Measuring Outcomes Promotes Quality Improvement
Measuring and understanding outcomes of medical treatments promotes quality improvement. Cleveland Clinic has created a series of Outcomes books similar to this one for its disease-based institutes. Designed for a physician audience, the Outcomes books contain a summary of many of our surgical and medical treatments, with data on patient volumes and outcomes and a review of new technologies and innovations.

The Outcomes books are not a comprehensive analysis of all treatments provided at Cleveland Clinic, and omission of a particular treatment does not necessarily mean we do not offer that treatment. When there are no recognized clinical outcome measures for a specific treatment, we may report process measures associated with improved outcomes. When process measures are unavailable, we may report volume measures; a relationship has been demonstrated between volume and improved outcomes for many treatments, particularly those involving surgical techniques.

In addition to these institute-based books of clinical outcomes, Cleveland Clinic supports transparent public reporting of healthcare quality data and participates in the following public reporting initiatives:

- Joint Commission Performance Measurement Initiative (qualitycheck.org)
- Centers for Medicare & Medicaid Services (CMS) Hospital Compare (hospitalcompare.hhs.gov)
- Ohio Department of Health (ohiohospitalcompare.ohio.gov)
- Cleveland Clinic Quality Performance Report (clevelandclinic.org/QPR)

Our commitment to transparent reporting of accurate, timely information about patient care reflects Cleveland Clinic’s culture of continuous improvement and may help referring physicians make informed decisions.

We hope you find these data valuable, and we invite your feedback. Please send your comments and questions via email to:

OutcomesBooksFeedback@ccf.org or scan here.

To view all our Outcomes books, please visit Cleveland Clinic’s Quality and Patient Safety website at clevelandclinic.org/outcomes.
Dear Colleague:

Welcome to this 2012 Cleveland Clinic Outcomes book. We distribute Outcomes books for more than 14 specialties. These publications are unique in healthcare. Each one provides a summary overview of medical or surgical trends, innovations, and clinical data for a Cleveland Clinic specialty over the past year.

Cleveland Clinic uses data to manage outcomes across the full continuum of care. Clinical services are delivered through patient-centered institutes, each based around a single disease or organ system. Institutes combine medical and surgical services, along with research and education, under unified leadership. The individual institute defines quality benchmarks for its specialty services and reports longitudinal progress.

All Cleveland Clinic Outcomes books are available in print and online. Additional data are available through our online Quality Performance Report (clevelandclinic.org/QPR). The site offers process measure, outcome measure, and patient experience data in advance of national and state public reporting sites.

Our practice of releasing annual outcomes reports has received favorable notice from colleagues, media, and healthcare observers. We appreciate your interest and hope you find this information useful and informative.

Sincerely,

Delos M. Cosgrove, MD
CEO and President
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Prefer an e-version?

Visit clevelandclinic.org/OutcomesOnline, and
we’ll remove you from the hard copy mailing list
and email you when next year’s books are online.
Chairman’s Letter

I am pleased to share the 2012 Ob/Gyn & Women’s Health Institute outcomes with you. We are committed to providing quality and outcomes measures each year for referring physicians and others who are interested in our institute’s medical and surgical activities.

Each Cleveland Clinic institute shares our commitment to transparency. Together, we hope to serve as a model for improving healthcare quality, safety, and efficiency — while reducing health disparities — in this era of outcomes-based reimbursement.

U.S. News & World Report ranks our gynecology program No. 3 in the country. We are gratified by this vote of confidence from our colleagues. In the following pages, we outline programs and services that reflect our institute’s commitment to clinical excellence, innovation, education and research.

These include advances in the treatment of infertility, the use of advanced minimally invasive surgical approaches such as single-site robotics, a wide range of office-based hysteroscopic procedures, advanced approaches to peritoneal cancers and research on a new breast cancer vaccine.

In addition to these subspecialty services, we offer comprehensive ob/gyn care at Cleveland Clinic community hospitals and family health centers across Northeast Ohio by a large network of providers.

We have taken steps to become even more responsive to the community by promoting health and wellness through two key programs:

• Last year, we launched Celebrate Sisterhood with Cleveland Clinic, a unique health and education initiative for women of color. The program, created by Linda L. Bradley, MD, Vice Chair of Obstetrics and Gynecology, seeks to educate, energize and empower women of color to embrace self-care. The program’s successful community events offer engaging speakers, healthy cooking demonstrations and free health screenings.

• This year, we are taking a proactive approach to the problem of maternal obesity — and, ultimately, childhood obesity — through our innovative Healthy Expectations Program. The goal is to improve pregnancy outcomes through medically monitored weight management and nutritional guidance during the preconception, pregnancy and postpartum stages. The program is led by bariatric medicine specialist Karen Cooper, DO, and was created with Jeffrey Chapa, MD, Head of Maternal-Fetal Medicine, along with registered dietitians.

We hope you find the information in this Outcomes book useful and informative. We look forward to working with you to ensure the best clinical care and the best patient experience.

Tommaso Falcone, MD
Professor and Chairman, Ob/Gyn & Women’s Health Institute
Institute Overview

Cleveland Clinic Ob/Gyn & Women’s Health Institute is committed to providing world-class care to women of all ages. The institute offers a full complement of services that fall within the field of women’s health, from general obstetric/gynecologic care and screenings for breast disorders to complex oncologic surgery for breast and gynecologic malignancies, management of fetal anomalies, management of complex mesh complications, and innovative approaches to cryopreservation of gametes. Cleveland Clinic has one of the highest-acuity patient profiles in the country.

Services are available on the main campus, at other Cleveland Clinic hospitals in Northeast Ohio, and at many family health centers. In 2012, the Department of Obstetrics and Gynecology was ranked third in the nation by U.S. News & World Report and was the top-rated program in Ohio.

The Ob/Gyn & Women’s Health Institute includes the Department of Obstetrics and Gynecology, the Department of Regional Obstetrics and Gynecology, and the Center for Specialized Women’s Health. The institute model has streamlined the care of women, enhanced research opportunities, and improved the education of physicians, nurses, and other healthcare professionals.

Staff members are actively involved in the education of residents, fellows, and medical students in Cleveland Clinic Lerner College of Medicine. The institute offers fellowships in women’s health, gynecologic oncology, breast surgery, urogynecology/reconstructive pelvic surgery, and reproductive endocrinology. The institute’s staff hosts continuing medical education courses throughout the year on a variety of topics, from minimally invasive surgical approaches, including single-port laparoscopy and robotics, to female sexual dysfunction.

Breast Center
The Breast Center has breast surgeons, medical breast specialists, and radiologists who provide breast cancer screening, including high-risk screening and prevention; advanced diagnostic breast imaging; and leading-edge surgical treatment. Breast surgeons and medical breast specialists see patients at the main campus Breast Center and in the community.

The Breast Center’s team of microvascular breast reconstructive surgeons specializes in DIEP free-flap reconstruction, offered only at select centers worldwide. Cleveland Clinic’s Breast MRI Program has set the standard for breast MRI in disease staging and high-risk screening. In 2010, a comprehensive task force of Cleveland Clinic breast cancer specialists sorted through controversies in screening guidelines and recommended that most women continue annual screenings beginning at age 40. Screening mammography is available at 18 Cleveland Clinic locations.

The Breast Center at Cleveland Clinic’s main campus was recently awarded a three-year accreditation by the American College of Surgeons’ National Accreditation Program for Breast Centers.

Department of Obstetrics and Gynecology
The Department of Obstetrics and Gynecology has a wide range of specialists and generalists in distinct clinical sections.

The Section of General Gynecology provides general women’s healthcare, menopause care, and geriatric gynecologic services, including the treatment of pelvic pain and menstrual disorders. Cleveland Clinic’s Menstrual and Fibroid Treatment Center offers advanced care for women experiencing menstrual dysfunction and symptoms from uterine fibroids, including hysteroscopic surgery and other minimally invasive alternatives to hysterectomy.
Institute Overview

The Section of Gynecologic Oncology offers a multidisciplinary, comprehensive approach to the management of gynecologic malignancies, incorporating surgery, radiation, chemotherapy, and biologic therapy. The section’s innovative surgical approaches include single-port and robotic procedures. Staff members are part of the Gynecologic Oncology Group, the only national cooperative study group devoted exclusively to gynecologic malignancies. Extensive clinical trials of the newest treatments and techniques are available. The section also maintains the Familial Ovarian Cancer Registry and provides complete treatment of preinvasive lower genital tract disease.

The Maternal-Fetal Medicine/Obstetrics Section provides obstetrical care according to patient needs and preferences. Certified nurse midwives offer a family-centered approach to low-risk prenatal care and delivery, general obstetricians provide care for low- and high-risk pregnancies, and maternal-fetal medicine specialists provide consultative services and comprehensive management for complicated high-risk pregnancies. Available services include genetic counseling, aneuploidy screening, ultrasound, and prenatal diagnosis. A Level III neonatal intensive care unit is available on the main campus and at Fairview and Hillcrest hospitals. The Cleveland Clinic health system provides services for more than 10,000 deliveries every year.

