Patients First
Quality counts when referring patients to hospitals and physicians, so Cleveland Clinic has created a series of Outcomes books similar to this one for many of its institutes. Designed for a healthcare provider audience, the Outcomes books contain a summary of our surgical and medical trends and approaches, data on patient volume and outcomes, and a review of new technologies and innovations.

Although we are unable to report all outcomes for all treatments provided at Cleveland Clinic — omission of outcomes for a particular treatment does not mean we necessarily do not offer that treatment — our goal is to increase outcomes reporting each year. When outcomes for a specific treatment are unavailable, we often report process measures that have documented relationships with improved outcomes. When process measures are unavailable, we report volume measures; a volume/outcome relationship has been demonstrated for many treatments, particularly those involving surgical technique.

Cleveland Clinic also supports transparent public reporting of healthcare quality data and participates in the following public reporting initiatives:

- Joint Commission Performance Measurement Initiative (www.qualitycheck.org)
- Centers for Medicare and Medicaid (CMS) Hospital Compare (www.hospitalcompare.hhs.gov)
- Leapfrog Group (www.leapfroggroup.org)
- Ohio Department of Health Service Reporting (www.odh.state.oh.us)

Our commitment to providing accurate, timely information about patient care is designed to help patients and referring physicians make informed healthcare decisions. We hope you find these data valuable. To view all our Outcomes books, visit Cleveland Clinic's Quality and Patient Safety website at clevelandclinic.org/quality/outcomes.
Dear Colleague:

I am proud to present the 2007 Cleveland Clinic Outcomes books. These books provide information on results, volumes and innovations related to Cleveland Clinic care. The books are designed to help you and your patients make informed decisions about treatments and referrals.

Over the past year, we enhanced our ability to measure outcomes by reorganizing our clinical services into patient-centered institutes. Each institute combines all the specialties and support services associated with a specific disease or organ system under a single leadership at a single site. Institutes promote collaboration, encourage innovation and improve patient experience. They make it easier to benchmark and collect outcomes, as well as implement data-driven changes.

Measuring and reporting outcomes reinforces our commitment to enhancing care and achieving excellence for our patients and referring physicians. With the institutes model in place, we anticipate greater transparency and more comprehensive outcomes reporting.

Thank you for your interest in Cleveland Clinic’s Outcomes books. I hope you will continue to find them useful.

Sincerely,

Delos M. Cosgrove, MD
CEO and President
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<th>Page</th>
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<td>05</td>
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<tr>
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<td>09</td>
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Institute Overview

Cleveland Clinic’s Endocrinology and Metabolism Institute is committed to providing the highest-quality healthcare to patients with diabetes, endocrine and metabolism disorders and obesity; to explore ways to improve their care; and to teach how best to treat these disorders.

For patients with Types 1 and 2 diabetes, we provide diabetes education and nutrition services, and offer an intensive insulin treatment clinic. Studies involving many new products to manage diabetes are ongoing.

We provide an array of disease-specific clinics, including a pituitary clinic, thyroid clinic, metabolic bone clinic, preventive cardiology clinic and a transition clinic to help children transition to adult endocrine care. For all our patients with endocrine disorders, we provide intensive weight-management programs and consultations.

Our endocrine surgery services have seen tremendous clinical growth in the past few years. We continue to have the largest series of patients with neuroendocrine metastatic disease to the liver treated using laparoscopic radiofrequency thermal ablation. Additionally, we are excited to offer a new program of laparoscopic liver resection. Our endocrine surgical fellowship program is the first of its kind in the country, and has been instrumental in facilitating clinical growth and educational activities within the program.

Thyroid and parathyroid cases have doubled in volume since 2001. Additionally, there is an increasing referral of patients with complex conditions, including reoperative problems, advanced cancers and hereditary endocrine syndromes. Our referral intake program efficiently reviews all cases prior to the outpatient appointment, ensuring all required tests have been ordered. This is an improvement in efficiency of the available appointments, and has allowed for an increase in clinic-performed procedures such as ultrasound, fine-needle aspiration and fiberoptic laryngoscopy.

For patients with severe obesity, we provide bariatric surgery through minimally invasive surgical approaches. Our ultimate goal for this patient population is the management of all degrees of obesity and its co-morbidities. Bariatric surgeons, bariatricians, endocrinologists, endocrine surgeons, nutritionists, gastroenterologists, cardiologists, internists, pediatricians and anesthesiologists are involved in patient care and research.

We are one of only a few bariatric centers in the United States recognized by both the American Society for Metabolic and Bariatric Surgery (ASMBS) and the American College of Surgeons (ACS) as a Center of Excellence. These designations are awarded only after independent program review and demonstration of the highest quality in patient management and outcomes.

