heart disease, followed by abnormalities of the chest and abdomen.

About 75 percent of all infants evaluated at the Center require surgery, according to Dr. Stolar. "This is a stressful time for prospective parents," he adds, "but these families have more confidence knowing they've come to an institution with the resources to manage these unusual challenges." Morgan Stanley Children's Hospital has been designated by New York state as a Regional Perinatal Center with the ability to address high-risk cases. It has one of the most experienced obstetric teams in the nation, and the largest pediatric cardiac service in the New York area.

In a recent week, experts at the Center cared for two infants who had a great deal of difficulty coming into this world. Each child had a congenital diaphragmatic hernia as well as a heart defect. "Had these children been delivered at a local hospital, they wouldn't be alive today," Dr. Stolar says. "The obstetricians made a very accurate prenatal diagnosis. After delivery the infants were stabilized on a special heart-lung machine that oxygenates the baby's blood. We were able to address these complex conditions and now expect these infants to grow up to be teenagers and more."

"What makes us unique is our highly personalized and integrated approach," adds Dr. Simpson. "We have a case coordinator who helps families to prepare — medically and emotionally — for a high-risk delivery. Our physicians and surgeons also have a long history of collaborating on these difficult cases." In addition, the Center offers genetic testing and advises women and their families about their risks of having children with congenital abnormalities.

To learn more about The Center for Prenatal Pediatrics dial 1.877.THE BABY

The Health Corps

Teaching teens the basics of good living

Health Corps teens learn how their bodies are affected by a daily workout.

The Health Corps helps developing bodies in the same way the Peace Corps helps developing nations. In this ambitious program, created by Columbia heart surgeon, **Mehmet C. Oz, MD,** well-trained volunteers go into the public schools to teach the basics of self-care. Classes address the importance of eating well and getting enough exercise — critical issues for a generation that is increasingly overweight and therefore more likely to develop diabetes, cardiovascular disease, and other chronic ailments. Students also learn how to be emotionally resilient and to manage stress. This fall, the Health Corps was launched in four schools — two in New York and two in New Jersey.

"Only 63 percent of our public schools have a recognized health educator," says Dr. Oz. "We're hoping this program will fill the void and grow to the national level. Our goal is to teach 10 to 18 year olds that health is much more than the absence of disease. It's a way of taking control of your life, defining your values, and having a sense of purpose."

A high school class from Cliffside Park, New Jersey recently visited the operating room at NewYork-Presbyterian/Columbia to watch Dr. Oz perform open-heart surgery. "We introduce young people to the wonders of the body and to careers in medicine," says **Saral Mehra,** an MBA and medical student who helped develop the program.

In Manhattan, the Health Corps has partnered with the Natural Gourmet School to demonstrate the importance of a healthy diet. Working with a company called Functionally Innovative Training, the Health Corps Community Coordinators have also introduced video game exercise bikes in PE class. "At the same time, we hook them up to monitors so they can see how their bodies are affected by a workout," Mehra says.

To find out how to bring the Health Corps to your school or community, contact www.healthcorps.org

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Deborah Schwarz-McGregor, PA
Executive Director, External Affairs

M. El-Tamer, MD
Medical Editor

Sherry Knecht
Managing Editor

Valerie Andrews
Guest Editor

Tanya Krawciw
Creative Director

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Columbia University Medical Center
Department of Surgery
External Affairs
630 West 168th Street, Box 94
New York, NY 10032-3784

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