The Fetal Care Center is directed by a multidisciplinary team consisting of maternal-fetal medicine specialists, neonatologists, pediatric surgeons, and other subspecialists whose goal is to achieve the best possible outcomes in pregnancies complicated by complex congenital anomalies or serious maternal conditions. Through collaboration and communication, the team provides accurate prenatal diagnosis using advanced fetal imaging techniques, such as high-resolution ultrasound and MRI, and applies that information to develop a coordinated management plan for pregnancy, delivery, and newborn care.

The Special Delivery Unit (SDU) is a small, comprehensive labor and delivery unit located within Cleveland Clinic Children’s. The SDU team provides care for mothers carrying fetuses with congenital anomalies or illnesses requiring pediatric surgical or subspecialty care at birth, and for pregnant women with critical conditions requiring subspecialty care at delivery. The unit coordinates multispecialty care, eases logistical issues for patients and families, and improves access and quality of care for patients with the most complicated pregnancies. The unit adjoins a hybrid Pediatric Cardiac Catheterization Laboratory and is located next to an advanced pediatric surgical suite and Level III NICU.
The Section of Pediatric and Adolescent Gynecology offers gynecologic care for pediatric and adolescent patients, including consultations and surgery, in conjunction with colleagues in the Department of General Pediatrics.

The Section of Reproductive Endocrinology and Infertility offers comprehensive evaluation and treatment for infertile couples. Treatments encompass artificial insemination, ovulation induction, and reproductive surgery, including microsurgical sterilization reversal and advanced endoscopic techniques for tubal disease, advanced-stage endometriosis, and myomectomy with and without robotics. The IVF lab employs the complete spectrum of assisted-reproductive technologies, including in vitro fertilization with intracytoplastic sperm injection, assisted hatching, embryo co-culture and preimplantation, and genetic testing, as well as oocyte, embryo, and ovarian tissue freezing. The lab is involved in several innovative techniques outlined in the “Innovations” section of this report. A fellowship-trained male infertility specialist is also on the section’s staff.

The Section of Urogynecology and Pelvic Reconstructive Surgery offers a wide variety of subspecialty expertise, including urogynecology and vaginal reconstructive pelvic surgery, advanced operative endoscopy, and treatment of genital fistulas and bowel disorders. Staff members are national leaders and innovators in advanced gynecologic surgery. Cleveland Clinic urogynecologists are pioneers in minimally invasive and robotic procedures. The staff offers urogynecology services at four Cleveland Clinic community hospitals and three family health centers, as well as at the main campus. Cleveland Clinic is a member of the Pelvic Floor Disorders Network, a network of doctors, nurses, and researchers from across the United States who engage in collaborative research to improve the care and daily lives of women with pelvic organ prolapse and bladder and bowel control problems.

Department of Regional Obstetrics and Gynecology

The Department of Regional Obstetrics and Gynecology provides comprehensive general gynecologic and obstetric care, including midwifery services. Its 78 physicians and 10 midwives provide services at Cleveland Clinic family health centers and community hospitals across Northeast Ohio.

Center for Specialized Women’s Health

The Center for Specialized Women’s Health offers leading-edge interdisciplinary women’s healthcare and serves as a national model for other hospitals. Its staff specializes in problems of particular concern to women, including menstrual disorders, non-hysterectomy alternatives, perimenopausal and menopausal disorders, uterine fibroids, severe premenstrual syndrome and premenstrual dysphoric disorder, menopause hormone therapies, postmenopausal osteoporosis, urinary incontinence, hormonally induced depressive disorders, polycystic ovarian syndrome, and female sexual dysfunction. The center has a women’s health fellowship training program. In addition, the center operates Speaking of Women’s Health, a national program that educates women to make informed decisions about health, well-being, and personal safety for themselves and their families.
### 2012 Volumes

<table>
<thead>
<tr>
<th>Service</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outpatient Visits</strong></td>
<td></td>
</tr>
<tr>
<td>Breast Center</td>
<td>15,619</td>
</tr>
<tr>
<td>Obstetrics and Gynecology</td>
<td>155,736</td>
</tr>
<tr>
<td>Regional Obstetrics and Gynecology</td>
<td>198,080</td>
</tr>
<tr>
<td>Center for Specialized Women’s Health</td>
<td>6,137</td>
</tr>
<tr>
<td><strong>TOTAL VISITS</strong></td>
<td><strong>375,572</strong></td>
</tr>
<tr>
<td><strong>Breast Services</strong></td>
<td></td>
</tr>
<tr>
<td>Screening Mammogram</td>
<td>68,893</td>
</tr>
<tr>
<td>Diagnostic Mammogram</td>
<td>17,165</td>
</tr>
<tr>
<td>Diagnostic Breast Ultrasound</td>
<td>10,550</td>
</tr>
<tr>
<td>Imaging Special Procedure</td>
<td>899</td>
</tr>
<tr>
<td>Core Biopsy</td>
<td>3,037</td>
</tr>
<tr>
<td>Excisional Biopsy</td>
<td>457</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>647</td>
</tr>
<tr>
<td>Lumpectomy</td>
<td>626</td>
</tr>
</tbody>
</table>

### Surgical Procedure Distribution

<table>
<thead>
<tr>
<th>Service</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Obstetrics and Gynecology</td>
<td>4,433</td>
</tr>
<tr>
<td>Gynecologic Oncology</td>
<td>1,489</td>
</tr>
<tr>
<td>Urogynecology</td>
<td>772</td>
</tr>
<tr>
<td>Reproductive Endocrinology</td>
<td>816</td>
</tr>
<tr>
<td>Maternal Fetal Medicine</td>
<td>77</td>
</tr>
</tbody>
</table>

### Hysteroscopy

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operative</td>
<td>2,278</td>
</tr>
<tr>
<td>Polyps</td>
<td>1,574</td>
</tr>
<tr>
<td>Fibroids</td>
<td>144</td>
</tr>
<tr>
<td>Ablation</td>
<td>560</td>
</tr>
<tr>
<td>Diagnostic – Office</td>
<td>773</td>
</tr>
<tr>
<td>Diagnostic – Outpatient</td>
<td>102</td>
</tr>
<tr>
<td>Procedure</td>
<td>Count</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td></td>
</tr>
<tr>
<td>Abdominal</td>
<td>583</td>
</tr>
<tr>
<td>Vaginal</td>
<td>413</td>
</tr>
<tr>
<td>Laparoscopic</td>
<td>818</td>
</tr>
<tr>
<td>Robotic</td>
<td>372</td>
</tr>
<tr>
<td>Incontinence and Prolapse</td>
<td></td>
</tr>
<tr>
<td>Prolapse</td>
<td>400</td>
</tr>
<tr>
<td>Incontinence</td>
<td>206</td>
</tr>
<tr>
<td>Incontinence and Prolapse</td>
<td>400</td>
</tr>
<tr>
<td>In Vitro Fertilization</td>
<td></td>
</tr>
<tr>
<td>Egg Retrievals (excluding oocyte donor and surrogate)</td>
<td>352</td>
</tr>
<tr>
<td>Oocyte Donor Retrievals</td>
<td>22</td>
</tr>
<tr>
<td>Intrauterine Insemination</td>
<td>1,145</td>
</tr>
<tr>
<td>Deliveries</td>
<td>10,399</td>
</tr>
<tr>
<td>Perinatal Testing</td>
<td></td>
</tr>
<tr>
<td>Doppler Ultrasound</td>
<td>2,080</td>
</tr>
<tr>
<td>Amniocentesis</td>
<td>277</td>
</tr>
<tr>
<td>Biophysical Profile</td>
<td>4,136</td>
</tr>
<tr>
<td>Chorionic Villus Sampling</td>
<td>123</td>
</tr>
<tr>
<td>Nuchal Translucency</td>
<td>3,899</td>
</tr>
</tbody>
</table>

375,572 — Number of outpatient visits to the Ob/Gyn & Women’s Health Institute in 2012
Medical treatment is the primary method used for treating endometriosis. When surgical methods are used, hysterectomy is seldom the course of action taken.

### Procedures for Treatment of Endometriosis

**2011 – 2012**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Treatment</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Surgical (No Hysterectomy)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

*In prior years, these figures were based on scheduled procedures. The current figures are based on billed procedures.*

### Procedures for Uterine Fibroid Removal

**2011 – 2012**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine Fibroid Embolization</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Myomectomy</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Cleveland Clinic provides several treatment options for uterine fibroids, including uterine fibroid embolization, myomectomy, and hysterectomy.
An interdisciplinary project team was formed to identify risk points for infection during the perioperative period. Action steps were implemented to reduce these risks, resulting in lower surgical site infection rates in hysterectomy cases.
Surgical Case Approach (All Cases)

2008 – 2012

Procedures

N =

2008  2009  2010  2011  2012

635   716   752   750   772

Adverse Events Within 30 Days of Urogynecologic Surgery*

2010 – 2012

Rate per 1,000 Surgeries

N =

2010  2011  2012

795   825   869

Deep Vein Thrombosis
Pulmonary Embolism
Small Bowel Obstruction

*N represents the total number of urogynecologic surgical procedures per year.

