To promote quality improvement, Cleveland Clinic has created a series of Outcomes books similar to this one for many of its institutes. Designed for a physician audience, the Outcomes books contain a summary of our surgical and medical trends and approaches, data on patient volumes 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 necessarily mean we 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 associated with improved outcomes. When process measures are unavailable, we may report volume measures; a volume/outcome relationship has been demonstrated for many treatments, particularly those involving surgical techniques.

In addition to our internal efforts to measure clinical quality, 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 providing accurate, timely information about patient care also will help patients and referring physicians make informed healthcare decisions.

We hope you find these data valuable, and we invite your feedback. Please send comments and suggestions to us at OutcomesBookFeedback@ccf.org. To view all our Outcomes books, please visit Cleveland Clinic’s Quality and Patient Safety website at clevelandclinic.org/outcomes.
Dear Colleague:

Welcome to Cleveland Clinic’s 2011 Outcomes books. They include data on clinical outcomes, patient volumes, innovations and publications. Cleveland Clinic pioneered the collection and annual publication of outcomes data. This initiative has become part of the national discussion on lowering costs and improving the quality of healthcare.

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. Each institute defines quality benchmarks for its specialty services and reports longitudinal progress.

Cleveland Clinic Outcomes books are available in print and online. Additional data is available through our online Quality Performance Report (clevelandclinic.org/QPR). The site offers data in advance of national and state public reporting sites in key areas, including heart attack, heart failure, stroke and infection prevention.

We hope you will find this information useful.

Sincerely,

Delos M. Cosgrove, MD
CEO and President
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Dear Colleague,

I am pleased to share the 2011 Outcomes from Cleveland Clinic Cole Eye Institute with referring physicians, alumni and potential patients across the country.

Last year was an important year for the Cole Eye Institute. We created a state-of-the-art electronic medical record (EMR) that will allow us to see patients more efficiently and document more accurately. Our new EMR integrates both ophthalmic imaging and clinical data. By the end of 2012, the EMR will be accessible to Cole Eye ophthalmologists across our health system.

In 2011 we also reported first-year results for the Comparison of Age-Related Macular Degeneration Treatments Trials (CATT) study, sponsored by NIH. Evaluating the efficacy, safety and dosing of Lucentis® versus Avastin® for neovascular AMD broke new ground in comparison effectiveness research.

Our staff and services continued to grow last year. We welcomed two new retina specialists and one cornea and external disease specialist. We established an ophthalmology clinic with eight exam lanes at Cleveland Clinic’s new Twinsburg Family Health and Surgery Center. We are enlarging our ophthalmology clinic at Hillcrest Hospital with the addition of five exam lanes and are significantly expanding our Beachwood office from 16 to 30 lanes.
Our staff had a productive year in 2011. We conducted 187,640 patient visits and performed more than 9,000 surgical procedures. In reporting our Outcomes data, we relied on two key assessment measures: visual acuity, using Early Treatment of Diabetic Retinopathy Study (ETDRS) protocol refraction, and rate of surgical complications.

Beginning in 2012, we will be able to use our new EMR to report integrated outcomes data. Our goal for the EMR is to optimize clinical efficiency and to implement quality measures and best practices systemwide. We remain as committed to innovation and discovery as we are to putting patients first.

On behalf of my colleagues, I hope that you find this edition of the Cole Eye Institute Outcomes book informative and useful.

Daniel F. Martin, MD
Chairman, Cole Eye Institute
Institute Overview

Cleveland Clinic Cole Eye Institute is a center of excellence for highly specialized ophthalmologic care and research, with a reputation for innovation and superior outcomes. Its patient volume is one of the highest in the United States. Cleveland Clinic’s ophthalmology program has been highly ranked in the *U.S. News & World Report* “Best Hospitals” survey for 12 years in a row.

**Spearheading Research, Innovation**

Cole Eye Institute staff members aggressively pursue research to bridge the gap between laboratory and patient care. Our ophthalmologists are national leaders in clinical trials for age-related macular degeneration (AMD) and have pioneered comparative effectiveness research in heading the groundbreaking Comparison of Age-Related Macular Degeneration Treatments Trials (CATT).

Cole Eye Institute is among the first academic centers to customize an electronic medical record (EMR) for ophthalmic use. The two-year project will allow Cole Eye Institute staff across the system to share an EMR by the end of 2012. The EMR will integrate ophthalmic imaging and provide full access to patient histories for maximal clinical efficiency. It will also streamline data collection and allow quality measures to be adopted system wide.

**Cornea and External Diseases**

Our Cornea and External Diseases staff performs more than 1,700 cataract surgeries each year. They also offer advanced procedures such as Descemet’s stripping automated endothelial keratoplasty (DSAEK), deep anterior lamellar keratoplasty (DALK) and highly specialized transplant procedures.
**Vitreoretinal Conditions**
Surgical procedures developed by our vitreoretinal faculty are used worldwide for the treatment of retinal detachments, diabetic macular edema, diabetic traction detachments, macular holes and pediatric retinal surgery. Cole Eye Institute experts are also helping to develop the next generation of vitreoretinal surgical devices. They utilize advanced retinal imaging devices such as next generation spectral domain optical coherence tomography (OCT) and are investigating its intraoperative use. Cole Eye Institute retina specialists provide access to the latest clinical trials for patients who are in the early stages of AMD, those who have failed standard medical therapy and those with macular edema from diabetes or vein occlusion.

