Cleveland Clinic Performs One of the First Cases of Robotic Total Pelvic Exenteration

Cleveland Clinic
Emerging Research Fosters Innovation in Breast Cancer Care
p 3
Patient Receives Special Delivery from Cleveland Clinic
p 6
Medical Students Bring Healthcare to Remote Areas of Peru
p 8
Dear Colleagues and Friends:

Welcome to this issue of Ob/Gyn & Women's Health Perspectives. On behalf of everyone at the Ob/Gyn & Women’s Health Institute, I am pleased to share the information in the following pages.

This issue begins with a cover story about one of the world’s first robotic total pelvic exenteration procedures, which was performed at Cleveland Clinic. We also offer several articles about multidisciplinary partnerships — one international and one very local — that show the depth and the breadth of the work we do to advance the practice of obstetrics and gynecology.

Cleveland Clinic continues to be dedicated to producing and reporting our quality outcomes in our annual, transparent process. I encourage you to review our Outcomes book for 2011, which is available at clevelandclinic.org/outcomes.

I hope you find this edition helpful in your practice. As always, our team welcomes your comments and feedback and continues to value our ongoing collaborations with you.

Sincerely,

Tommaso Falcone, MD
Professor & Chairman,
Department of Obstetrics and Gynecology
Chairman, Ob/Gyn & Women’s Health Institute

Ob/Gyn & Women’s Health Perspectives is written for physicians and should be relied on for medical education purposes only. It does not provide a complete overview of the topics covered and should not replace the independent judgment of a physician about the appropriateness or risks of a procedure for a given patient.

© 2013 The Cleveland Clinic Foundation
Innovation in Breast Cancer Care

Emerging Research Focuses on Nanotechnology, While Disease-Specific Metrics Drive Quality

While many factors contribute to the successful treatment of breast cancer, Stephen R. Grobmyer, MD, says that one of the most important is the ability to conduct meaningful research that can be widely applied.

“We are researching new ways to not only image cancers but treat them, by combining imaging with treatment,” says Dr. Grobmyer, who joined Cleveland Clinic in September 2012 as Section Head, Surgical Oncology, in the Department of General Surgery and as Director of the Breast Center. “We are researching new materials that are safe for administration but that have unique properties. We also are working to integrate new methods for staging cancer.”

He brings to his new role a research program in cancer nanotechnology, an interdisciplinary field that is focused on engineering materials on a very small scale and specifically designing them to both diagnose and treat cancers at their earliest stages. This research includes collaboration with material scientists, imaging researchers and experts in biomedical engineering.

Dr. Grobmyer and colleagues also are working on applying new technologies to improve the ability of radiologists and surgeons to identify cancers in the breast. “It is critical that we continue to improve our ability to detect cancers at their earliest stages, as this gives patients the greatest chance for cure,” he says. “There is a great clinical need for us to continue to translate these technologies to the clinic.”

An Interdisciplinary Approach to Research and Patient Care

Interdisciplinary collaboration forms the basis of progressive, quality care at a center of excellence such as Cleveland Clinic. Dr. Grobmyer says that the best treatments are evolving, and the way in which surgery, radiation and medical therapy are used together has a major effect on overall care and outcomes.

“We need to work with our colleagues to accurately triage and stage and design treatments,” he says, “so that every patient is treated at the right time and in the absolute right way.”

Disease-Specific Metrics in Real Time

Quality metrics for the care of breast cancer patients are extremely important, because they enable care providers and support staff to continuously refine and provide optimal care, Dr. Grobmyer says. Technology plays a pivotal role in tracking that information in real time.

In his previous position, Dr. Grobmyer helped develop an Android™-based health application, or “app,” that tracked the department’s performance against national metrics, from diagnosis to follow-up.

Likewise, Cleveland Clinic is looking at new ways to measure many quality parameters through the Epic® electronic medical records system as well as some other high-tech means.

When it comes to quality metrics, breast cancer is more disease-specific than global, and Cleveland Clinic’s technology-based tracking mechanisms will be built with that in mind. “Metrics such as length of stay in the hospital and readmission rates don’t really apply to breast cancer,” Dr. Grobmyer says. “We need disease-specific metrics: for example, the percentage of patients with early-stage cancer who receive breast-conserving surgery and the number of patients diagnosed with needle biopsy instead of surgical biopsy, since less invasive is better.”