There is a low incidence of adverse events after urogynecologic surgery at Cleveland Clinic.
Between 2005 and 2012, 2,390 patients underwent prolapse surgery and had at least one year of follow-up. The figure illustrates the percentage of these patients who had a reoperation for prolapse relative to the time of their initial surgery. The number of patients at risk represents those patients with the indicated length of follow-up who did not have a prolapse reoperation. The three-year prolapse reoperation percentage for Cleveland Clinic urogynecologic surgeons is approximately 2.5%.

Between 2005 and 2012, 1,671 patients received anti-incontinence (sling) surgery and had at least one year of follow-up. The figure illustrates the percentage of these patients who had sling revision urethrolysis relative to the time passed since their initial surgery. The number of patients at risk represents those patients with the indicated length of follow-up who have not had sling revision. The three-year sling revision percentage for Cleveland Clinic urogynecologic surgeons is 2.4%.
30-Day Readmission Rate and Severity Index Following Inpatient Urogynecologic Surgery*
2010 – 2012

Rate per 100 Surgeries
Severity Index**

<table>
<thead>
<tr>
<th>Year</th>
<th>Readmission Rate</th>
<th>Severity Index**</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1.59</td>
<td>3.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2011</td>
<td>1.74</td>
<td>3.1</td>
<td>1.0</td>
</tr>
<tr>
<td>2012</td>
<td>1.51</td>
<td>3.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

***N = 159

Length of Stay and Severity Index Following Inpatient Urogynecologic Surgery*
2010 – 2012

Days
Severity Index**

<table>
<thead>
<tr>
<th>Year</th>
<th>Observed LOS</th>
<th>Expected LOS</th>
<th>Severity Index**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>361</td>
<td>3.0</td>
<td>2.0</td>
</tr>
<tr>
<td>2011</td>
<td>361</td>
<td>3.1</td>
<td>2.1</td>
</tr>
<tr>
<td>2012</td>
<td>357</td>
<td>3.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

***N = 359

*These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. uhc.edu

**The 3M™ All Patient Refined Diagnosis Related Groups (APR DRG) Classification System is used for adjusting data for severity of illness and risk of mortality. solutions.3m.com/wps/portal/3M/en_US/Health-Information-Systems/HIS/Products-and-Services/Products-List-A-Z/APR-DRG-Software

***N = Total number of surgical cases performed for MS-DRGs 748, 749, and 750.
The advent of robotic-assisted laparoscopy has prompted an increase in minimally invasive procedures in the gynecologic subspecialties. Cleveland Clinic gynecologic oncology surgeons strive to provide the best care for patients while using minimally invasive procedures when possible.
Primary Cytoreduction for Ovarian Cancer (N = 33)

2012

Percent

Data excludes patients who received chemotherapy prior to primary cytoreduction.

Length of Stay and Severity Index Following Inpatient Gynecologic Oncology Surgery*

2010 – 2012

30-Day Readmission Rate and Severity Index Following Inpatient Gynecologic Oncology Surgery*

2010 – 2012

30-Day Mortality Rate and Severity Index Following Inpatient Gynecologic Oncology Surgery*

2010 – 2012

*These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. uhc.edu

**The 3M™ All Patient Refined Diagnosis Related Groups (APR DRG) Classification System is used for adjusting data for severity of illness and risk.

***N = Total number of surgical cases for gynecologic malignancy identified by MS-DRGs 734, 735, 736, 737, 738, 739, 740, 741, 754, 755, and 756.
Cervical Cancer

Radiation oncologists and medical oncologists work in close collaboration with gynecologic oncologists to treat patients with gynecologic cancers of the vulva, vagina, cervix, uterine body, and uterine adnexa. Standard radiation treatment employs high-dose-rate brachytherapy and external beam radiotherapy.

Overall Survival of Patients With Early-Stage* Cervical Cancer Treated With Radiation by Stage at Diagnosis (N = 217) 1996 – 2012

Percent Survival and (Number at Risk) by Stage*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Years Since Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>IB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>93.3</td>
</tr>
<tr>
<td></td>
<td>(123)</td>
</tr>
<tr>
<td>IIA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>96.7</td>
</tr>
<tr>
<td></td>
<td>(28)</td>
</tr>
<tr>
<td>IIB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>89.6</td>
</tr>
<tr>
<td></td>
<td>(42)</td>
</tr>
</tbody>
</table>

*Data for Stage 0 and IA not shown due to N < 10

CC = Cleveland Clinic

Overall Survival of Patients With Late-Stage* Cervical Cancer Treated With Radiation by Stage at Diagnosis (N = 159) 1996 – 2012

Percent Survival and (Number at Risk) by Stage*

<table>
<thead>
<tr>
<th>Stage</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIIB</td>
<td>69.7</td>
<td>53.6</td>
<td>48.0</td>
<td>45.6</td>
<td>41.7</td>
</tr>
<tr>
<td></td>
<td>(73)</td>
<td>(49)</td>
<td>(42)</td>
<td>(37)</td>
<td>(30)</td>
</tr>
<tr>
<td>IVA</td>
<td>66.7</td>
<td>66.7</td>
<td>66.7</td>
<td>50.0</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>(8)</td>
<td>(4)</td>
<td>(4)</td>
<td>(3)</td>
<td>(1)</td>
</tr>
<tr>
<td>IVB</td>
<td>61.8</td>
<td>38.4</td>
<td>30.7</td>
<td>17.6</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>(20)</td>
<td>(10)</td>
<td>(8)</td>
<td>(3)</td>
<td>(3)</td>
</tr>
</tbody>
</table>

*Data for Stage IIIA not shown due to N < 10

CC = Cleveland Clinic

Cleveland Clinic performs a very large number of screening mammograms and has a diagnostic callback program for patients with abnormal screening mammograms. The callback rate has been around 13% since 2008, with some variation in 2010 due to changes in technology and staffing.

Most breast biopsies were nonsurgical, consistent with Cleveland Clinic's minimally invasive approach to breast cancer diagnosis.

*Surgery for Breast Cancer

*Cleveland Clinic performs a very large number of screening mammograms and has a diagnostic callback program for patients with abnormal screening mammograms. The callback rate has been around 13% since 2008, with some variation in 2010 due to changes in technology and staffing.

Most breast biopsies were nonsurgical, consistent with Cleveland Clinic's minimally invasive approach to breast cancer diagnosis.

*Includes prophylactic mastectomy with breast reconstruction
**Breast Cancer**

Patients newly diagnosed with breast cancer are seen in the multidisciplinary Breast Center, a single location comprising surgeons, medical oncologists and radiation oncologists specializing in breast cancer. This arrangement is convenient for patients and allows the closest possible collaboration among physicians to develop an integrated treatment plan.

**Five-Year Relative Survival of Female Patients With All Stages of Breast Cancer (N = 7,646) 1996 – 2011**

![Graph showing percent survival over years since diagnosis](image)

<table>
<thead>
<tr>
<th>Years Since Diagnosis</th>
<th>Percent Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>1</td>
<td>99</td>
</tr>
<tr>
<td>2</td>
<td>97.3</td>
</tr>
<tr>
<td>3</td>
<td>95.3</td>
</tr>
<tr>
<td>4</td>
<td>93.2</td>
</tr>
</tbody>
</table>

Percent Survival = 100 99 97.3 95.3 93.2

American Joint Committee on Cancer (AJCC) Stage I–IV breast cancer
CC = Cleveland Clinic
Five-Year Relative Survival of Patients With Breast Cancer by Stage at Diagnosis (N = 7,646)
1996 – 2011

Percent Survival

<table>
<thead>
<tr>
<th>Years Since Diagnosis</th>
<th>Stage I CC (N = 3,835)</th>
<th>Stage I Ref</th>
<th>Stage II CC (N = 2,755)</th>
<th>Stage II Ref</th>
<th>Stage III CC (N = 752)</th>
<th>Stage III Ref</th>
<th>Stage IV CC (N = 304)</th>
<th>Stage IV Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100</td>
<td>100</td>
<td>98.8</td>
<td>92.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>100</td>
<td>98.8</td>
<td>92.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>91.3</td>
<td>85.3</td>
<td>76.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent Survival by Stage

American Joint Committee on Cancer (AJCC) Stage I–IV breast cancer

CC = Cleveland Clinic

Overall Survival of Patients With Early-Stage Breast Cancer Treated With Radiation (N = 2,130)

1996 – 2012

Percent Survival

<table>
<thead>
<tr>
<th>Years Since Treatment</th>
<th>Stage 0 CC (N = 308)</th>
<th>Stage 0 Ref</th>
<th>Stage I CC (N = 1,034)</th>
<th>Stage I Ref</th>
<th>Stage IIA CC (N = 504)</th>
<th>Stage IIA Ref</th>
<th>Stage IIB CC (N = 284)</th>
<th>Stage IIB Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>99.3 (286)</td>
<td></td>
<td>97.5 (265)</td>
<td></td>
<td>96.4 (237)</td>
<td></td>
<td>94.2 (209)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>99.3 (977)</td>
<td></td>
<td>98.4 (927)</td>
<td></td>
<td>97.2 (870)</td>
<td></td>
<td>95.1 (803)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>97.6 (468)</td>
<td></td>
<td>95.2 (437)</td>
<td></td>
<td>91.0 (392)</td>
<td></td>
<td>87.6 (361)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>95.7 (261)</td>
<td></td>
<td>90.1 (233)</td>
<td></td>
<td>86.1 (214)</td>
<td></td>
<td>82.8 (197)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Percent Survival and (Number at Risk) by Stage