**Glaucoma**
Our glaucoma specialists employ automated visual field testing, retinal nerve fiber layer photography, stereoscopic disc photography and computerized optic disc analysis in the diagnosis of primary, secondary or complicated glaucoma. They offer patients of all ages access to the latest treatments: topical medications, glaucoma implants, mitomycin C, glaucoma filtration surgery, cataract surgery, combined glaucoma/cataract surgery and laser surgery (argon, Nd:YAG and pulsed-dye).

**Keratorefractive Surgery**
Cole Eye Institute surgeons use a state-of-the-art excimer laser system for customized treatment of myopia, hyperopia and astigmatism. Our keratorefractive surgeons rely on advanced laser technologies that offer increased accuracy and faster healing, including all-laser or “bladeless” LASIK and photorefractive keratectomy (PRK).

**Neuro-Ophthalmology**
Our neuro-ophthalmologists are experts in optic nerve disorders, visual field loss, unexplained or transient vision loss, diplopia, nystagmus, thyroid eye disease, ocular myasthenia gravis, unequal pupil size and eyelid abnormalities. They collaborate with Cleveland Clinic Neurological Institute specialists on patient care when needed.

**Pediatric Ophthalmology/Strabismus**
Cole Eye Institute pediatric specialists offer expert treatment for strabismus, retinopathy of prematurity (ROP) and congenital cataracts. They perform about 150 surgical procedures annually for esotropia, exotropia, thyroid eye disease, cranial nerve palsies, dissociated deviations, hypertropias and hypotropias, Duane and Brown syndromes, nystagmus and related conditions.

**Oculoplastics**
Our oculoplastic specialists perform more than 700 procedures annually for eyelid, lacrimal (tear duct) and orbital surgery. Complex procedures performed include repairs of orbital fractures, ptosis and lacrimal obstruction.

**Ophthalmic Oncology**
Cole Eye Institute oncologists treat uveal melanoma and other ocular tumors using advanced techniques such as radioactive plaque therapy to preserve vision. A technique they have developed for resecting circumscribed iris tumors utilizes gentle aspiration through a small corneal incision to reduce morbidity. Ophthalmic oncologists collaborate with Taussig Cancer Institute and other Cleveland Clinic specialists on research projects to improve the outlook for these diseases.
Institute Overview

Uveitis
Cole Eye Institute specialists are international leaders in the diagnosis and management of uveitis. They collaborate with rheumatologists and other Cleveland Clinic specialists when uveitis signals a systemic immune disorder, offering topical therapy, antibiotics or other medications along with careful follow-up to prevent/manage relapses and to minimize vision damage.

Genetic Eye Diseases
Cole Eye Institute’s Center for Genetic Eye Diseases is an international referral center for multidisciplinary diagnosis, treatment and research. Our specialists care for patients with inherited corneal and retinal dystrophies and microphthalmia, as well as patients with inherited systemic disorders that involve the eye such as neurofibromatosis, albinism, neurodegenerative disorders and Marfan syndrome.

Serving the Northeast Ohio Community
Cole Eye Institute offers comprehensive specialty ophthalmic care in a state-of-the-art building equipped with advanced technology and designed for patient comfort. High-quality ophthalmic care is also offered at five Cleveland Clinic community locations. Comprehensive general ophthalmology and retina services are provided at Hillcrest Hospital in Mayfield Heights and at Twinsburg Family Health and Surgery Center, which opened in 2011. Ophthalmologists are on call 24/7 for emergency care across the system. Cole Eye Institute specialists also provide all retina services for MetroHealth Medical Center in Cleveland.

Research
Cole Eye Institute is heavily engaged in research, with an aggregate annual grant level of $11,173,415 for 2010-2011, including $5,424,998 from federal sources for basic research and $1,376,301 annually for clinical research. This funding helps both basic and clinical researchers better understand ophthalmic conditions and pioneer new treatments and techniques that will improve visual outcomes. Major research initiatives under way include those in the areas of age-related macular degeneration, diabetic retinopathy, retinal degeneration and retinopathy of prematurity.
2011 Key Statistics

Total Clinic Visits  |  187,640

Total Surgeries   |  7,615

Total Surgical Procedures  (surgeries in OR and all outpatient procedures) |  9,669

Total Laser Procedures  |  1,564
Cataract surgery is the most commonly performed surgical procedure in ophthalmology and thus represents a significant proportion of the surgical caseload performed at Cleveland Clinic Cole Eye Institute. From October 2010 through September 2011, a total of 1,861 cataract extraction procedures were performed.

Intraoperative complications during cataract surgery were uncommon, occurring in only 1.4 percent of patients. The most common complication was a capsular tear, reported in 0.5 percent of patients, most of whom ended up with excellent vision.

Postoperative complications also were rare, occurring in less than 1 percent of patients who returned for their three-month follow-up visit. The most common complication was cystoid macular edema.

Most patients achieved a refractive outcome following cataract surgery that was near the anticipated refractive error. Despite the large number of patients with other conditions that can influence the refractive outcome or the accuracy in measuring the final refractive error, 86 percent of patients achieved a final spherical equivalent refractive error within 1 diopter of the expected result.

The goal of cataract surgery is the improvement of visual acuity, which is accomplished for the vast majority of our patients. There was a ≥ 15 letter improvement in ETDRS (Early Treatment of Diabetic Retinopathy Study) protocol refraction visual acuity in 42.6 percent of patients at their one-month follow-up, and 54 percent of patients had a < 15 letter improvement. The remaining 3.8 percent had no change or a decrease from baseline status.