Our state-of-the-art bariatric patient care facility was completely renovated in 2006 to better accommodate our patients. Components of the facility include an inpatient bariatric unit, an adjacent outpatient clinic, patient waiting rooms, a patient conference room, physician and support staff administrative offices, and a new surgical endoscopy facility.

We have consistently expanded our research efforts to include 38 active clinical and basic science studies that address a broad range of topics related to obesity and associated diseases. Educational highlights include our second annual Obesity Summit with attendance of more than 250 physicians from Ohio and throughout the United States.

Endocrinology

- Total Patient Visits 17,679
- New Patient Visits 594
- Total Fine Needle Aspirations 206

Endocrine Surgery

- Total Major Surgeries: Thyroid/Parathyroid 729
- Complex / Reoperative Surgeries 341

Bariatric Surgery

- Total Bariatric Cases 412
- Lap Roux-en-Y 255
- Lap Band 68
- Lap Sleeve 69
- Lap Gastric Bypass LOS 3.3 days
- Lap Adjustable Gastric Band LOS 1.8 days
**Endocrinology**

**Diabetes**

Diabetes is a major public health problem, and the Department of Endocrinology, Diabetes and Metabolism continues to be very active in providing consultative as well as continuing care. The department also has special clinics dedicated to Type I diabetes, and intensive diabetes management for particularly high-risk patients. Our Diabetes Self-Management Program was recently recertified by the American Diabetes Association, and offers both group and individual instruction. We are transferring many stable patients back to their primary care physicians.

**Total Diabetes Cases**

<table>
<thead>
<tr>
<th>Number</th>
<th>2003</th>
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<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tbody>
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<td>0</td>
<td></td>
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</tr>
</tbody>
</table>

(Source: TSI)

<table>
<thead>
<tr>
<th>Target %</th>
<th>2004 Fourth Quarter</th>
<th>2005 Fourth Quarter</th>
<th>2006 Fourth Quarter</th>
<th>2007 Fourth Quarter</th>
</tr>
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<tr>
<td>HbA1c &gt; 9%</td>
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<td>14%</td>
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<td>14%</td>
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<td>HbA1c ≤ 8%</td>
<td>55%</td>
<td>68%</td>
<td>70%</td>
<td>68%</td>
</tr>
<tr>
<td>HbA1c ≤ 7%</td>
<td>50%</td>
<td>44%</td>
<td>42%</td>
<td>43%</td>
</tr>
<tr>
<td>LDL Rate ≤ 100</td>
<td>75%</td>
<td>66%</td>
<td>67%</td>
<td>68%</td>
</tr>
<tr>
<td>BP Control &lt;130/80</td>
<td>n/a</td>
<td>40%</td>
<td>38%</td>
<td>39%</td>
</tr>
</tbody>
</table>

**Eligible patients:** patients with a diagnosis of diabetes mellitus of any type in our electronic medical record and who have been seen twice in our department within the past 12 months.

**HbA1c > 9, ≤ 8 and ≤ 7%:** the percentage of patients who had an HbA1c measurement and the result indicated on their most recent visit.

**LDL < 100 mg/dl:** the percentage of patients who had an LDL-cholesterol measurement and the result indicated on the most recent visit.

**Blood pressure control in diabetes:** the percent of eligible patients who, at the most recent EMR measurement, had a blood pressure below 130 systolic and below 80 diastolic. National figures show that only about 7 percent of people with diabetes have a HbA1c less than 7 percent, a BP less than 130/80 mm Hg and a total cholesterol less than 200 mg/dl. About 30 percent of those with diabetes have a HbA1c less than 7 percent. We are definitely achieving results exceeding the national trends.
**Diabetes Education**

Patients who received diabetes education (e.g., diabetes self-management education, nutrition counseling, survival skills and/or comprehensive group classes) in the Department of Endocrinology, Diabetes and Metabolism were evaluated for improvement in Hba1c at three and six months following their education session. They were compared with patients referred for education but who did not attend. Average improvement for the education group at six months was an approximate 1.2 A1c point decrease from baseline. Most of the education participants received one education session. The majority of these patients had no diabetes medication changes or had a medication decrease during this period. Some were even taken off their diabetes medications completely because of improved blood glucose control. It may also be noted that nearly all of the patients reported a high level of satisfaction.

*Hba1c*

Patients with only baseline measures were excluded. Data are from January 2007 through December 2007. Control group consists of those who were referred for education but did not attend.