Patients who received radiation therapy at Cleveland Clinic main campus

CC = Cleveland Clinic

Overall Survival of Patients With Late-Stage Breast Cancer Treated With Radiation (N = 466) 1996 – 2012

Percent Survival

Percent Survival and (Number at Risk) by Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIIA</td>
<td>95.0</td>
<td>87.7</td>
<td>83.4</td>
<td>80.2</td>
<td>76.6</td>
</tr>
<tr>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIIB</td>
<td>88.6</td>
<td>73.1</td>
<td>68.1</td>
<td>63.0</td>
<td>59.1</td>
</tr>
<tr>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IIIC</td>
<td>90.2</td>
<td>72.1</td>
<td>62.5</td>
<td>55.6</td>
<td>46.3</td>
</tr>
<tr>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>60.9</td>
<td>47.0</td>
<td>36.5</td>
<td>28.6</td>
<td>25.0</td>
</tr>
<tr>
<td>Ref</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Patients who received radiation therapy at Cleveland Clinic main campus

CC = Cleveland Clinic

Specialized Women’s Health

The Center for Specialized Women’s Health comprises an interdisciplinary team that specializes in addressing health issues specific to women, such as menstrual disorders, alternatives to hysterectomy, hormone therapies, uterine fibroids, urinary incontinence, and osteoporosis.

The center began using zoledronic acid in 2008 to treat women with osteopenia and osteoporosis. In the majority of patients, this treatment has helped prevent further deterioration of bone mineral density.

**Diagnosis of Patients Treated With Zoledronic Acid 5 mg (N = 246)**

2008 – 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>46</td>
<td>19%</td>
</tr>
<tr>
<td>2009</td>
<td>43</td>
<td>17%</td>
</tr>
<tr>
<td>2010</td>
<td>157</td>
<td>64%</td>
</tr>
<tr>
<td>2011</td>
<td>63</td>
<td>27%</td>
</tr>
<tr>
<td>2012</td>
<td>98</td>
<td>41%</td>
</tr>
</tbody>
</table>

*Osteopenia is defined by a bone mineral density T-score between –2.5 and –1.0; clinical osteoporosis is defined by a fragility fracture with osteopenia; osteoporosis is defined by a bone mineral density T-score ≤ –2.5.

**Change in Bone Mineral Density* After Treatment With Zoledronic Acid 5 mg (N = 246)**

2008 – 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>65</td>
<td>27%</td>
</tr>
<tr>
<td>2009</td>
<td>12</td>
<td>5%</td>
</tr>
<tr>
<td>2010</td>
<td>63</td>
<td>27%</td>
</tr>
<tr>
<td>2011</td>
<td>98</td>
<td>41%</td>
</tr>
</tbody>
</table>

*Improvement or deterioration in bone mineral density is defined as a difference of at least 0.03 g/cm² between the baseline and two-year follow-up scans.

**Zoledronic Acid* Injections Administered for Low Bone Mineral Density (N = 246)**

2008 – 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>27%</td>
</tr>
<tr>
<td>2009</td>
<td>5%</td>
</tr>
<tr>
<td>2010</td>
<td>27%</td>
</tr>
<tr>
<td>2011</td>
<td>41%</td>
</tr>
<tr>
<td>2012</td>
<td>19%</td>
</tr>
</tbody>
</table>

*Some patients received more than one injection.
While success rates for in vitro fertilization (IVF) continue to improve over time, the patient's age remains the strongest predictor of success. Cleveland Clinic’s In Vitro Fertilization Laboratory employs cutting-edge technology for the culture, growth, and assessment of embryos. The laboratory’s extensive database allows tracking and analysis of morphologic features that indicate which embryos are most likely to result in pregnancies. The EmbryoScope™ Time Lapse System, introduced to the laboratory in 2012, enables continuous monitoring of embryo growth with time lapse imaging, further enhancing the ability to select embryos most likely to implant successfully. (For more information about the EmbryoScope, see page 47 of the Innovations section.) The research laboratory has also been instrumental in developing and advancing novel technologies for cryopreservation of embryos, oocytes, and individually selected sperm.

### Clinical Pregnancies

**IVF Success Rates — Day 3 and Day 5 Transfers**

**2012**

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>&lt; 35</th>
<th>35–37</th>
<th>38–40</th>
<th>41–42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrievals</td>
<td>154</td>
<td>83</td>
<td>82</td>
<td>33</td>
</tr>
<tr>
<td>Transfers</td>
<td>154</td>
<td>75</td>
<td>80</td>
<td>29</td>
</tr>
<tr>
<td>Average Number of Embryos Transferred per Patient</td>
<td>2.0</td>
<td>2.1</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Clinical Pregnancy Rate</td>
<td>56%</td>
<td>52%</td>
<td>40%</td>
<td>31%</td>
</tr>
<tr>
<td>Implantation Rate</td>
<td>37%</td>
<td>30%</td>
<td>22%</td>
<td>12%</td>
</tr>
<tr>
<td>Singletons</td>
<td>67%</td>
<td>64%</td>
<td>66%</td>
<td>89%</td>
</tr>
<tr>
<td>Twins</td>
<td>33%</td>
<td>36%</td>
<td>31%</td>
<td>11%</td>
</tr>
<tr>
<td>Triplets</td>
<td>0</td>
<td>0</td>
<td>3%</td>
<td>0</td>
</tr>
</tbody>
</table>
## Clinical Pregnanacies

### IVF Success Rates — Day 5 Transfer of Blastocyst Stage Embryos

#### 2012

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>&lt; 35</th>
<th>35–37</th>
<th>38–40</th>
<th>41–42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>45</td>
<td>26</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Average Number of Embryos Transferred per Patient</td>
<td>1.7</td>
<td>2.2</td>
<td>2.2</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Pregnancy Rate</td>
<td>80%</td>
<td>77%</td>
<td>50%</td>
<td>20%</td>
</tr>
<tr>
<td>Implantation Rate</td>
<td>67%</td>
<td>55%</td>
<td>33%</td>
<td>7%</td>
</tr>
</tbody>
</table>

#### Pregnancies:

<table>
<thead>
<tr>
<th></th>
<th>&lt; 35</th>
<th>35–37</th>
<th>38–40</th>
<th>41–42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singletons</td>
<td>56%</td>
<td>45%</td>
<td>67%</td>
<td>100%</td>
</tr>
<tr>
<td>Twins</td>
<td>44%</td>
<td>55%</td>
<td>33%</td>
<td>0</td>
</tr>
<tr>
<td>Triplets</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### IVF Success Rates — Frozen Embryo Transfers

#### 2012

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>&lt; 39</th>
<th>≥ 39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>156</td>
<td>79</td>
</tr>
<tr>
<td>Average Number of Embryos Transferred per Patient</td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>Clinical Pregnancy Rate</td>
<td>47%</td>
<td>43%</td>
</tr>
<tr>
<td>Implantation Rate</td>
<td>30%</td>
<td>27%</td>
</tr>
</tbody>
</table>

#### Pregnancies:

<table>
<thead>
<tr>
<th></th>
<th>&lt; 39</th>
<th>≥ 39</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singletons</td>
<td>83%</td>
<td>85%</td>
</tr>
<tr>
<td>Twins</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Triplets</td>
<td>1%</td>
<td>0</td>
</tr>
</tbody>
</table>
**IVF Success Rates — Donor Egg Cycles**

2012

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>22</td>
</tr>
<tr>
<td>Average Number of Embryos Transferred per Patient</td>
<td>1.9</td>
</tr>
<tr>
<td>Clinical Pregnancy Rate</td>
<td>59%</td>
</tr>
<tr>
<td>Implantation Rate</td>
<td>48%</td>
</tr>
</tbody>
</table>

**Pregnancies:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Singletons</td>
<td>46%</td>
</tr>
<tr>
<td>Twins</td>
<td>54%</td>
</tr>
<tr>
<td>Triplets</td>
<td>0</td>
</tr>
</tbody>
</table>

**Live Births**

**IVF Success Rates and Live Births — Fresh Embryos From Nondonor Eggs**

2011

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>&lt; 35</th>
<th>35–37</th>
<th>38–40</th>
<th>41–42</th>
<th>&gt; 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>172</td>
<td>84</td>
<td>68</td>
<td>29</td>
<td>9</td>
</tr>
<tr>
<td>Average Number of Embryos Transferred per Patient</td>
<td>2.0</td>
<td>2.4</td>
<td>2.7</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Number of Live Births</td>
<td>77</td>
<td>51</td>
<td>17</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of Transfers Resulting in Live Births</td>
<td>45%</td>
<td>61%</td>
<td>25%</td>
<td>24%</td>
<td>0</td>
</tr>
<tr>
<td>Singletons</td>
<td>66%</td>
<td>82%</td>
<td>65%</td>
<td>86%</td>
<td>0</td>
</tr>
<tr>
<td>Twins</td>
<td>31%</td>
<td>18%</td>
<td>29%</td>
<td>14%</td>
<td>0</td>
</tr>
<tr>
<td>Triplets or More</td>
<td>3%</td>
<td>0</td>
<td>6%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
IVF Success Rates and Live Births — Thawed Embryos From Nondonor Eggs*