The overall improvement in vision was seen in patients with a cataract condition; some also may have had other disorders of the eye, such as glaucoma, retina disease or anterior segment disease. A significant number of our cataract patients have multiple clinical morbidities. In patients without other eye disease, the mean visual acuity score with best glasses correction following surgery was 79 ETDRS letters, corresponding to nearly 20/20 vision.
Complications During Cataract Surgery (N = 1,861)
October 2010 – September 2011

98.60% None

1.40% Complications:
- 0.48% Posterior Capsule Tear
- 0.22% Zonular Dialysis
- 0.32% Vitreous Loss
- 0.22% Retained Lens
- 0.05% Descemet’s Detachment
- 0.11% Iris Trauma

Postoperative Complications (N = 1,036)
October 2010 – September 2011

99.33% None

0.67% Complications:
- 0.29% Retina-Related
- 0.19% Cornea-Related
- 0.19% Pressure-Related
Difference Between Actual and Target Refractive Error
October 2008 – September 2009
October 2009 – September 2010
October 2010 – September 2011

Percentage of Patients

ETDRS Vision Improvement
October 2008 – September 2009
October 2009 – September 2010
October 2010 – September 2011

Percentage of Patients

Vision Improvement

N = 42 35 27 338 395 379 245 342 301
Visual Acuity by Ocular Comorbidity

October 2008 – September 2009
October 2009 – September 2010
October 2010 – September 2011

ETDRS* Visual Acuity Score

*Early Treatment Diabetic Retinopathy Study
Corneal transplant surgeons at Cleveland Clinic Cole Eye Institute perform state-of-the-art procedures for numerous conditions that distort or cloud the normally transparent cornea. Traditional full-thickness procedures, also known as penetrating keratoplasties (PK), make up the majority of the grafts performed in recent years. From October 2010 to September 2011, 65 PKs were performed, and 94 percent of these grafts remained clear at three to six months.

Cole Eye Institute surgeons also are contributing to the development of lamellar corneal transplant procedures in which only the diseased portion of the cornea is replaced. Using a procedure called Descemet’s stripping automated endothelial keratoplasty (DSAEK), surgeons selectively transplant the endothelium for conditions such as pseudophakic bullous keratopathy and Fuchs’ endothelial dystrophy. These patients experience faster visual recovery and more stable and predictable refractive outcomes than with traditional PK. During the period mentioned above, 80 DSAEKs were performed at Cole Eye Institute, and all of these grafts remained clear at three to six months. In deep anterior lamellar keratoplasty (DALK) for corneal scars and keratoconus, the recipient’s anterior cornea is replaced but the patient’s healthy endothelium is retained, eliminating the risk of endothelial rejection. In 2009 to 2010, equivalent numbers of PKs and DSAEKs were performed. This year, DSAEK cases outnumbered PKs, reflecting an international trend toward less-invasive corneal transplant procedures for endothelial disease.

Highly specialized transplants are performed in smaller numbers for uncommon sight-threatening corneal conditions. Certain disorders disrupt or destroy the stem cells responsible for maintaining a healthy and visually useful ocular surface. Cleveland Clinic surgeons continue to perform corneal limbal stem cell transplants to restore damaged ocular surfaces. For end-stage corneal disease in patients who were not candidates for other forms of transplantation, synthetic corneas (Boston Keratoprostheses) were implanted last year to allow them to regain their visual function.

A total of 153 keratoplasties were performed last year, and most patients had no complications. Analysis of intraoperative complications included all surgical procedures performed during the period mentioned above. Postoperative complications and outcomes of surgery included patients who had completed less than three months of follow-up. Consequently, the sample sizes reported for intraoperative and postoperative complications differ.
Intraoperative Complications (N = 153)
October 2010 – September 2011

- 1.95% Complications:
  - 0.65% Capsular Rupture
  - 0.65% Expulsive Hemorrhage
  - 0.65% Vitreous Prolapse

- 98.05% None

Postoperative Complications (N = 53)
October 2010 – September 2011

- 3.8% Graft Rejection Episode

- 96.2% None

The three-month postoperative complication rate was 3.8 percent due to two patients who had PK; the PK graft failed in one patient and another recovered from a rejection episode with medical management.
Changes in visual acuity by the type of corneal transplant procedure are shown in the graph. For patients who completed a three- to 12-month follow-up, the mean improvement in ETDRS visual acuity score in DSAEK patients was 26.2 letters, corresponding to an improvement of about five lines of visual acuity. PK patients had worse preoperative vision than DSAEK patients and gained 36 letters, equivalent to seven lines of vision.
Glaucoma is the second most common cause of irreversible blindness in the United States, after age-related macular degeneration. While visual loss from glaucoma cannot be reversed, adequate control of eye pressure can halt the progressive loss of vision. The keys to preserving vision in glaucoma are early detection and good intraocular pressure control. Glaucoma can be managed with eye drops, laser treatment or surgery. Using medication can help patients avoid the need for laser treatment or surgery to control glaucoma, but medication, usually in the form of eye drops, entails long-term cost and some potential for local and systemic side effects. Laser treatment for glaucoma is generally quick, safe and convenient but has only a relatively small effect in reducing intraocular pressure in many patients and may wear off over time. For some patients, surgery to control glaucoma is the best option.