(Source: departmental chart review within Endocrinology)

**Thyroid Cancer**

The department is increasingly recognized for its expertise in thyroid cancer management. Working with our colleagues in Surgery, Nuclear Medicine, Pathology, Endocrine Biochemistry and Oncology, endocrinologists offer compassion backed by the latest research.

*Total Thyroid Cancer Cases*

(Source: Eclipsys/TSI Decision Support System)
Thyroid Biopsies and Thyroid Ultrasounds

The department has been a leader in incorporating fine needle aspirations and ultrasounds into the realm of endocrinology. Our fellowship program was one of the first in the United States to train future endocrinologists in guided biopsy techniques of the thyroid.

Total Thyroid Biopsies

![Bar chart showing the number of thyroid biopsies from 2003 to 2007.](Source:Eclipsys/TSI Decision Support System)

Total Thyroid Ultrasounds

![Bar chart showing the number of thyroid ultrasounds from 2003 to 2007.](Source:Eclipsys/TSI Decision Support System)
Pituitary Disease

Over the past five years, pituitary care has become more collaborative among endocrinologists, neurosurgeons and radiation oncologists, resulting in increased national recognition. Cleveland Clinic is one of the top centers in the United States for number of pituitary surgeries at an institution.

Total Pituitary Cases

Number

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1,000</td>
</tr>
<tr>
<td>2004</td>
<td>1,500</td>
</tr>
<tr>
<td>2005</td>
<td>1,500</td>
</tr>
<tr>
<td>2006</td>
<td>2,000</td>
</tr>
<tr>
<td>2007</td>
<td>1,500</td>
</tr>
</tbody>
</table>

(Source:Eclipsys/TSI Decision Support System)
Endocrine Surgery

Cleveland Clinic surgeons offer renowned surgical care for patients with diseases of the thyroid, parathyroid, adrenal gland and endocrine pancreas, as well as neuroendocrine tumors metastatic to the liver. Cleveland Clinic endocrine surgeons offer comprehensive diagnostic evaluations during the physician consultation. Diagnostic ultrasound and thyroid needle biopsy can be done in a single visit, which is particularly convenient for out-of-town patients. In fact, with nearly 500 endocrine surgical procedures each year, the Clinic’s program is the largest in Ohio and the five surrounding states.

The Department of Endocrine Surgery uses a system of streamlining evaluations for endocrine surgery patients. This reduces the number of return preoperative visits before embarking on a definitive treatment plan.

A special emphasis is placed on patients with complex problems and those requiring reoperations.

(Source:Eclipsys/TSI Decision Support System)
Bariatric Surgery

Cleveland Clinic's Bariatric and Metabolic Institute (BMI) was named a Bariatric Surgery Center of Excellence by the American Society for Metabolic and Bariatric Surgery and the American College of Surgeons in 2006. This designation is awarded to programs that meet high quality standards and perform a minimum of 125 cases annually. In 2007, bariatric case volume at Cleveland Clinic was more than three times the Center of Excellence volume requirement.

Total Bariatric Cases

Laparoscopic Roux-en-Y gastric bypass, laparoscopic adjustable gastric banding and laparoscopic sleeve gastrectomy are the most common bariatric operations performed at Cleveland Clinic.

Bariatric Cases By Type

(Source: ORIS/EPIC)
Cleveland Clinic is a referral center for high-risk bariatric patients who require specialty care. Thirty-three percent of bariatric surgical case volume involves high-risk patients who have a Body Mass Index (BMI) greater than 55 or are age 60 years and older. Super Obesity (BMI ≥ 50) represents 41 percent of bariatric cases performed at our center.

![Patient Risk](Source: ORIS/EPIC)

- **33%** High Risk
- **67%** Not High Risk

![Super Obese Case Volume](Source: ORIS/EPIC)

- **41%** Super Obese
- **59%** Not Super Obese

Occasionally bariatric operations require revisions due to surgical complications such as fistula, obstructions, ulcers, severe reflux, band slippage, and weight regain related to gastric pouch dilation or an ineffective gastric band. Cleveland Clinic is a referral center for revisional bariatric surgery which represents 9 percent of all bariatric cases.

![Primary vs. Revisional Surgery](Source: ORIS/EPIC)

- **Primary Operations**
- **Revisional Operations**
Less than 2 percent of laparoscopic Roux-en-Y gastric bypass and adjustable gastric band patients required postoperative ICU stays, despite the relatively large percentage of high-risk patients. Sleeve gastrectomy is a procedure primarily used as part of a staged approach to surgical weight loss for higher risk patients and this population had an ICU stay of only 3.3 percent.