<table>
<thead>
<tr>
<th>Patient Age (years)</th>
<th>&lt; 35</th>
<th>35–37</th>
<th>38–40</th>
<th>41–42</th>
<th>&gt; 42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>93</td>
<td>51</td>
<td>41</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Percentage of Transfers Resulting in Live Births</td>
<td>41%</td>
<td>37%</td>
<td>39%</td>
<td>29%</td>
<td>14%</td>
</tr>
</tbody>
</table>

IVF Success Rates and Live Births — Donor Eggs (All Ages)*

<table>
<thead>
<tr>
<th>Fresh Embryos</th>
<th>Thawed Embryos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfers</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Percentage of Transfers Resulting in Live Births</td>
<td>42%</td>
</tr>
</tbody>
</table>

*Clinical pregnancy determined by presence of fetal heartbeat on ultrasound. A comparison of success rates may not be meaningful because patient medical characteristics and treatment approaches may vary from center to center. Data obtained from the Society for Assisted Reproductive Technology Clinical Outcomes Reporting System.
Fetal Testing
2008 – 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,916</td>
</tr>
<tr>
<td>2009</td>
<td>1,919</td>
</tr>
<tr>
<td>2010</td>
<td>3,303</td>
</tr>
<tr>
<td>2011</td>
<td>4,026</td>
</tr>
<tr>
<td>2012</td>
<td>4,311</td>
</tr>
</tbody>
</table>

Genetic Screening
2008 – 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,916</td>
</tr>
<tr>
<td>2009</td>
<td>1,919</td>
</tr>
<tr>
<td>2010</td>
<td>3,303</td>
</tr>
<tr>
<td>2011</td>
<td>4,026</td>
</tr>
<tr>
<td>2012</td>
<td>4,311</td>
</tr>
</tbody>
</table>

*Tracking of cell-free DNA began in 2012.*

- Cell-Free DNA*
- Chorionic Villus Sampling
- Amniocentesis
- Nuchal Translucency

Biophysical Profiles
- Doppler
- Nonstress Test
Fetal Care Center

The goal of the Fetal Care Center is to coordinate care for women with pregnancies complicated by fetal anomalies or critical maternal illness. Disciplines involved in prenatal diagnosis and counseling include maternal-fetal medicine specialists, neonatologists, and pediatric specialists in surgery, imaging, and medical management. In the event of critical maternal illness, consultation is sought from appropriate medical and surgical subspecialists. A collaborative plan is then developed for the pregnancy and may include fetal interventions or maternal medical and/or surgical treatment. The fetal care coordinator supports patients and their families throughout the entire process by providing education, facilitating communication, and incorporating the appropriate ancillary services.

Fetal Abnormalities*

2011 – 2012

*Some fetuses exhibited more than one abnormality.
Outcomes reporting for all Cleveland Clinic health system deliveries began in 2011. In previous years, only data for deliveries attended by Cleveland Clinic staff at health system community hospitals were reported in the Ob/Gyn & Women’s Health Institute Outcomes books. During 2011 and 2012, dozens of community-based obstetrician-gynecologists joined Cleveland Clinic’s staff and now attend 70% of all births at health system hospitals. As a result, this 2012 edition reports obstetric data for all births, including those attended by both staff and private physicians, at Cleveland Clinic health system community hospitals and the main campus. To support staff and hospital integration, the Regional Quality Collaborative was formed to standardize quality metrics. All sites transitioned to a common electronic health record platform in the fourth quarter of 2012, and data are reported through the end of the third quarter pending enterprise-wide report development.

**Cesarean Delivery**  
*January 2011 – September 2012*

![Cesarean Delivery Chart]

*N = Number of low-risk, first-birth women (i.e., nulliparous, term, singleton, vertex presentation)  
Source: California Maternal Quality Care Collaborative  

**Labor Induction**  
*January 2011 – September 2012*

![Labor Induction Chart]

Induction of labor is an intervention designed to artificially initiate uterine contractions leading to progressive dilatation and effacement of the cervix and birth of the baby.  

*N = All deliveries  
Vaginal Birth After Cesarean Delivery
January 2011 – September 2012

*\(N\) = Number of patients with prior cesarean delivery

Source: Vaginal Birth After Cesarean (VBAC) Rate, All Inpatient Quality Indicators #34 Area-Level Indicator, Procedure Utilization Indicator, AHRQ Quality Indicators, Version 4.3, August 2011 qualityindicators.ahrq.gov/Downloads/Modules/IQI/V43/TechSpecs/IQI%2034%20Vaginal%20Birth%20After%20Cesarean%20(VBAC)%20Rate%20All.pdf

Benchmark: VBAC delivery rate of U.S. News & World Report “Top Ten Hospitals.” These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. uhc.edu

Successful Trial of Labor After Cesarean Delivery
January 2011 – September 2012

*\(N\) = Patients with prior cesarean delivery who underwent trial of labor

Elective Deliveries at < 39 Weeks

January 2011 – September 2012

Percent

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2011</th>
<th>2012</th>
<th>Benchmark</th>
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</thead>
<tbody>
<tr>
<td>Q1</td>
<td>176</td>
<td>183</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>190</td>
<td>169</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>324</td>
<td>363</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>371</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*N = Number of deliveries occurring between 37 and 39 weeks' gestation

Source: Joint Commission, JCAHO PC-01


Episiotomy

January 2011 – September 2012

Percent

<table>
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<tr>
<th>Quarter</th>
<th>2011</th>
<th>2012</th>
<th>Benchmark</th>
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<tbody>
<tr>
<td>Q1</td>
<td>1,684</td>
<td>1,789</td>
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<tr>
<td>Q2</td>
<td>2,017</td>
<td>1,753</td>
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<tr>
<td>Q3</td>
<td>1,546</td>
<td>1,797</td>
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<tr>
<td>Q4</td>
<td>1,896</td>
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</tbody>
</table>

*N = Number of vaginal deliveries

Source: National Perinatal Information Center

Third- and Fourth-Degree Lacerations in Vaginal Deliveries With Instrument Assistance

January 2011 – September 2012

Rate per 1,000 Deliveries

<table>
<thead>
<tr>
<th>Quarter</th>
<th>2011</th>
<th>2012</th>
<th>Benchmark</th>
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<tbody>
<tr>
<td>Q1</td>
<td>108</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>101</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>91</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>114</td>
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</tbody>
</table>

*N = Total number of instrument-assisted vaginal deliveries

Source: Obstetric Trauma Rate-Vaginal Delivery With Instrument, Patient Safety Indicator #18, Provider-Level Indicator, AHRQ Quality Indicators, Version 4.3, August 2011. qualityindicators.ahrq.gov/Downloads/Modules/PSI/V43/TechSpecs/PSI%2018%20Obstetric%20Trauma%20Rate-Vaginal%20Delivery%20With%20Instrument.pdf

Benchmark: University HealthSystem Consortium 50th percentile for 2011 and 90th percentile for 2012. These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. uhc.edu
Postpartum Depression Screening
May – December 2012

*N = Patients who have given birth presenting for six-week postpartum visit.

To optimize outpatient screening for postpartum depression, an electronic questionnaire was developed in the prenatal record for use in all outpatient postpartum encounters. All outpatient prenatal caregivers received training in use of the questionnaire between May and September. The screening rates improved month by month throughout the year, and > 90% of patients are currently being screened at their six-week outpatient postpartum visits. Patients with symptoms of depression are identified, and opportunities for treatment and intervention are maximized.
The American College of Surgeons’ National Surgical Quality Improvement Program (NSQIP) objectively measures and reports risk-adjusted surgical outcomes based on a defined sampling and abstraction methodology. These outcomes data reflect Cleveland Clinic’s NSQIP performance benchmarked against more than 350 participating hospitals.

Overall mortality was significantly lower than expected, and overall morbidity was significantly higher than expected.

In addition to overall surgical performance, NSQIP data specific to gynecologic surgery are provided. There was no significant difference between gynecologic surgery observed and expected rates.
Surgical Care Improvement Program (SCIP) — Appropriateness of Care

This composite metric, based on 10 hospital surgical quality process measures developed by the Centers for Medicare & Medicaid Services, shows the percentage of patients who received all the recommended care for which they were eligible.

Cleveland Clinic Surgical Appropriateness of Care

2011–2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
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<tbody>
<tr>
<td>2011</td>
<td>92.3</td>
</tr>
<tr>
<td>2012</td>
<td>93.0</td>
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</table>

N = 1,501 1,293

UHC 90th Percentile, 2012*

*These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. uhc.edu

Cleveland Clinic has set a target of UHC’s 90th percentile, and results are trending positively.
Cleveland Clinic is dedicated to delivering excellent clinical outcomes and the best possible experience for our patients and their families. Patient feedback is critical in driving priorities and assessing results. Based on this feedback, Cleveland Clinic’s Office of Patient Experience implements training programs to improve service and communication as well as educational initiatives to help patients understand what to expect when they are in our care.