Groups and programs such as the American Society of Breast Surgeons and the American College of Surgeons’ National Accreditation Program for Breast Centers establish breast cancer-specific quality metrics that can serve as a barometer of a program’s care, and institutions also should develop their own complementary metrics, he says.

“There’s lots of traction across departments and within the institute at Cleveland Clinic to measure and track quality,” Dr. Grobmyer says. “Metrics help us understand where we stand currently so that we can further optimize processes.”

To contact Dr. Grobmyer, call 216.445.3569 or email him at grobmyrs@ccf.org.
Cleveland Clinic Performs One of the First Cases of Robotic Total Pelvic Exenteration

Robotic surgery represents a milestone in the management of gynecologic cancers. Cleveland Clinic has taken this milestone one step further with the successful performance of a robotic total intracorporeal pelvic exenteration in a patient with recurrent uterine cancer. It is one of the first documented cases of robotic-assisted total pelvic exenteration in the world. The surgery was conducted by Mehdi Kebria, MD, an associate staff member in the Department of Obstetrics and Gynecology.

Pelvic exenteration is a major operation during which the entire pelvic contents — the bladder, uterus, vagina and rectum — are removed and a conduit is reconstructed using a portion of small or large bowel to replace the bladder. This procedure is employed with the goal of curing women with central pelvic cancer recurrence or a gynecologic malignancy that remains after failure of initial definitive therapy.

**Case: Recurrent Endometrial Cancer**
An 80-year-old woman presented with a central recurrence of an endometrial cancer that had been surgically resected and then treated with radiation.

The patient underwent robotic total intracorporeal pelvic exenteration with the creation of an ileal conduit and end colostomy. The pelvic exenteration was performed using the da Vinci® Surgical System.

An advantage of the robotic platform is that it allows the surgeon to precisely dissect the tissues down to the pelvic floor, often with minimal blood loss. Because the location of the cancer recurrence involved the bladder, and since the field was previously heavily radiated, the entire bladder had to be removed. The patient’s bladder, rectum and vagina were removed completely as one en bloc specimen through the vaginal orifice.

A portion of the distal ileum was used to create an ileal conduit, and the ureters were reimplanted to the ileal conduit. The final step in the procedure was formation of an end colostomy.

The surgery lasted about seven hours.

“A pelvic exenteration using an open procedure in an 80-year-old patient would have been very risky considering her age and the potential complications of surgery,” says Dr. Kebria. “The published rate of major complications is as high as 25 percent, and there is a 5 percent risk of mortality from this surgery. With a laparotomy, the incision is large, the risk of complications is higher and the recovery would be protracted because of her age.”

**Pelvic Exenteration Offers Advantages**
Patients with recurrent gynecologic malignancies after primary treatment with surgery and radiation or radiation alone have a poor response to chemotherapy. Limited resection is difficult when high doses of radiation have been used for treatment of the original malignancy.

Evolving operative techniques and better patient selection have resulted in improved clinical outcomes with total pelvic exenteration, but morbidity, mortality and recovery time are still significant. Using a minimally invasive approach with robotically controlled instrumentation holds the potential for minimizing blood loss, reducing morbidity and hastening recovery.

The robotic platform offers superior visualization of the surgical site and improved precision with the use of much smaller articulating instruments, and it enhances dissection of previously radiated tissue, which is often fibrotic.

In addition, the procedure can resolve other related pelvic issues. For example, in the case presented above, the patient also had significant radiation proctitis with daily rectal bleeding, both of which were cured through this procedure.

**Speedy Recovery, Minimal Blood Loss**
The minimally invasive approach to total pelvic exenteration speeds up the recovery phase and reduces the risk of infection, says Dr. Kebria. “The woman was ambulatory in two days, and she was started on a regular diet and was able to tolerate her diet by postoperative
day two. I saw her at her postoperative visit at four weeks after surgery, and she was doing quite well,” he says.

Blood loss was also much less than with an open procedure. In this patient, blood loss was less than 100 mL, compared with the liters of blood loss that is typical with open procedures.

“I would certainly use the robotic approach for my next exenteration; there are clearly many benefits to the patients without any compromises,” he says.

“Robotic surgery allows me to perform very complex operations in a minimally invasive fashion. The instruments are tiny and can fit and function in any small cavity, which is an important advantage in any pelvic surgery.”