**Bariatric Procedures Requiring ICU Stay**

![Bar graph showing percent requiring ICU stay for different bariatric procedures.](source)

Over 97 percent of bariatric cases are performed laparoscopically and the length of stay is 3.3 days for the Roux-en-Y gastric bypass and 1.8 days for the adjustable gastric band.

**Laparoscopic Procedure Length of Stay**

![Bar graph showing days of length of stay for different bariatric procedures.](source)
Overall operative mortality at 30 days postoperatively for laparoscopic Roux-en-Y gastric bypass and gastric band patients was 0.3% and 0%, respectively. These exceptionally low mortality rates were achieved even though 33 percent of patients were high risk and 9 percent required revisional surgery.

Laparoscopic Procedure 30-Day Mortality

The major complication rate for laparoscopic Roux-en-Y gastric bypass (anastomotic leak, subphrenic abscess, splenic injury, pulmonary embolism or wound infection) was 5.29 percent. Adjustable gastric banding cases had no major complications.
At two years post-bariatric surgery, 70 percent of patients lost at least 50 percent of their excess weight (based on normal BMI = 25).

**Weight Loss at Two Years Postop**

* N = 116

![Pie chart showing weight loss categories: 70% >50% Excess Weight Loss, 30% <50% Excess Weight Loss.]

(Source: ORIS/EPIC)

Diabetic patients accounted for 37 percent of all bariatric cases since 2004. Fifty-three percent of patients with diabetes achieved complete remission defined as cessation of all diabetic medications post-bariatric surgery.

**Diabetes and Bariatric Surgery**

* % Diabetic Patients N = 248
* % Resolution of Diabetes N = 131

(Source: ORIS/EPIC)
Anesthesiology

Bariatric Surgery Anesthesiology

The Section of Anesthesia for Bariatric Surgery continues its emphasis on the management of perioperative normothermia ($\geq 36.0^\circ C$). Although the trend in 2007 was upward, the addition of this measure in early 2008 to the Anesthesiologist Dashboard clinical practice reporting tool for Staff Anesthesiologists will provide data for continuous improvement.

**Perioperative Normothermia**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Qtr</td>
<td>78</td>
</tr>
<tr>
<td>2nd Qtr</td>
<td>87</td>
</tr>
<tr>
<td>3rd Qtr</td>
<td>72</td>
</tr>
<tr>
<td>4th Qtr</td>
<td>104</td>
</tr>
</tbody>
</table>

(Source: Anesthesia Record Keeping System (ARKS))

The Department of General Anesthesiology visits bariatric surgery in-patients on their second postoperative day in the hospital to evaluate the early postoperative period and to obtain patients' responses to a standardized anesthesia experience survey. Favorable responses to the question “I threw up or felt like throwing up” are “Disagree very much” or “Disagree moderately”. Results for 2006-7 are shown below.

**Management of Postoperative Nausea & Vomiting**

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>123</td>
</tr>
<tr>
<td>2007</td>
<td>230</td>
</tr>
</tbody>
</table>

(Source: Perioperative Health Documentation System (PHDS))
A question in the postoperative patient satisfaction survey obtained during postoperative rounds asks for the response to the statement “I was satisfied with my anesthesia care”. Favorable responses include “Agree very much” or “Agree moderately”. Results for 2006 and 2007 for bariatric surgery patients are shown below.

(Source: Perioperative Health Documentation System (PHDS))
Surgical Quality Improvement

Surgical Care Improvement Program (SCIP)

SCIP is a national campaign aimed at reducing surgical complications by 25 percent by the year 2010. SCIP is sponsored by the Centers for Medicare and Medicaid Services (CMS) in collaboration with a number of other national partners serving on the steering committee, including the American Hospital Association (AHA), Centers for Disease Control and Prevention (CDC), Institute for Healthcare Improvement (IHI), The Joint Commission and others. Cleveland Clinic is committed to improving the care of surgical patients and participates in SCIP. A multidisciplinary team including the Surgery Institute, Anesthesiology Institute, Infectious Disease Department, Nursing Institute, and Quality and Patient Safety Institute works together to ensure that our surgical patients receive appropriate care.

Appropriate Preoperative Prophylactic Antibiotic Timing 2007

* Source:
United States Department of Health and Human Services, Hospital Compare
Most current reported discharges July 2006 to June 2007.
“Top Hospitals” represent the top 10 percent of reporting hospitals nationwide.
National average of all reporting hospitals in the United States.