**Outpatient Office Survey — Ob/Gyn & Women’s Health Institute**

2011 – 2012

<table>
<thead>
<tr>
<th>Percent Best Response*</th>
<th>2011 (N = 5,712)</th>
<th>2012 (N = 6,363)</th>
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<tr>
<td>Appt Access/ Check-In</td>
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<tr>
<td>Clinic Wait Times</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Comfort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse and Assistant</td>
<td></td>
<td></td>
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<tr>
<td>Physician</td>
<td></td>
<td></td>
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<tr>
<td>Concern for Needs and</td>
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<tr>
<td>Privacy</td>
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<td></td>
</tr>
<tr>
<td>Overall Assessment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Response options: Very Good, Good, Fair, Poor, Very Poor
Each bar represents a composite score based on responses to multiple survey questions.
Source: Press Ganey, a national hospital survey vendor
The Centers for Medicare & Medicaid Services requires United States hospitals that treat Medicare patients to participate in the national Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, a standardized tool that measures patients’ perspectives of hospital care. Results collected for public reporting are available at medicare.gov/hospitalcompare.

The guiding principle of Cleveland Clinic is “Patients First,” and improving the patient experience is a major strategic organizational goal. The Office of Patient Experience collaborates with physician and nursing leadership to establish best practices and implement standardized protocols that ensure delivery of patient-centered care.

**HCAHPS Domains of Care**

2011 – 2012

*Except for “Room Clean” and “Quiet at Night,” each bar represents a composite score based on responses to multiple survey questions.

Source: Press Ganey, a national hospital survey vendor
Overview

Cleveland Clinic health system uses a scorecard approach to measure and monitor quality, safety, and patient experience. Real-time dashboard data are leveraged in each location to drive performance improvement. Although not an exact match to publicly reported data, more timely internal data create transparency at all organizational levels and support improved care in all clinical locations. The following measures are examples of health system 2012 quality and safety focus areas. Throughout this section, “Cleveland Clinic” refers to the academic medical center or “main campus,” and those results are shown.

Cleveland Clinic Core Measures
Appropriateness of Care

2011 – 2012

Cleveland Clinic monitors 30-day readmission rates for any reason to any of its system hospitals. Unplanned readmissions are actively reviewed for improvement opportunities. Strategies associated with communication, education, and follow-up have been implemented for several high-risk conditions, including heart failure and pneumonia. These practices are being expanded and enhanced to reduce overall avoidable readmissions.

Cleveland Clinic's goal is for all patients to receive all the recommended care for their condition. An aggregated “all or nothing” measurement approach to monitoring multiple publicly reported process-of-care measures for heart failure, acute myocardial infarction, pneumonia, and surgery patients yields results consistently above 94%.

All-Cause 30-Day Readmission Rate to Any Cleveland Clinic Hospital

2011 – 2012
Cleveland Clinic Overall In-Hospital Mortality
Observed/Expected Ratio

2011 – 2012

Cleveland Clinic's observed/expected (O/E) mortality ratio outperformed the University HealthSystem Consortium (UHC) academic medical center 50th percentile throughout 2012 based on the UHC 2012 risk model. Ratios less than 1.0 indicate mortality performance “better than” expected in UHC’s risk adjustment model.

*These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. [uhc.edu](http://www.uhc.edu)
Cleveland Clinic continues to improve its performance with respect to postoperative blood clots (AHRQ Patient Safety Indicator 12). Improved screening and prevention strategies have led to a 45% reduction in these events over the past two years.

Cleveland Clinic has implemented several strategies to reduce central line-associated bloodstream infections (CLABSI), including a central-line bundle of insertion, maintenance, and removal best practices. In 2012, Cleveland Clinic initiated focused reviews of every CLABSI occurrence and is introducing equipment and technology to support reductions in CLABSI rates in its high-risk critical care population.

*These data are prepared using the University HealthSystem Consortium (UHC) Clinical Database. [uhc.edu](http://uhc.edu)
A pressure ulcer is an injury to the skin that can be caused by pressure, moisture, or friction. These sometimes occur when patients have difficulty changing positions on their own. Cleveland Clinic caregivers have been trained to provide appropriate skin care and regular repositioning help while taking advantage of special devices and mattresses to reduce pressure for high-risk patients. In addition, they actively look for hospital-acquired pressure ulcers and treat them quickly if they occur.

Nationally, falls are a leading cause of hospital patient injury. Cleveland Clinic fall prevention efforts include identifying patients who are at risk for falls, checking on them frequently, assisting them to the bathroom, and providing nonskid footwear. Caregivers make sure patients have all necessary items, including a call light, within easy reach.
Patient Experience

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is a standardized national tool used to measure patients’ perspectives of hospital care. Results collected for public reporting are available at medicare.gov/hospitalcompare.

Cleveland Clinic HCAHPS Overall Assessment
2011 – 2012

Percent Best Response*

<table>
<thead>
<tr>
<th></th>
<th>2011 (N = 10,378)</th>
<th>2012 (N = 11,190)</th>
<th>National Average</th>
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</thead>
<tbody>
<tr>
<td>Recommend Hospital (% Definitely Yes)*</td>
<td>84.0</td>
<td>84.9</td>
<td></td>
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<tr>
<td>Hospital Rating (% 9 or 10) 0–10 Scale</td>
<td>80.0</td>
<td>80.8</td>
<td></td>
</tr>
</tbody>
</table>

*Response options: Definitely Yes, Probably Yes, Probably No, Definitely No

Source: Centers for Medicare & Medicaid Services and Press Ganey, a national hospital survey vendor
The guiding principle of Cleveland Clinic is “Patients First,” and improving the patient experience is a major strategic organizational goal. The Office of Patient Experience collaborates with physician and nursing leadership to establish best practices and implement standardized protocols that ensure delivery of patient-centered care.
Laparoscopic Sacrocolpopexy Simulation Model for Surgical Training

Laparoscopic suturing integrates several critical skills such as depth perception, bimanual dexterity, efficiency, and tissue handling. Suturing with mesh manipulation is one of the most challenging tasks for surgeons performing laparoscopic sacrocolpopexy. At the same time, suturing is the easiest part of the technique to simulate with a low-fidelity model because it is the least variable and most repetitive skill required for successful and efficient completion of the procedure.

Ob/Gyn & Women’s Health Institute surgeons have designed a simulation model useful for training surgeons in several key steps involved in laparoscopic sacrocolpopexy. The model primarily focuses on attaching the mesh to the anterior and posterior sides of the vaginal apex.

The simulation model uses a vaginal manipulator, which is a probe on a RUMI® handle that institute surgeons have affixed to a Fundamentals of Laparoscopic Surgery trainer box. A material used to simulate the vagina has been incorporated so that this model may be used by surgeons in training for laparoscopic or robotic-assisted laparoscopic sacrocolpopexy. The training simulator can also be adapted for a robotic platform. This model was presented at the 38th Society of Gynecologic Surgeons Annual Meeting and is currently undergoing validity testing.
**Advanced Embryo Monitoring**

In 2012 Cleveland Clinic’s in vitro fertilization lab at the Beachwood Family Health and Surgery Center became the only lab in Ohio and one of 10 in the United States to use the EmbryoScope™ Time Lapse System for continuous embryo monitoring from conception to time of transfer. This technology enhances understanding of embryo development and allows staff to identify new grading criteria for embryo selection. A built-in camera provides automated and continuous time-lapse imaging of fertilized oocytes without disturbing their environment. Up to 72 embryos — 12 from each of six patients — can be incubated simultaneously.

Data suggest that the timing of variables such as pronuclear formation, syngamy, early cleavage, compaction, and cavitation are indicators of an embryo’s developmental potential, and embryologists now have the ability to evaluate these variables at many more time points. As more information about the early development of the embryos and resulting pregnancies is gathered, in vitro fertilization programs can refine their grading criteria, enabling selection of embryos with the best implantation potential. The device has already yielded several successful pregnancies for Cleveland Clinic patients.

A novel benefit for patients is that they can receive a CD with images showing the cleavage of their embryos prior to implantation, which allows them to witness the development of their baby from the very beginning.

---

**Robotic Intracorporeal Total Pelvic Exenteration — Maximally Aggressive Surgery Performed in a Minimally Invasive Fashion**

Pelvic exenteration is a complicated and lengthy procedure to remove the entire pelvic contents, including the uterus, vagina, rectum, and bladder, with reconstruction of an ileal conduit using a portion of small or large bowel. The majority of pelvic exenterations are performed with intent to cure in patients with central pelvic recurrence of gynecologic cancers who have failed previous treatments, including radiation and chemotherapy. Traditional pelvic exenteration surgery has been associated with a high risk of major complications, lengthy hospitalization, massive blood loss, frequent readmission, and increased intraoperative mortality.

In 2012 an elderly Ob/Gyn & Women’s Health Institute patient underwent a robotic total pelvic exenteration with an excellent outcome. There were no procedural complications, recovery was uneventful, and blood loss was minimal. This minimally invasive approach can be offered to appropriate candidates and is highly beneficial for elderly patients who were not previously considered pelvic exenteration candidates because of the associated high morbidity.
Ob/Gyn & Women’s Health Institute staff authored more than 90 publications in 2012. For a complete list, go to clevelandclinic.org/outcomes.