Cleveland Clinic also recently became the first center to perform robotic single-site hysterectomy through a 2.5-cm incision at the umbilicus. So far, more than 25 such procedures have been performed at Cleveland Clinic.

Dr. Kebria can be reached at 216.445.7069 or kebriam@ccf.org.

Benefits of a Robotic-Assisted Approach to Total Pelvic Exenteration

- An open total pelvic exenteration is associated with significant morbidity, mortality and recovery time and would be risky in an older patient with a recurrent uterine malignancy.

- A robotic-assisted approach to total pelvic exenteration reduces morbidity and speeds recovery.

- Blood loss is significantly less with a robotic-assisted approach.

- The robotic platform offers the surgeon better visualization of the surgical site, improved surgical precision with the use of much smaller articulating instruments and enhanced dissection of previously radiated tissue.
Pregnancy can be both a wonderful and challenging time for an expectant mother. But for some patients, the normal physiologic changes can become life-threatening, and underlying the excitement is constant fear.

That is exactly the way one Cleveland Clinic patient would explain her experience. Twenty-eight-year-old Tabitha McClendon was born with congenital bicuspid aortic valve stenosis. Although she was aware of her condition from an early age, she says she never experienced any symptoms, and it never really occurred to her that her “heart murmur” would become a problem during pregnancy.

After an echocardiogram indicated she had aortic stenosis, McClendon was referred to Cleveland Clinic’s Richard Krasuski, MD, Director of Adult Congenital Heart Disease Services, and Amy Merlino, MD, who specializes in high-risk maternal-fetal medicine. Along with the potential risks, the patient and her medical team discussed whether McClendon wanted to terminate the pregnancy, repair her heart and try again for a family from a healthier place.

“I was pretty scared. I was of course concerned for myself, but I was more concerned for my baby at that point,” she says.

“I was already 16 weeks pregnant; I had already fallen in love.”

Hoping for the best but preparing for the worst, McClendon began to meet regularly with the specialists who would become her caregivers, confidants and supporters over the next six months.

**A New Class of Patients**

About 1 in 125 babies born in the United States comes into the world with congenital heart disease, says Dr. Krasuski. It’s the most common congenital defect.

“As recently as 30 years ago, most children with congenital heart disease did not survive into adulthood. If they did, they certainly weren’t healthy enough to bear children. However, as medical technology and strategies for managing these patients have advanced, we’re seeing more women with this disease who want to become pregnant, and the complexity of what we’re seeing is increasing,” he says.

“Probably at least a third of our patients in the Special Delivery Unit are there because the mom has congenital heart disease and they need the combined services we offer,” says Dr. Merlino. She says that is one of the primary reasons the Special Delivery Unit was created. It’s a collaboration that brings together a multidisciplinary team of maternal-fetal medicine specialists, neonatologists, geneticists and pediatric surgery specialists, as well as other specialists as required by the mother’s or baby’s condition.

And the collaboration between obstetrics and the cardiologists who have brought these patients to childbearing age, and who understand how their hearts react to the physiologic and physical changes in pregnancy, is fundamental to their care.

**Special Delivery**

McClendon was monitored closely by her medical team. Unfortunately, her heart disease did progress over the course of her pregnancy. By her third trimester, she says normal daily activities became more challenging. She became easily winded and experienced some chest pain and tightening and light-headedness. An echocardiogram showed that her valve narrowing progressed during the course of her pregnancy, and her heart muscle was beginning to show the effects.

McClendon would require a valve replacement, but with careful observation, the team was confident that the procedure could wait until after the birth of the baby.

McClendon was scheduled to deliver via a cesarean section because of the impact natural labor has on blood flow and the heart. She was able to carry to term, and under carefully planned and monitored general anesthesia, McClendon and her husband welcomed a healthy girl into the world on May 2, 2012.

Baby Olivia was monitored in the Special Delivery Unit while McClendon was monitored in the Cardiac Intensive Care Unit.

“The hardest part of the whole thing was not being able to hear my baby’s first cries,” McClendon says.
Another New NAFC Center of Excellence

In May 2012, Female Pelvic Medicine and Reconstructive Surgery at Cleveland Clinic was designated a Center of Excellence (COE): Continence Care for Women by the National Association for Continence (NAFC).

This designation takes into account training, clinical experience, interdisciplinary resources and patient satisfaction statistics. Female Pelvic Medicine and Reconstructive Surgery is part of Cleveland Clinic’s Ob/Gyn & Women’s Health Institute and the Department of Colorectal Surgery in the Digestive Disease Institute.