Appropriate Prophylactic Antibiotic Selection 2007

* Source:
United States Department of Health and Human Services, Hospital Compare
Most current reported discharges July 2006 to June 2007.
“Top Hospitals” represent the top 10 percent of reporting hospitals nationwide.
National average of all reporting hospitals in the United States.
Prophylactic Antibiotics Discontinued within 24 Hours After Surgery 2007

* Source:
United States Department of Health and Human Services, Hospital Compare
Most current reported discharges July 2006 to June 2007.
“Top Hospitals” represent the top 10 percent of reporting hospitals nationwide.
National average of all reporting hospitals in the United States.

Recommended Venous Thromboembolism Prophylaxis Received by Patient 2007

* Source:
United States Department of Health and Human Services, Hospital Compare
Most current reported discharges January 2007 to June 2007.
“Top Hospitals” represent the top 10 percent of reporting hospitals nationwide.
National average of all reporting hospitals in the United States.
Recommended Venous Thromboembolism Prophylaxis Ordered 2007

* Source: United States Department of Health and Human Services, Hospital Compare Most current reported discharges January 2007 to June 2007.
"Top Hospitals" represent the top 10 percent of reporting hospitals nationwide. National average of all reporting hospitals in the United States.

Surgery Patients Who Received their Beta Blocker Perioperatively 2007

* No national benchmark data available at this time
National Surgical Quality Improvement Program (NSQIP)

The American College of Surgeons’ National Surgical Quality Improvement Program is a national program that objectively measures surgical outcomes. It reports risk-adjusted 30-day mortality and morbidity outcomes. Currently, the program includes Cleveland Clinic’s surgical cases from colorectal surgery, general surgery and vascular surgery. As this program continues to grow at a national level, Cleveland Clinic is committed to expanding it to all surgical areas. We view NSQIP as a valid, independent way to document our surgical outcomes and provide a basis for ongoing performance improvement.

NSQIP July 1, 2006 to June 30, 2007
General Surgery

<table>
<thead>
<tr>
<th>Percent</th>
<th>Observed</th>
<th>Expected</th>
</tr>
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<td></td>
<td>N=1,289</td>
</tr>
<tr>
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</tr>
<tr>
<td>10</td>
<td></td>
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<tr>
<td>30</td>
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</table>

Morbidity  Mortality
Patient Experience

Outpatient - Endocrinology & Metabolism Institute

We ask our patients about their experiences and satisfaction with the services provided by our staff. Although our patients are already indicating we provide excellent care, we are committed to continuous improvement.

Overall Rating of Care 2007

Overall Rating of Provider Care 2007

Would Recommend Provider 2007
Inpatient - Cleveland Clinic

With the support of the Center for Medicare and Medicaid Services (CMS) and its partner organizations, the first national standard patient experience survey was implemented in late 2006. Adult medical, surgical, and obstetrics and gynecology patients treated at acute care hospitals across the country are included in the survey. Results collected for initial public reporting, published on www.hospitalcompare.gov in March 2008, are shown here.

Overall Rating of Care (0 worst - 10 best scale)
October 2006 - June 2007

Would Recommend Facility
October 2006 - June 2007
**Sweet Results**

At just 38 years old, Rahele Malanca was carefully arranging for the care of her two young children and two teenage stepchildren in the event of her death. She was sure she wouldn't live more than five years. “Massive quantities of insulin and blood pressure medication weren't making a difference,” she says. “My kidneys and heart were under constant strain. I was desperate to find life insurance.”

But an article on the internet offered a new alternative. Bariatric surgery specialists at Cleveland Clinic were successfully using the procedure for patients like Malanca, whose diabetes could not be controlled with medication alone.

Malanca came to Cleveland from Switzerland for gastric bypass surgery in August 2007. “I took 130 to 170 units of insulin every day before the surgery,” she says. “By the time I got out of the hospital three days later, I was on oral medication.”

At four months post-op, Malanca was free of all medication. Her daily regimen consists of just vitamins. She considers the ensuing weight loss an added bonus. Now, at 125 pounds, she has newfound energy to play with her children, and she is happily planning a ski trip instead of a funeral, she quips.
We at the Endocrinology and Metabolism Institute believe change is a constant part of our lives and that we must continuously improve our ability to provide accessible world class care. Changes have been made that are truly in the best interests of our patients. We look forward to any suggestions from our physician colleagues as well as our patients and their families.

Some New Innovations:

**Endocrinology**

**Fine-Needle Aspiration of the Thyroid**

The Department of Endocrinology, Diabetes and Metabolism has found a unique way to teach its fellows to perform fine-needle aspiration biopsies on thyroid nodules. An olive hidden in a chicken breast and placed at various depths is used to simulate tumors of different sizes, to give fellows the opportunity to practice on a range of situations. With the help of ultrasound, fellows can practice the process repeatedly until they have mastered the technique.