Trabeculectomy is the most frequently performed glaucoma surgical procedure in the United States. For some patients who either have more difficult-to-control glaucoma or have had previous other eye surgery or trauma, a glaucoma implant (glaucoma drainage device) is used instead. From January 2006 through September 2011, 1,619 glaucoma surgeries were performed at Cleveland Clinic Cole Eye Institute. These included 834 trabeculectomies, 601 glaucoma implants and 119 revisions of other glaucoma surgeries.
Outcomes 2011

Intraoperative Complications (N = 313)
October 2010 – September 2011

- 0.3% Complication: Microperforation of Trabecular Descemet's Window
- 99.7% None

Postoperative Complications (N = 134)
October 2010 – September 2011

- 3.0% Complications:
  - 0.75% Hypotony (IOP < 5 mm Hg)
  - 0.75% Bleb Leak
  - 0.75% Choroidal Hemorrhage
  - 0.75% Tube Occlusion by Fibrin Plug
- 97.0% None
In procedures performed in the 12-month period from Oct. 1, 2010, to Sept. 30, 2011, trabeculectomies reduced intraocular pressure in our patients from a mean of 22.0 mm Hg to 14.7 mm Hg, and glaucoma implant surgery reduced intraocular pressure from 28.3 mm Hg to 16.1 mm Hg. A normal range of eye pressure is approximately 10 to 21 mm Hg. The goal of glaucoma surgery is to preserve current level of vision.

Glaucoma surgery usually does not improve visual acuity unless combined with cataract surgery. In our surgeries, the mean level of visual acuity, as measured on ETDRS visual acuity charts, improved slightly after trabeculectomy.
Oculoplastic service outcomes were divided into three categories: eyelid surgery, lacrimal surgery and orbital surgery. There were 946 oculoplastic surgeries performed at Cleveland Clinic Cole Eye Institute from October 2010 through September 2011. Eyelid surgery outcome measures included intraoperative complications and postoperative eyelid symmetry.

A total of 695 eyelid surgeries were performed during this period. Of the 645 patients who returned for their follow-up, postoperative complications included reoperation in 1.7 percent, worsened dry eyes in 1.1 percent, a failed DCR (dacrocystorhinostomy) in 0.2 percent and bleeding/infection in 0.3 percent of cases.

There were 172 lacrimal and 79 orbital procedures performed from October 2010 through September 2011. No intraoperative or postoperative complications were observed in any of the lacrimal or orbital procedures performed.
Postoperative Eyelid Symmetry (N = 265)
October 2010 – September 2011

Postoperative eyelid symmetry showed excellent results in 70 percent of cases and good results in the remaining 30 percent. Excellent and good eyelid symmetry was defined by a marginal reflex distance within 0.5 mm and 1.0 mm of the desired position, respectively.
Uveal Melanoma

Uveal melanoma is the most common primary intraocular malignancy in adults and accounts for approximately 85 percent of all ocular melanomas. With current clinical examination techniques, the accuracy of clinical diagnosis of uveal melanoma exceeds 99 percent. A variety of imaging techniques have been used for differentiating uveal melanoma from other tumors or simulating conditions. The primary diagnostic modalities include slit-lamp examination, transillumination, digital photography, A-scan and B-scan ultrasonography, ultrasound biomicroscopy, angiography and optical coherence tomography (OCT).

Plaque brachytherapy continues to be the most frequent method of treatment. Analysis of our data shows local primary tumor control rates of 98 percent at one year and 94 percent at three years.

Treatment of Uveal Melanoma (N = 78)
2011

- Enucleation: 27%
- Plaque: 73%
Outcome of patients with uveal melanoma treated with radiation between Jan. 1, 2005, and June 30, 2010. The freedom from recurrence was 98 percent (95 percent CI: 96 percent, 100 percent) at one year, 97 percent (94 percent, 100 percent) at two years and 94 percent (89 percent, 99 percent) at three years.
Ocular Oncology Surgery

Digital Photography

Both digital slit lamp and fundus cameras are useful for documenting the clinical features of uveal melanoma and provide a ready means for future comparison to monitor growth, monitor response to treatment and detect recurrence. Choroidal melanoma is typically dome or mushroom shaped but can also occur as a diffuse form. Lesions are gray to greenish-brown in color, and there may be overlying orange pigment. Choroidal melanoma may cause exudative retinal detachment and retinal pigment epithelium changes such as necrosis or atrophy. The presence of drusen is more suggestive of nevi.

75-year-old Caucasian male presented with a pigmented iris lesion inferonasally in the right eye.

Gonioscopic slit-lamp photographs showed that the lesion extended into the trabecular meshwork with pigment dispersion.

Ultrasound biomicroscopy demonstrated thickened ciliary body in the region of the tumor.
**Ultrasonography**

Ophthalmic ultrasonography is a powerful, noninvasive and inexpensive tool that aids in the diagnosis of uveal melanoma. It uses higher frequency for better tissue resolution compared with abdominal ultrasonography where greater tissue penetration is required. Ultrasonography can accurately define tumor location, shape, size and degree of extraocular extension, which is useful for proper staging and selection of treatment. Serial monitoring of these parameters allows for evaluation of growth or response to treatment. B-scan ultrasonography is more sensitive than computed tomography (CT) or magnetic resonance imaging (MRI) in detecting extrascleral extension.

A pathognomonic finding is a “collar button” or a mushroom-shaped tumor that results from a rupture through Bruch’s membrane; however, this configuration is present in only 25 percent of cases. Intrinsic vascular pulsations may be visible in some tumors. Near the base, an acoustic quiet zone may be observed due to a relatively avascular tumor. B-scan ultrasonography is also helpful in cases with dense vitreous or subretinal hemorrhage in which the fundus view is restricted, permitting serial examinations. In addition to measuring the size and extent of a tumor, B-scan ultrasonography can be used intraoperatively to confirm the position of the radioactive plaque, especially in posterior tumors where plaque placement may be technically challenging. Choroidal melanoma has a low to medium reflectivity and a high initial spike on A-scan ultrasonography. As this is a one-dimensional reflectivity analysis, it is difficult to obtain measurements of tumor size with A-scan; thus, B-scan ultrasonography is usually preferred for tumor biometry.