“This joint recognition reflecting the collaborative expertise of two separate institutes underscores our commitment to interdisciplinary care for women with urinary and fecal incontinence,” says Tracy Hull, MD, of the Digestive Disease Institute. “We believe that each patient deserves to be cared for by a team of clinicians who work collaboratively to help the patient participate fully in the best treatment pathway for her.”

To refer your patient to one of our specialists, please call 855.REFER.123 (855.733.3712).

Five months after having her baby, McClendon was back at Cleveland Clinic receiving a tissue valve replacement via open heart surgery, with the hope that she may eventually be able to have another child. She’s now on the road to recovery.

“I’m feeling stronger every day,” she says. “I can finally change a diaper.”

The Road Ahead

According to Drs. Krasuski and Merlino, the departments are working to formalize their collaborative approach by instituting a cardio-obstetrics clinic specifically for patients like McClendon. The goal would be to arrange for the doctors to be available jointly once a month to streamline appointments for their patients.

“In the past I think people were scared away from this,” Dr. Krasuski says. “A lot of doctors told the female patient with heart disease who wanted to have a child that it was just too high risk, but the reality is that there’s a growing body of literature demonstrating that this can be done safely under the right circumstances.”

For more information about the Special Delivery Unit, contact Dr. Merlino at 440.366.9444.
Medical Students Bring Healthcare to Remote Areas of Peru

By Uma Perni, MD

This past June, I had the privilege of accompanying medical students from Cleveland Clinic Lerner College of Medicine and Case Western Reserve University School of Medicine for one week to Peru.

It was the fourth consecutive year that students participated in the Peru Health Outreach Project (PHOP), a grassroots effort to improve the health of the indigenous population of Peru’s Sacred Valley. Founded and run by medical students, PHOP is directed by Sangeeta Krishna, MD, a Cleveland Clinic pediatrician.

The trip was organized through the non-profit Peruvian Hearts, in collaboration with local authorities and medical officers, and supported by Lerner College of Medicine, MedWish, fundraising events and private donations.

**Evaluations, Medications, Vision Screening and More**

The students had prepared for the trip for an entire year — collecting medical supplies and medications, organizing committees, developing teaching materials, raising funds and learning Spanish.

In Peru, approximately 3,300 patients received care from our 60 volunteers, including 20 medical students as well as nurses, physical therapists, residents, fellows and other medical staff from Cleveland Clinic, University Hospitals of Cleveland and MetroHealth Medical Center. Our medical team included specialists in internal medicine, pediatrics, ob/gyn, ophthalmology, infectious diseases and emergency medicine.

The group traveled to remote villages, orphanages, schools and homes for the disabled. They evaluated and treated many acute problems; distributed basic medications, such as antibiotics, analgesics and vitamins; performed vision screening; and supplied glasses and children’s shoes. When more serious conditions were suspected or diagnosed, patients were referred to the urban center of Cusco, Peru, for more specialized care.

Some of the more sustainable interventions included educational programs on parasite prevention, dental hygiene, back-strengthening exercises and child resuscitation.

This year, for the first time, PHOP collaborated with the Peruvian American Medical Society (PAMS), serving an additional 800 patients at the PAMS clinic in the Chincha region of Peru.

**Volunteers Lead Symposium for Local Healthcare Workers**

The highlight of the last week was a two-day symposium organized by our partnering local physician, Dr. Morales. Healthcare workers from mountain villages and physicians, medical students and physical therapists all the way from Cusco attended.

We covered a variety of topics as requested, including obstetrics and...
Marie Fidela Paraiso, MD, Section Head of Urogynecology and Pelvic Floor Disorders at Cleveland Clinic, received the 2011 Roy M. Pitkin Award from The American College of Obstetricians and Gynecologists. The award honors departments of obstetrics and gynecology for excellence in research.


The trial compared the outcomes of patients with stage 2-4 posthysterectomy vaginal prolapse who were treated with laparoscopic sacrocolpopexy and those treated with robotic sacrocolpopexy. Results showed that the conventional laparoscopic approach took significantly less operating time, caused significantly less pain and cost considerably less than the robotic approach. The two approaches resulted in equally significant improvement in vaginal support and functional activity one year after surgery.