Center for Specialized Women’s Health


Selected Publications

**Obstetrics and Gynecology**


Diwadkar GB, Hunter C, Barber MD, Jelovsek JE. Understanding the critical components of performing vaginal hysterecy with cognitive task analysis. 


Falcone T. Single-port/single-site laparoscopic procedures. 

Falcone T. Vaginal cuff dehiscence after hysterectomy. 

Falcone T. What is new in minimally invasive surgery? Best articles from the past year. 

Gibson KS, Muffy TM, Penick E, Barber MD. Factors used by program directors to select obstetrics and gynecology fellows. 


Jeppson PC, Paraiso MFR, Jelovsek JE, Barber MD. Accuracy of the digital anal examination in women with fecal incontinence. 
Int Urogynecol J. 2012 Jun;23(6):765-768.


Rose PG. Which is the best foot to put forward in recurrent ovarian cancer? *Cancer.* 2012 Jul 1;118(13):3229-3231.

Rose PG. Are the differences in treatment outcome for adenocarcinoma of the cervix different enough to change the treatment paradigm? *Gynecol Oncol.* 2012 May;125(2):285-286.


**Regional Obstetrics and Gynecology**

Some physicians may practice in multiple locations. For a detailed list including staff photos, please visit clevelandclinic.org/staff.

<table>
<thead>
<tr>
<th>Institute Chair</th>
<th>Obstetrics and Gynecology Chair</th>
<th>Maternal-Fetal Medicine Section Chair</th>
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</thead>
<tbody>
<tr>
<td>Tommaso Falcone, MD</td>
<td>Tommaso Falcone, MD</td>
<td>Jeffrey Chapa, MD</td>
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<td>Linda Bradley, MD</td>
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<td>Julian Peskin, MD</td>
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<th>Institute Patient Experience Officer</th>
<th>Section Head, General Obstetrics and Gynecology, Fairview Hospital</th>
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<td>Gretchen Fisher, MD</td>
<td>Amanda Kalan, MD</td>
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<tr>
<td>J. Eric Jelovsek, MD</td>
<td>Robert Kiwi, MD</td>
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<td>Mohammad Rajabi, MD</td>
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<td>S. Jules Moodley, MD</td>
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<td>Natalie Drake, MD</td>
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<td>Yogesh Shah, MD</td>
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Reproductive Endocrinology and Infertility Section
Jeffrey M. Goldberg, MD
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Nina Desai, PhD
Tommaso Falcone, MD
Hanna Lisboa, MD
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Piyush Mathur, MD
Joti Juneja Mucci, MD
Douglas Naylor Jr., MD
William Phillips, MD
Marc Popovich, MD
Nadeem Rahman, MD
Nicholas Russo, MD
Anand Satyapriya, MD
Ellen Wurm, MD

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Charanjit Bahniwal, MD
Matvey Bobylev, MD
Raymond Borkowski, MD
Thomas Bralliar, MD
Miguel Cruz, MD
Kenneth Cummings, MD
Hesham Elsharkawy, MD
John George III, MD
Marguerite Group, MD
Maria Inton-Santos, MD
John Jerabek, DO
Allen Keebler, DO
Paul Kempen, MD, PhD
Reem Khatib, MD
Tatyana Kopyeva, MD
Mariel Manlapaz, MD
Loran Mounir, MD
Mauricio Perilla, MD
Antonio Ramirez, MD
Stacy Ritzman, MD
Peter Schoenwald, MD
Olusegun Senbore, MD
Wolf Stapelfeldt, MD
Karen Steckner, MD
John Tetzlaff, MD
Solur Udayashankar, MD
Claudene Vlah, MD
Guangxiang Yu, MD

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Charles Biscotti, MD
Jennifer Brainard, MD
Andres Chiesa-Vottero, MD
Abha Goyal, MD
Christopher Przybycin, MD
Andres Roma, MD
Bin Yang, MD, PhD
Institute Overview

General Patient Referral
24/7 hospital transfers or physician consults
800.553.5056

Obstetrics and Gynecology
Appointments/Referrals
216.444.6601 or 800.223.2273, ext. 46601

Women’s Health and Breast Pavilion Appointments/Referrals
216.444.3024 or 800.223.2273, ext. 43024

Additional Contact Information

General Information
216.444.2200

Hospital Patient Information
216.444.2000

General Patient Appointments
216.444.2273 or 800.223.2273

Referring Physician Center and Hotline
24/7 hotline to streamline access to our array of medical services and schedule patient appointments
855.REFER.123 (855.733.3712
email refdr@ccf.org or visit clevelandclinic.org/refer123

Request for Medical Records
216.444.2640 or 800.223.2273, ext. 42640

Same-Day Appointments
216.444.CARE (2273)

Global Patient Services/International Center
Complimentary assistance for international patients and families
001.216.444.8184
or visit clevelandclinic.org/gps

Medical Concierge
Complimentary assistance for out-of-state patients and families
800.223.2273, ext. 55580, or email medicalconcierge@ccf.org

Cleveland Clinic Abu Dhabi
clevelandclinicabudhabi.ae

Cleveland Clinic Canada
888.507.6885

Cleveland Clinic Florida
866.293.7866

Cleveland Clinic Nevada
702.483.6000

For address corrections or changes, please call
800.890.2467

4HER® Women’s Health Advice Line
Monday through Friday, 8:30 a.m. to 4:30 p.m.
216.444.4HER (4437) or 800.223.2273, ext. 44437

On the Web at
clevelandclinic.org/obgyn
clevelandclinic.org/womenshealth
clevelandclinic.org/breastcenter
Institute Locations

Cleveland Clinic
Ob/Gyn & Women’s Health Institute physicians see patients at the following locations. Please inquire about the availability of specific services at each location when calling.

**Main Campus**
9500 Euclid Ave.
Cleveland, OH 44195
Breast Pavilion: 216.444.3024
Center for Specialized Women’s Health: 216.444.3024
Obstetrics and Gynecology: 216.444.6601

**Avon Pointe Family Health Center**
36901 American Way
Avon, OH 44011
440.930.6200

**Beachwood Family Health and Surgery Center**
26900 Cedar Road
Beachwood, OH 44122
Breast Center: 216.839.3200
Fertility Center at Beachwood: 216.839.3150
Obstetrics and Gynecology: 216.839.3100

**Brunswick Family Health Center**
3574 Center Road
Brunswick, OH 44212
330.225.8886

**Gemini Towers**
2001 Crocker Road
Westlake, OH 44145
Suite 520: 440.835.6132
Suite 650: 440.808.1905

**Elyria Family Health and Surgery Center**
303 Chestnut Commons Drive
Elyria, OH 44035
440.366.9444

**Fairview Hospital**
18099 Lorain Ave.
Cleveland, OH 44111
Breast Services: 216.252.2235
Gynecologic Oncology (Moll Cancer Center): 216.476.7540
Incontinence Clinic: 216.671.0380
Maternal-Fetal Medicine: 216.476.7144
Obstetrics and Gynecology: 216.476.7912

**Hillcrest Hospital**
6780 Mayfield Road
Mayfield Heights, OH 44124
Breast Services: 440.312.5569
Gynecologic Oncology: 440.312.5560
Maternal-Fetal Medicine: 440.312.2229
Obstetrics and Gynecology
Suite 205: 440.312.3500
Suite 426: 440.312.2229