**Angiography**

The retinal vasculature can be observed with fluorescein angiography; however, this form of angiography is rarely part of the standard spectrum of tests used in the diagnosis of choroidal melanoma.

**Indocyanine Green Angiography (ICG)**

ICG is useful for visualizing tumor vascularity. In amelanotic melanomas, there is earlier onset of fluorescence (< 1 minute) compared with pigmented melanomas (3 minutes).

**Optical Coherence Tomography (OCT) Enhanced Depth Imaging (EDI)**

EDI is necessary as standard OCT is unable to visualize the choroid and outer layers of the eye. EDI spectral domain OCT can assess small choroidal tumors that are undetectable by ultrasonography.
Outcomes of laser vision correction are best summarized based on the patient’s preoperative refractive status. Both the type and magnitude of refractive error affect the likelihood that uncorrected visual acuity of 20/20 or better will be achieved. Another important metric in laser vision correction outcomes is the proportion of patients whose final refractive error falls within ± 0.5 diopters of the intended result.

Below we present the collective outcomes for laser in situ keratomileusis with the femtosecond laser (FemtoLASIK) and photorefractive keratectomy (PRK) using optimized ablation with the excimer laser (WaveLight® Allegretto Eye-Q). In addition, we report the proportion of patients with an exceptional outcome (uncorrected acuity of 20/16 or better) and the proportion of patients with uncorrected acuity meeting the requirements for driving without glasses (20/40 or better). For this analysis, we included the 1,441 eyes treated at Cole Eye Institute in 2011.
Distance Only LASIK for Low to Moderate Myopia (0 to -7 Diopters Sphere with Cylinder < 3 Diopters) (N = 1,150 at ≥ 3 Months) 2011

Approximately 86 percent of low to moderate myopic eyes achieved uncorrected visual acuity of 20/20 or better with FemtoLASIK, and 95 percent of patients with less than 7 diopters preoperatively had 20/25 vision, which is also a refractive result that fell within ± 0.5 diopters of the desired target. Overall, 99 percent achieved uncorrected visual acuity of 20/40 or better and close to one-half had an exceptional result of uncorrected visual acuity of 20/16 or better.

Distance Only LASIK for High Myopia (> -7 Diopters Sphere with Cylinder < 3 Diopters (N = 134 at ≥ 3 Months) 2011

Approximately 79 percent of high myopic eyes achieved uncorrected visual acuity of 20/20 or better with FemtoLASIK, and 91 percent of patients with greater than 7 diopters preoperatively had 20/25 vision, while 85 percent had a refractive result that fell within ± 0.5 diopters of the desired target. Over 99 percent achieved uncorrected visual acuity of 20/40 or better, and over 25 percent had an exceptional result of uncorrected visual acuity of 20/16 or better.
With myopic surface ablation, over 91 percent achieved uncorrected visual acuity of 20/20 or better with FemtoLASIK, and 97 percent of patients with less than 7 diopters preoperatively had a refractive result that fell within ± 0.5 diopters of the desired target. All patients achieved uncorrected visual acuity of 20/40 or better, and 60 percent had an exceptional result of uncorrected visual acuity of 20/16 or better.

In hyperopic eyes, where a precise refractive outcome is known to be more difficult to achieve with laser vision correction, about 66 percent of our patients still achieved uncorrected visual acuity of at least 20/20, and 86 percent achieved visual acuity of 20/25. Also, 90 percent were within ± 0.5 diopters of the target outcome. Again, 96 percent had uncorrected visual acuity of 20/40 or better, and 15 percent achieved an exceptional result with uncorrected visual acuity of at least 20/16.
The Vitreoretinal Department at Cleveland Clinic Cole Eye Institute has assembled a dedicated surgical team of surgeons, nurses and skilled technicians to deliver world-class care for our patients. This team has developed several new surgical procedures that are now used worldwide in diseases such as retinal detachment, diabetic macular edema, diabetic traction retinal detachments, myopic macular holes, microincision surgery and pediatric retinal surgery. Members of the team have also helped develop the next generation of vitreoretinal surgical devices including microincision surgical instruments and techniques. Finally, the Ophthalmic Imaging Center at Cole Eye Institute is a leader in the new field of intraoperative optical coherence tomography (OCT), developing new uses for this pioneering technology.

In 2011, the team performed 690 surgical cases. As in previous years, emergency cases or situations where ETDRS (Early Treatment Diabetic Retinopathy Study) protocol visual acuity could not be performed at baseline or where patients received postoperative care at another facility were excluded from the analysis.

The vitreoretinal team performed 52 surgeries to close a macular hole for which detailed efficacy outcomes were available. Anatomic closure of the macular hole was achieved in 96 percent of cases, with only two recurrent holes. Vision improved ≥ 3 ETDRS lines in 56 percent of cases, with an average improvement in vision of +16.7 ETDRS letters, or ≥ 3 lines. Two patients’ visual acuity decreased after surgery (within one line of baseline).

Another common macular procedure was removal of an epiretinal membrane, with detailed efficacy outcomes available in 115 cases. The mean visual acuity improvement after membrane peeling surgery was +11.2 ETDRS letters, with 36 percent of patients having a ≥ 3 line gain in vision.

Primary rhegmatogenous retinal detachments are common, and primary retinal detachment repair was performed in 61 patients. The mean change in vision after primary retinal detachment repair was an improvement of +12.9 ETDRS letters, with an improvement in vision of ≥ 3 lines in 39 percent of cases.