**Thyroid-Stimulating Hormone mRNA in Diagnosis of Thyroid Cancer**

Manjula Gupta, PhD has been involved in defining the role of TSH mRNA in the diagnosis and recurrence of thyroid cancer.

**Electronic Medical Record Innovations**

The Department has developed a system for computerized physician order entry of insulin in the hospital. The group is also participating in a study utilizing the electronic medical record for assessing diabetes drugs.

**International Diabetes Center**

The Department is engaged in a program in association with the International Diabetes Center to improve diabetes care throughout the Cleveland Clinic system.

**Prescription Service**

Within the last year, the department implemented a 24-hour prescription refill service for all of our patients.

**Insulin Drip Protocol**

Byron Hoogwerf, MD, developed standard protocols for perioperative glucose management and standardized insulin infusion for hyperglycemia on the hospital nursing floors.

**Clinical Trial Research**

Byron Hoogwerf, MD, with Cleveland Clinic staff and others, played a seminal role in a major clinical trial -- ACCORD (Action to Control Cardiovascular Risk in Diabetes) -- investigating the importance of intensive control of blood sugar, blood pressure and lipids in the management of diabetes.

**Pituitary Clinic**

A multidisciplinary Pituitary Clinic assists referring physicians with expert subspecialty diagnosis and treatment for these complicated tumors. To date, more than 2,000 patients with functioning and nonfunctioning pituitary tumors have been treated here, one of the highest patient volumes in the country. An annual pituitary conference is also organized by Amir Hamrahian, MD, in conjunction with the Neurosurgery Department.

**Diabetes Care in the United Arab Emirates**

Charles Faiman, MD, and Robert Zimmerman, MD, lent their expertise to assist the UAE in establishing a national program for diabetes management. They participated in a national Diabetes Day in Abu Dhabi, sponsored by Cleveland Clinic and done in conjunction with the Imperial College of London Diabetes Centre. The program was aimed at updating internists, endocrinologists, nurses and health educators on the latest in diabetes care and screening.

**Endocrine Surgery**

**Liver Tumor Ablation Program**

A large number of patients with neuroendocrine metastatic disease to the liver are treated with laparoscopic radiofrequency thermal ablation. This treatment is part of a proposed study pioneering new technologies in microwave ablation of hepatic tumors, supported by a TATRC grant (from the Army’s Telemedicine and Advanced Technology Research Center).
Patient Intake Process

The efficiency of the patient referral intake process ensures high patient and referring physician satisfaction. Our process continues to work well by reviewing all cases prior to initial appointment and assuring that all needed tests have been ordered. This has resulted in an increase in inpatient operative procedures, as well as increased efficiency in the outpatient areas and increased numbers of outpatient procedures (ultrasound, fine-needle aspiration and fiberoptic laryngoscopy). This program has been streamlined with regular meetings of the physicians, nurses and other support staff to better coordinate patient activities within the department.

Bariatric Surgery

Effective Treatment of Type 2 Diabetes

Bariatric surgery is not only successful for weight loss, but also for preventing, improving or resolving type 2 diabetes. Recent studies demonstrate that bariatric operations, particularly gastric bypass, can achieve a resolution rate as high as 83 percent, rendering these patients normoglycemic. Other studies have shown that patients with a body mass index (BMI) as low as 30 may have successful resolution of diabetes with gastric bypass surgery or gastric banding. We work in close collaboration with our Department of Endocrinology, Diabetes and Metabolism to prepare and manage these patients pre- and postoperatively. Cleveland Clinic bariatric surgeons have lectured on surgical treatment of diabetes internationally and are conducting the first randomized controlled trial comparing bariatric surgery and medical treatment of type 2 diabetes, called STAMPEDE -- Surgical Therapy and Medications Potentially Eradicate Diabetes Efficiently. Physicians who have patients with even mild obesity and inadequately controlled diabetes should consider bariatric surgery as an option for better diabetes control.

Sleeve Gastrectomy

Laparoscopic sleeve gastrectomy is a bariatric procedure in which 75 percent of the stomach is removed, leaving a narrow tube of stomach along the lesser curvature. We are currently performing sleeve gastrectomy as a first-stage procedure for selected high-risk bariatric patients. When weight loss plateaus following sleeve gastrectomy, some patients with extremely high BMIs are converted to gastric bypass as a second-stage procedure. This risk management strategy is effective for patients who may not tolerate gastric bypass initially or who have massive hepatomegaly that makes gastric bypass prohibitive.

We are also performing sleeve gastrectomy in diabetic patients with lower BMIs as part of an investigational study.