In recognition of her award, Dr. Paraiso received a certificate from The American College of Obstetricians and Gynecologists plus a $5,000 check for Cleveland Clinic's Department of Obstetrics and Gynecology.

Dr. Paraiso practices in the Department of Obstetrics and Gynecology at Cleveland Clinic. For more information about the Peru Health Outreach Project, contact Dr. Krishna at krishns@ccf.org.

For more information, contact Dr. Paraiso at paraism@ccf.org.
Selected Publications
From Cleveland Clinic’s Ob/Gyn & Women’s Health Institute

Journal Articles


Resources for Physicians

Referring Physician Center and Hotline
Cleveland Clinic’s Referring Physician Center has established a 24/7 hotline — 855.REFER.123 (855.733.3712) — to streamline access to our array of medical services. Contact the Referring Physician Hotline for information on our clinical specialties and services, to schedule and confirm patient appointments, for assistance in resolving service-related issues, and to connect with Cleveland Clinic specialists.

Physician Directory
View all Cleveland Clinic staff online at clevelandclinic.org/staff.

Track Your Patient’s Care Online
DrConnect is a secure online service providing real-time information about the treatment your patient receives at Cleveland Clinic. Establish a DrConnect account at clevelandclinic.org/drconnect.

Critical Care Transport Worldwide
Cleveland Clinic’s critical care transport teams and fleet of vehicles are available to serve patients across the globe.

- To arrange for a critical care transfer, call 216.448.7000 or 866.547.1467 (see clevelandclinic.org/criticalcaretransport).
- For STEMI (ST elevated myocardial infarction), acute stroke, ICH (intracerebral hemorrhage), SAH (subarachnoid hemorrhage) or aortic syndrome transfers, call 877.379.CODE (2633).

Outcomes Data
View clinical Outcomes books from all Cleveland Clinic institutes at clevelandclinic.org/outcomes.

Clinical Trials
We offer thousands of clinical trials for qualifying patients. Visit clevelandclinic.org/clinicaltrials.

CME Opportunities: Live and Online
The Cleveland Clinic Center for Continuing Education’s website offers convenient, complimentary learning opportunities. Visit ccfcmo.org to learn more, and use Cleveland Clinic’s my CME portal (available on the site) to manage your CME credits.

Executive Education
Cleveland Clinic has two education programs for healthcare executive leaders — the Executive Visitors’ Program and the two-week Samson Global Leadership Academy immersion program. Visit clevelandclinic.org/executiveeducation.

24/7 Referrals

Referring Physician Hotline
855.REFER.123 (855.733.3712)

Hospital Transfers
800.553.5056

On the Web at clevelandclinic.org/refer123

Stay Connected to Cleveland Clinic

Same-Day Appointments
Cleveland Clinic offers same-day appointments to help your patients get the care they need, right away. Have your patients call our same-day appointment line, 216.444.CARE (2273) or 800.223.CARE (2273).

About Cleveland Clinic
Cleveland Clinic is an integrated healthcare delivery system with local, national and international reach. At Cleveland Clinic, more than 2,800 physicians represent 120 medical specialties and subspecialties. We are a main campus, 18 family health centers, eight community hospitals, Cleveland Clinic Florida, the Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, Cleveland Clinic Canada, Sheikh Khalifa Medical City, and Cleveland Clinic Abu Dhabi.

In 2012, Cleveland Clinic was ranked one of America’s top 4 hospitals in U.S. News & World Report’s annual “America’s Best Hospitals” survey. The survey ranks Cleveland Clinic among the nation’s top 10 hospitals in 14 specialty areas, and the top hospital in three of those areas.
Subscribe to *Infertility eNews*

The latest information on infertility — delivered to your inbox!

*Infertility eNews* is an online publication that includes timely and practical health information from Cleveland Clinic. Designed for primary care physicians as well as obstetricians and gynecologists, *Infertility eNews* will serve as a clinical resource for your practice by featuring our institutional perspective on stories making medical headlines and highlighting new services and technology that impact clinical care.

Subscribe at clevelandclinic.org/ObGynNews.

Cleveland Clinic’s Ob/Gyn & Women’s Health Institute is ranked as the No. 3 program in the country by U.S. News and World Report.

The 2012 “America’s Best Hospitals” survey recognized Cleveland Clinic as one of the nation’s best overall, ranking the hospital as No. 4 in the country. Cleveland Clinic ranked in all 16 specialties evaluated by the magazine.

For details, visit clevelandclinic.org.