Cole Eye Institute is a tertiary care facility and the vitreoretinal team is called on to assist in difficult cases. This is especially true with cases of giant retinal tears and complicated retinal detachments that have proliferative vitreoretinopathy (PVR), which are referred to our facility, often after previous vitreoretinal surgeries at other hospitals. Detailed efficacy outcomes for these types of surgery are available for 207 patients in 2011. Although most patients had a previous retinal surgery, the reattachment rate in these complicated patients was 98 percent. The average improvement in vision after PVR retinal detachment repair was +13.2 ETDRS letters. A ≥ 3 line improvement in vision occurred in 38 percent of cases, while a ≥ 3 line loss in vision occurred in 13.8 percent of cases.

Diabetic vitrectomy surgery is among the most complex surgeries performed by a vitreoretinal surgeon. The vitreoretinal team has developed new techniques for diabetic surgery including pioneering the use of small gauge surgery. In 2011, detailed efficacy outcomes analysis was available in 63 cases. In cases with traction retinal detachment, the mean improvement in visual acuity was +11.4 ETDRS letters, with 41 percent having a ≥ 3 line gain in vision and 13.6 percent having a ≥ 3 line loss in vision. When looking at the visual outcomes after surgery for diabetics, consisting mainly of vitreous hemorrhage, the mean change in vision was +35.1 ETDRS letters or 7 lines, with 50 percent having a ≥ 3 line gain in vision and two patients having a ≥ 3 line loss in vision.
**Category Definitions**

**DR 1**  
- Diabetic Macular Edema (DME)  
  - Macular edema due to posterior hyaloidal traction

**DR 2**  
- Complicated Diabetic Retinopathy  
  - Anterior hyaloidal fibrovascular proliferation  
  - Traction retinal detachment (TRD)  
  - Combined TRD and rhegmatogenous retinal detachment (RRD)

**RRD 1**  
- Rhegmatogenous Retinal Detachment (RRD)

**RRD 2**  
- Complicated Rhegmatogenous Retinal Detachment (RRD)  
  - Recurrent Retinal Detachment  
  - Proliferative Vitreoretinopathy

*Vitreous Hemorrhage (VH)*

*Giant Retinal Tear (GRT)*

*Macular Hole (MH)*

*Epiretinal Membrane (EM)*

**Groupings for Graphs**

**Group 1:** Diabetic Retinopathy (DR1 and Diabetic VH)

**Group 2:** Complicated Diabetic Retinopathy

**Group 3:** Primary Rhegmatogenous Retinal Detachment

**Group 4:** Complicated Rhegmatogenous Retinal Detachment and GRT

**Group 5:** Macular Hole

**Group 6:** Epiretinal Membrane

Note: For most emergency cases, especially RRD1, preoperative baseline ETDRS visual acuity cannot be performed and therefore the outcome results are not included in this analysis.

**Vision Change by Indication for Surgery**

*October 2010 – September 2011*

**Percentage**

![Bar chart showing visual acuity change by indication for surgery, with data broken down by group.](chart.png)
An analysis of intraoperative complications for all surgical procedures revealed no complications in 95.1 percent of cases. Intraoperative retinal tears were the most common intraoperative complication, recorded in 2.8 percent of cases.
## Postoperative Complications
### October 2010 – September 2011

<table>
<thead>
<tr>
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<th>Group 1 (N = 25)</th>
<th>Group 2 (N = 42)</th>
<th>Group 3 (N = 110)</th>
<th>Group 4 (N = 55)</th>
<th>Group 5 (N = 40)</th>
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<td>Hypotony</td>
<td></td>
<td></td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visually Significant Cataract</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vitreous Hemorrhage</td>
<td></td>
<td>2%</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Retinal Detachment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Nonhealing Epithelial Defect</td>
<td>4%</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

An analysis of postoperative complications in patients for whom there were at least three months of follow-up revealed that 95.6 percent of cases did not have any postoperative complications. The most prevalent postoperative complications were intraocular pressure (IOP) spike > 30 mm Hg (1.2 percent), cataract formation (0.9 percent), hypotony (0.3 percent) and new retinal tear (0.6 percent).
Cole Eye Institute considers a good outcome of surgery for strabismus in adults to be the disappearance of diplopia and/or anomalous head position in primary position of gaze or, in the absence of diplopia or anomalous head position, a constant deviation of less than 10 prism diopters.

In children, a good outcome is defined as a constant deviation of less than 10 prism diopters in primary position or the disappearance of anomalous head position in those for whom the surgery was done for that purpose, such as patients with a fourth nerve palsy, Brown syndrome or Duane syndrome. We reviewed only the follow-up visits during October 2010 and September 2011. Therefore, some patients have no follow-up and we do not provide long-term outcomes.

For the above-mentioned period, 257 strabismus procedures were performed by two surgeons; 159 procedures were done on children and 98 were done on patients aged 16 and over (classified as adults). Eighty-seven procedures were for esotropia, 100 for exotropia, 10 for thyroid eye disease, 20 for fourth nerve palsy, nine for dissociated deviations, three for hypertropia, six for sixth nerve palsy, five for Duane syndrome, three for Brown syndrome, six for a face turn for nystagmus, one for Moebius syndrome, one for third nerve palsy, one for CFEOM (congenital fibrosis of the extraocular muscles), four for divergence insufficiency and one for a blow-out fracture.
Sixty-seven children and 20 adults had esotropia. Outcomes were good in 64 children and 17 adults. Three children had a poor outcome, as did three adults.

Fifty-eight children and 42 adults had exotropia. Outcomes were good in 46 children, and eight had a poor outcome. Of the adults, 36 had a good outcome, and six had a poor one. No follow-up was available for four children.

Ten adults had procedures for thyroid eye disease. Good outcomes occurred in all 10.