Revisional Bariatric Procedures

Surgical Revisions

Long-term complications such as refractory ulcers and weight regain can occur after bariatric surgery and we offer revisional surgery to many of these patients. Revision of the gastrojejunostomy and lengthening the intestinal bypass are currently performed based on an individual’s anatomy and preoperative evaluation by our nutritionists and psychologists. Revisional bariatric surgery carries a higher risk of complications than primary bariatric surgery, and our program provides the surgical expertise and experience to complete these operations safely.

Endoscopic Therapy

Our surgeons are currently performing endoscopic procedures for gastric bypass patients who have weight regain. After careful psychological, nutritional and endoscopic screening, appropriate candidates undergo endoscopic suturing of an enlarged gastrojejunostomy to restore the restrictive component of their operation. This procedure is currently being performed as part of a clinical trial. Endoscopic gastric pouch volume reduction is also offered to appropriate candidates. These investigational procedures can be performed with much less risk to the patient than surgery.
Anesthesiology

Endocrinology and Metabolism Institute

During the past two years, under the direction of Drs. Karen Steckner and Tatyana Kopyeva, the Section of Anesthesia for the Metabolic and Endocrine Institute has cared for over 500 patients undergoing weight-reduction surgery, providing patient-focused, team-based care. Our Center, fully accredited by the American College of Surgeons and the American Society for Bariatric Surgery, completes as many as eight surgeries daily, in newly renovated Stryker operating rooms in the H pavilion.

We maintain a patient information and quality database and continually improved care processes. With intense collaboration between anesthesia, surgery and nursing teams, important outcomes were identified and throughput improved. This was accomplished by focusing on teamwork, communication, induction room use and protoclorized care to enhance patient safety. Our team of seven anesthesiologists educates residents about anesthesia for laparoscopic surgery, airway management and vascular access techniques. Recently acquired equipment, including state-of-the-art Drager Medical's Fabius anesthesia machines, GlideScopes®, and Olympus BF-Q180 intubating video bronchoscopes has enhanced our ability to deliver even more-sophisticated anesthesia care.

In several clinical trials, staff physicians of the section are investigating how surgical outcome can improve with supplemental oxygen, optimal analgesia techniques and temperature-monitoring protocols.
New Knowledge


Fleseriu M, Licata AA. Failure of successful renal transplant to produce appropriate levels of 1,25-dihydroxyvitamin D. Osteopros Int. 2007 Mar;18(3):363-368.


Whole Books

Book Chapters


Staff Listing

**Chairman**
James Young, MD

**Bariatric & Metabolic Institute**
Philip Schauer, MD
Director, Advanced Laparoscopic & Bariatric Surgery

- Kathleen Ashton, PhD
- Stacy Brethauer, MD
  Quality Review Officer
- Bipan Chand, MD
- Karen Cooper, DO
- Leslie Heinberg, PhD
- Tomasz Rogula, MD
- Amy Windover, PhD

**Endocrine Surgery**
Allan Siperstein, MD
Head, Section of Endocrine Surgery

- Eren Berber, MD
  Quality Review Officer
- Kresimira Milas, MD
  Patient Experience Officer

**Endocrinology**
Robert Zimmerman, MD, FACP, FACE
Interim Chair, Department of Endocrinology, Diabetes and Metabolism

- Krupa Doshi, MD
- Marwan Hamaty, MD
- Amir Hamrahian, MD
- Byron J. Hoogwerf, MD, FACP, FACE, CDE
- Sangeeta Kashyap, MD
- Adi E. Mehta, MD, FRCPC, FACE
- Christian Nasr, MD
  Quality Review Officer
- Leann Olansky, MD
- Mario Skugor, MD
- Mariam Stevens, MD
- Jennifer Wojtowicz, DO

**Consultant Staff**
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- Angelo Licata, MD, PhD, FACE
- S. Sethu K. Reddy, MD, MBA, FRCPC, FACP, FACE, MACE

**Pediatric Endocrinology**
Ajuah Davis, MD
Anzar Haider, MD
Douglas Rogers, MD
Scientist
Manjula Gupta, PhD

Clinical Fellows
Harpreet Bajaj, MD
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Dima Diab, MD
Hla Win, MD
Rahfa Zerkily, MD

Anesthesiology
Armin Schubert, MD, MBA
Chairman, General Anesthesiology
Karen Steckner, MD
Section Head
Maged Argalious, MD
Alex Gottlieb, MD
Sam Irefin, MD
Tatyana Kopyeva, MD
Brian Parker, MD
Michael Ritchey, MD
Endocrinology and Metabolism Institute