**Hillcrest Medical Office Building I**
6803 Mayfield Road
Mayfield Heights, OH 44124
440.312.9000

**Independence Family Health Center**
Crown Centre II
5001 Rockside Road
Independence, OH 44131
216.986.4130
<table>
<thead>
<tr>
<th>Hospital/Center</th>
<th>Address</th>
<th>Contact Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lakewood Hospital Community Health Center</td>
<td>1450 Belle Ave., Lakewood, OH 44107</td>
<td>Maternal-Fetal Medicine: 216.529.2202</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obstetrics and Gynecology: 216.529.2913</td>
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<tr>
<td>Lorain Family Health and Surgery Center</td>
<td>5700 Cooper Foster Park Road, Lorain, OH 44053</td>
<td>440.204.7400</td>
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<td>Lutheran Hospital</td>
<td>1730 W. 25th St., Cleveland, OH 44113</td>
<td>216.363.2312</td>
</tr>
<tr>
<td>Marymount Hospital and Medical Office Building</td>
<td>12000 McCracken Road Garfield Heights, OH 44125</td>
<td>216.663.7355</td>
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<tr>
<td>Medina Hospital</td>
<td>1000 E. Washington St., Medina, OH 44256</td>
<td>Maternal-Fetal Medicine: 330.725.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breast Services</td>
</tr>
<tr>
<td>Fairview Hospital Medical Offices</td>
<td>24700 Lorain Road North Olmsted, OH 44070</td>
<td>440.777.3800</td>
</tr>
<tr>
<td>Richard E. Jacobs Health Center</td>
<td>33100 Cleveland Clinic Blvd., Avon, OH 44011</td>
<td>440.695.4000</td>
</tr>
<tr>
<td>Ridgepark Medical Office Building</td>
<td>7575 Northcliff Ave., Brooklyn, OH 44144</td>
<td>216.398.5988</td>
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<tr>
<td>Solon Family Health Center</td>
<td>29800 Bainbridge Road Solon, OH 44139</td>
<td>440.519.6800</td>
</tr>
<tr>
<td>Medina Medical Office Building</td>
<td>970 E. Washington St., Medina, OH 44256</td>
<td>330.725.5282</td>
</tr>
<tr>
<td>Stephanie Tubbs Jones Health Center</td>
<td>13944 Euclid Ave., East Cleveland, OH 44112</td>
<td>216.767.4242</td>
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<tr>
<td>Strongsville Family Health and Surgery Center</td>
<td>16761 SouthPark Center Strongsville, OH 44136</td>
<td>440.878.2500</td>
</tr>
<tr>
<td>Twincity Family Health and Surgery Center</td>
<td>8701 Darrow Road Twinsburg, OH 44087</td>
<td>330.888.4000</td>
</tr>
<tr>
<td>Westlake Medical Campus</td>
<td>850 Columbia Road Westlake, OH 44145</td>
<td>Maternal-Fetal Medicine: 216.476.7144</td>
</tr>
<tr>
<td>Westlake Medical Campus</td>
<td></td>
<td>Obstetrics and Gynecology: 440.835.3883</td>
</tr>
<tr>
<td>Willoughby Hills Family Health Center</td>
<td>2550 &amp; 2570 SOM Center Road Willoughby Hills, OH 44094</td>
<td>440.943.2500</td>
</tr>
<tr>
<td>Wooster Family Health Center</td>
<td>1740 Cleveland Road Wooster, OH 44691</td>
<td>330.287.4500</td>
</tr>
</tbody>
</table>
Overview

Cleveland Clinic is an academic medical center offering patient care services supported by research and education in a nonprofit group practice setting. More than 3,000 Cleveland Clinic staff physicians and scientists in 120 medical specialties care for more than 5 million patients across the system, performing more than 200,000 surgeries and conducting 450,000 Emergency Department visits. Patients come to Cleveland Clinic from all 50 states and more than 132 nations around the world.

Cleveland Clinic is an integrated healthcare delivery system with local, national, and international reach. The main campus in midtown Cleveland, Ohio, has a 1,450-bed hospital, outpatient clinic, specialty institutes, labs, classrooms, and research facilities in 46 buildings on 167 acres. Cleveland Clinic patients represent the highest CMS case-mix index in the nation. Cleveland Clinic encompasses 75 northern Ohio outpatient locations, including 16 full-service family health centers, eight community hospitals, an affiliate hospital, and a rehabilitation hospital for children. Cleveland Clinic also includes Cleveland Clinic Florida, Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, Cleveland Clinic Canada, and Sheikh Khalifa Medical City (management contract). Cleveland Clinic Abu Dhabi is a full-service hospital and outpatient center in the United Arab Emirates scheduled to begin offering services in 2014. Cleveland Clinic is the second-largest employer in Ohio with nearly 44,000 employees. It generates $10.5 billion of economic activity a year.

The Cleveland Clinic Model

Cleveland Clinic was founded in 1921 by four physicians who had served in World War I and hoped to replicate the organizational efficiency of military medicine. The organization has grown through the years by adhering to the model set forth by the founders. All Cleveland Clinic staff physicians receive a straight salary with no bonuses or other financial incentives. The hospital and physicians share a financial interest in controlling costs, and profits are reinvested in research and education.

The Cleveland Clinic system began to grow in 1987 with the founding of Cleveland Clinic Florida and expanded in the 1990s with the development of 16 family health centers across Northeast Ohio. Fairview Hospital, Hillcrest Hospital, and six other community hospitals joined Cleveland Clinic over the past decade and a half, offering Cleveland Clinic institute services in heart and neurological care, physical rehabilitation, and more. Clinical and support services were reorganized into 27 patient-centered institutes beginning in 2007. Institutes combine medical and surgical specialists around specific diseases or body systems under single leadership and in a shared location to provide optimal team care for every patient. Institutes work with the Office of Patient Experience to give every patient the best outcome and experience.
Cleveland Clinic Lerner Research Institute

At the Lerner Research Institute, hundreds of principal investigators, project scientists, research associates, and postdoctoral fellows are involved in laboratory-based translational and clinical research. Total research expenditures from external and internal sources exceeded $265 million in 2012. Research programs include cardiovascular, oncology, neurology, musculoskeletal, allergy and immunology, ophthalmology, metabolism, and infectious diseases.

Cleveland Clinic Lerner College of Medicine

Lerner College of Medicine of Case Western Reserve University, which celebrated its 10th anniversary in 2012, is known for its small class size, unique curriculum, and full-tuition scholarships for all students. The program is open to 32 students who are preparing to be physician investigators.

Graduate Medical Education

In 2012, nearly 1,800 residents and fellows trained at Cleveland Clinic and Cleveland Clinic Florida, which is part of a continuing upward trend.

U.S. News & World Report Ranking

Cleveland Clinic is consistently ranked among the top hospitals in America by U.S. News & World Report, and our heart and heart surgery program has been ranked No. 1 in the nation since 1995. In 2012, Cleveland Clinic’s urology and nephrology programs were both ranked No. 1 in the nation.

For more information about Cleveland Clinic, please visit clevelandclinic.org.
Referring Physician Center and Hotline
24/7 hotline to streamline access to our array of medical services and schedule patient appointments, call 855.REFER.123 (855.733.3712), email refdr@ccf.org, or visit clevelandclinic.org/refer123

Remote Consults
Online medical second opinions from Cleveland Clinic's MyConsult® are particularly valuable for patients who wish to avoid the time and expense of travel. Cleveland Clinic offers online medical second opinions for more than 1,200 life-threatening and life-altering diagnoses. For more information, visit clevelandclinic.org/myconsult, email eclevelandclinic@ccf.org, or call 800.223.2273, ext. 43223.

Request Medical Records
216.444.2640 or 800.223.2273, ext. 42640

Track Your Patients' Care Online
DrConnect® offers referring physicians secure access to their patients' treatment progress while at Cleveland Clinic. To establish a DrConnect account, visit clevelandclinic.org/drconnect or email drconnect@ccf.org.

Medical Records Online
Cleveland Clinic continues to expand and improve electronic medical records (EMRs) to provide faster, more efficient, and more accurate care by sharing patient data through a highly secure network. Patients using MyChart® can renew prescriptions and review test results and medications from their personal computers. MyChart provides a link to Microsoft HealthVault, a free online service that helps patients securely gather and store health information. It connects to Cleveland Clinic's social media and Internet site, currently the most visited hospital website in America. For more information, visit clevelandclinic.org/mychart.

Critical Care Transport Worldwide
Cleveland Clinic's critical care transport team and fleet of mobile ICU vehicles, helicopters, and fixed-wing aircraft serve critically ill and highly complex patients across the globe.

To arrange a transfer for STEMI (ST elevated myocardial infarction), acute stroke, ICH (intracerebral hemorrhage), SAH (subarachnoid hemorrhage), or aortic syndrome, call 877.379.CODE (2633).

For all other critical care transfers, call 216.444.8302 or 800.553.5056.

CME Opportunities: Live and Online
Cleveland Clinic's Center for Continuing Education operates one of the largest and most successful CME programs in the country. The center's website (ccfcme.org) is an educational resource for healthcare providers and the public. Available 24/7, it houses programs that cover topics in 30 areas. Among other resources, the website contains a virtual textbook of medicine (Disease Management Project) and myCME, a system for physicians to manage their CME portfolios. Live courses, however, remain the backbone of the center's CME operation. Most live courses are held in Cleveland, but outreach plans are underway.
Clinical Trials
Since its establishment in 1921, Cleveland Clinic has been an innovator in medical breakthroughs, with a mission of unlocking basic science and pursuing clinical research. Today, Cleveland Clinic is running more than 2,000 clinical trials of various types. Our researchers are focusing on an array of conditions, including breast and liver cancer, coronary artery disease, heart failure, epilepsy, Parkinson disease, chronic obstructive pulmonary disease, asthma, high blood pressure, diabetes, depression, and eating disorders. To learn more, go to clevelandclinic.org/research.

Healthcare Executive Education
Cleveland Clinic's dynamic executive education program provides real-world insights into the highly competitive business of healthcare. The Executive Visitors’ Program is an intensive three-day program that provides a behind-the-scenes view of our organization for the busy executive. The Samson Global Leadership Academy is a two-week immersion into the challenges of leadership, management, and innovation. The curriculum includes coaching and a personalized three-year leadership development plan. Learn more at clevelandclinic.org/execed.
This project would not have been possible without the commitment and expertise of a team led by Sharon Sutherland, MD; Chad Kunkle, MBA; Benjamin Nutter, MS; Lori Negron, BA; Scott Jahn, MBA; Valeri Audino, BS; and Janice SanMarco, RN, MBA.

Graphic design and photography were provided by Cleveland Clinic's Center for Medical Art and Photography.