Ten children and 10 adults were operated on for fourth nerve palsy. One child and one adult had a poor outcome. Follow-up was obtained for all.

Eight children and one adult had surgery for dissociated deviations. Three children had good results, as did the adult. Three children had a poor outcome and no follow-up was available for two children.

Three adults had surgery for hypertropia. Good outcomes occurred in two and a poor outcome in one.

Three children and three adults had surgery for sixth nerve palsy. All six had a good outcome.

Four children and one adult had surgery for Duane syndrome. Three children and the adult had a good outcome. One child had a poor outcome.

Two children and one adult had surgery for Brown syndrome. All had a good outcome.

Five children with nystagmus, one with Moebius syndrome and one with CFEOM had surgery. The outcomes for nystagmus were good for all five. The Moebius patient had a poor outcome, and the CFEOM patient had a good outcome. One adult had surgery for nystagmus and had a good outcome.

One adult was operated on for third nerve palsy and had a poor outcome. One adult had surgery for a blow-out fracture and did not return for follow-up.

Four adults had surgery for divergence insufficiency. One had a poor outcome, and three had good results.
**Adult Strabismus Cases (N = 98)**
*October 2010 – September 2011*

**Percentage of Surgeries**

* “Other” includes patients with Brown or Duane syndrome.

**Pediatric Strabismus Cases (N = 159)**
*October 2010 – September 2011*

**Percentage of Surgeries**

* “Other” includes patients with Brown, Duane or Moebius syndrome and CFEOM patients.
Adult Outcomes (N = 97)
October 2010 – September 2011

13% Poor – Over- or undercorrected

87% Good – Ocular alignment within 10 prism diopters of orthotropia if no diplopia, and/or diplopia disappeared and/or anomalous head position resolved

This graph excludes one patient for whom follow-up is not available.

Pediatric Outcomes (N = 153)
October 2010 – September 2011

11% Poor – Over- or undercorrected

89% Good – Constant deviation < 10 prism diopters in primary position and/or anomalous head position resolved

This graph excludes six patients for whom follow-up is not available.
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 — Cole Eye Institute**

**Overall Rating of Outpatient Care and Services During Outpatient Visit**

2010 – 2011

Source: Press Ganey, a national hospital survey vendor
**Rating of Outpatient Care Provider**  
*2010 – 2011*

<table>
<thead>
<tr>
<th>Percent</th>
<th>2010 (N = 2,934)</th>
<th>2011 (N = 4,338)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Good</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Fair</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Very Poor</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Press Ganey, a national hospital survey vendor

**Likelihood of Recommending Outpatient Care Provider**  
*2010 – 2011*

<table>
<thead>
<tr>
<th>Percent</th>
<th>2010 (N = 2,934)</th>
<th>2011 (N = 4,338)</th>
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<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Very Poor</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: Press Ganey, a national hospital survey vendor
E M R:
Cole Eye Institute Among First Eye Centers to Go Fully Electronic
In early 2011, Cleveland Clinic Cole Eye Institute became one of the first U.S. eye centers to start using an electronic medical record (EMR).

“Historically, ophthalmology has had poor adoption of the electronic medical record for a multitude of reasons,” explains Rishi Singh, MD, who has served as physician leader for the project’s scope, design, development and implementation. These include the need to create intricate drawings of the eye as part of the patient record, the sheer volume of patients that are seen and the inability to integrate ophthalmology devices with EMR systems.

“We were able to successfully customize Epic®, which we then custom-designed to fit the needs of the Cole Eye Institute,” says Dr. Singh. Some of the institute's specific needs include:

- Solutions for remote healthcare that suit a widespread enterprise
- Measures to track the Physician Quality Reporting Initiatives (PQRIs) established by the Centers for Medicare and Medicaid Services (CMS), which determine reimbursement.

By July 2011, nearly 15,000 Cole Eye Institute patients had been integrated into the EMR system, which went live in January 2011. All Cole Eye Institute physicians, including those practicing at Cleveland Clinic regional hospitals, will be using the EMR by mid-2012. In addition, the institute will be rolling out a new imaging system to complement the EMR system, allowing for patients’ images to be shared by all medical specialties across the entire Cleveland Clinic network.

With the EMR, cross-communication among doctors who manage complex patients can occur with ease. For example, a patient who has both rheumatologic disease and eye disease and who requires care from multiple specialists now has the opportunity to take advantage of joint clinics, which allow him or her to see all providers in one day, at one location. Aside from being convenient for patients, joint clinics allow ophthalmologists and other physicians to provide coordinated multidisciplinary care.

As the EMR rolls out to Cole Eye Institute physicians throughout the year, Dr. Singh is forecasting the system’s additional benefits. “Because the EMR collects discrete, quantitative patient data that can be queried directly, it provides our physicians with the opportunity to conduct innovative clinical studies faster than ever before, with less error,” he explains. “The EMR is giving Cole Eye Institute the monumental opportunity to contribute knowledge to and impact the field of ophthalmology.”


For a complete list of 2011 publications go to [clevelandclinic.org/outcomes](http://clevelandclinic.org/outcomes)


Ehlers JP. Intraoperative OCT and vitreoretinal surgery: This technology has the potential to improve clinical outcomes and enhance understanding of the pathophysiology of a wide variety of surgical vitreoretinal diseases. *Retina Today.* 2011 Sep;50-53.