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

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

**Endocrinology and Metabolism Institute Appointments/Referrals**
216.444.6568 or 800.223.2273, ext. 46568

**Bariatric Surgery Appointments/Referrals**
216.445.2224 or 800.223.2273, ext. 52224

On the Web at clevelandclinic.org/endo

**Additional Contact Information**

**General Information**
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**Hospital Patient Information**
216.444.2000

**Patient Appointments**
216.444.2273 or 800.223.2273

**Special Assistance for Out-of-State Patients**
Complimentary assistance for out-of-state patients and families
800.223.2273, ext. 55580, or email medicalconcierge@ccf.org

**International Center**
Complimentary assistance for international patients and families
800.884.9551 or 001.631.439.1578 or visit clevelandclinic.org/ic

**Cleveland Clinic in Florida**
866.293.7866

For address corrections or changes, please call 800.890.2467

**Institute Locations**

**Main Campus**
9500 Euclid Ave./A53
Cleveland, OH 44195

**Huron Hospital**
13951 Terrace Road
East Cleveland, OH 44112
216.761.3300

**Independence Family Health Center**
5001 Rockside Road
Crown Center II
Independence, OH 44131
216.986.4000

**Lorain Family Health and Surgery Center**
5700 Cooper Foster Park Road
Lorain, OH 44053
440.204.7400
Cleveland Clinic Overview

Cleveland Clinic, founded in 1921, is a nonprofit multispecialty academic medical center that integrates clinical and hospital care with research and education. Today, 1,800 Cleveland Clinic physicians and scientists practice in 120 medical specialties and subspecialties, annually recording more than 3 million patient visits and more than 70,000 surgeries.

In 2007, Cleveland Clinic restructured its practice, bundling all clinical specialties into integrated practice units called institutes. An institute combines all the specialties surrounding a specific organ or disease system under a single roof. Each institute has a single leader and focuses the energies of multiple professionals onto the patient. From access and communication to point-of-care service, institutes will improve the patient experience at Cleveland Clinic.

Cleveland Clinic’s main campus, with 37 buildings on 140 acres in Cleveland, Ohio, includes a 1,000-bed hospital, outpatient clinic, specialty institutes and supporting labs and facilities. Cleveland Clinic also operates 14 family health centers; eight community hospitals; two affiliate hospitals; a 150-bed hospital and clinic in Weston, Fla.; and health and wellness centers in Palm Beach, Fla., and Toronto, Canada. Cleveland Clinic Abu Dhabi (United Arab Emirates), a multispecialty care hospital and clinic, is scheduled to open in 2011.

At the Cleveland Clinic Lerner Research Institute, hundreds of principal investigators, project scientists, research associates and postdoctoral fellows are involved in laboratory-based research. Total annual research expenditures exceed $150 million from federal agencies, non-federal societies and associations, and endowment funds. In an effort to bring research from bench to bedside, Cleveland Clinic physicians are involved in more than 2,400 clinical studies at any given time.

In September 2004, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University opened and will graduate its first 32 students as physician-scientists in 2009.

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 since 1995.

For more information about Cleveland Clinic, visit clevelandclinic.org.

Online Services

eCleveland Clinic

eCleveland Clinic uses state-of-the-art digital information systems to offer several services, including remote second medical opinions to patients around the world; personalized medical record access for patients; patient treatment progress for referring physicians (see below); and imaging interpretations by our subspecialty trained radiologists. For more information, please visit eclevelandclinic.org.

DrConnect

Online Access to Your Patient’s Treatment Progress

Whether you are referring from near or far, DrConnect can streamline communication from Cleveland Clinic physicians to your office. This online tool offers you secure access to your patient’s treatment progress at Cleveland Clinic. With one-click convenience, you can track your patient’s care using the secure DrConnect website. To establish a DrConnect account, visit eclevelandclinic.org or email drconnect@ccf.org.

MyConsult

MyConsult Remote Second Medical Opinion is a secure online service providing specialist consultations and remote second opinions for more than 600 life-threatening and life-altering diagnoses. The MyConsult service is particularly valuable for people who wish to avoid the time and expense of travel. For more information, visit eclevelandclinic.org/myconsult, email eclevelandclinic@ccf.org or call 800.223.2273, ext 43223.
Please visit us on the Web at clevelandclinic.org.

Cleveland Clinic

9500 Euclid Avenue, Cleveland, OH, 44195

Cleveland Clinic is a nonprofit multispecialty academic medical center. Founded in 1921, it is dedicated to providing quality specialized care and includes an outpatient clinic, a hospital with more than 1,000 staffed beds, an education institute and a research institute.

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