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J. Victor Ryckman, MD
Sara Spagnuolo, MD

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

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

Cole Eye Institute Appointments
216.444.2020 or 800.223.2273, ext. 42020

Cole Eye Institute Referrals
216.444.2030 or 800.223.2273, ext. 42030

On the Web at clevelandclinic.org/eye

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

Request for Medical Records
216.445.2547 or 800.223.2273, ext. 52547

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

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

Cleveland Clinic Florida
Toll-free 866.293.7866

For address corrections or changes, please call
800.890.2467
Institute Locations

Cleveland Clinic Main Campus
9500 Euclid Ave.
Cleveland, OH 44195
216.444.2020

Beachwood
25101 Chagrin Blvd.
Beachwood, OH 44122
216.831.0120

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

Hillcrest Hospital
Atrium Medical Building
6770 Mayfield Road, Suite 326
Mayfield Heights, OH 44124
440.461.4733

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

Strongsville Family Health and Surgery Center
16761 SouthPark Center
Strongsville, OH 44136
440.878.2500

Twinsburg Family Health and Surgery Center
8701 Darrow Road
Twinsburg, OH 44087
330.888.4000
Improving Quality, Safety and the Patient Experience

Overview

Cleveland Clinic uses a scorecard approach to measure quality, safety and patient experience. In addition, real-time dashboard data are leveraged to drive performance improvement. Although not an exact match to publicly reported data, more timely internal data provide transparency for leaders at all levels of the organization to support improved care in their clinical locations. The following are examples of Cleveland Clinic’s 2011 focus areas and main campus results.

Appropriateness of Care

2010 – 2011

Cleveland Clinic’s observed/expected (O/E) mortality ratio outperformed the University HealthSystem Consortium (UHC) academic medical center 50th percentile throughout 2011. Cleveland Clinic’s goal is for all patients to receive all the recommended care for which they are eligible. An aggregated “all or nothing” measurement approach to monitoring multiple publicly reported process-of-care measures for heart failure, acute myocardial infarction, pneumonia and surgical patients is trending positively.

Mortality

2010 – 2011

Cleveland Clinic’s observed/expected (O/E) mortality ratio outperformed the University HealthSystem Consortium (UHC) academic medical center 50th percentile throughout 2011.

*Source: Performance Accelerator Suite Program maintained by the University HealthSystem Consortium (UHC) https://www.uhc.edu/
Cleveland Clinic established a 2011 target ICU surveillance rate of 1.33 central line-associated bloodstream infections (CLABSIs) per 1,000 central line days, with the goal of reducing our rate by an additional 50 percent over the 2010 results. This 2011 target was met by the end of the year.

Cleveland Clinic focused on reducing the incidence of 10 Agency for Healthcare Research and Quality PSIs. Cleveland Clinic achieved a reduction of more than 60 percent in the total number of these PSIs in 2011 through a combination of clinical and documentation improvement activities.

* PSI 3 Stage III/IV Pressure Ulcers, PSI 6 Iatrogenic Pneumothorax, PSI 7 CLABSI, PSI 8 Post-Op Hip Fracture, PSI 9 Post-Op Hemorrhage/Hematoma, PSI 11 Post-Op Respiratory Failure, PSI 12 Post-Op PE or DVT, PSI 13 Post-Op Sepsis, PSI 14 Post-Op Wound Dehiscence, PSI 15 Accidental Puncture/Laceration
Hospital-acquired pressure ulcers in Cleveland Clinic ICU patients were below the national average in 2010 and 2011.

Falls in Cleveland Clinic stepdown unit patients were below the national average for most of 2010 and 2011. In 2011, Cleveland Clinic supplemented proactive falls-reduction strategies with after-event huddles to evaluate causality and develop prevention strategies.
Critical Response Outcomes

Medical Emergency Team Event Volume*
2009 – 2011

Medical Emergency Teams (METs) bring critical care experience to patients across the hospital and provide early intervention that can prevent unplanned transfers to ICUs. As adult MET activations increased from 2009 through 2011, post-event adult ICU transfers decreased.
Patient Experience — Cleveland Clinic

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is the standard national tool for measuring patients’ perspectives of hospital care. Results are available at hospitalcompare.hhs.gov.

HCAHPS Rate and Recommend Hospital
2010 – 2011

Percent (Best Response)

HCAHPS Hospital Domain Scores
2010 – 2011

Percent (Best Response)

“Patients First” is the guiding principle of Cleveland Clinic, which was among the first major academic medical centers to make improving the patient experience a strategic 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. Campus-wide HCAHPS survey results are trending favorably in every domain.
Overview

Cleveland Clinic is a nonprofit multispecialty academic medical center that integrates clinical and hospital care with research and education. Across the health system, 2,800 Cleveland Clinic physicians and scientists practice in 120 medical specialties and subspecialties, annually recording more than 4.6 million physician visits and nearly 188,000 surgeries. Patients come for treatment from every state and from more than 125 countries annually.

Cleveland Clinic’s main campus, with 50 buildings on 180 acres in Cleveland, Ohio, includes a 1,400-bed hospital, outpatient clinic, specialty institutes, and supporting labs and facilities. The hospital currently has the highest CMS case-mix index in America. Cleveland Clinic also operates 18 family health centers, eight community hospitals, one affiliate hospital, a rehabilitation hospital for children, Cleveland Clinic Florida, Cleveland Clinic Lou Ruvo Center for Brain Health in Las Vegas, Cleveland Clinic Canada, and Sheikh Khalifa Medical City. Cleveland Clinic Abu Dhabi (United Arab Emirates), a multispecialty care hospital and clinic, is scheduled to open in 2013. With 41,000 employees, Cleveland Clinic is the second largest employer in Ohio and is responsible for an estimated $9 billion of economic activity every 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.

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 on the patient. Institutes are improving the patient experience at Cleveland Clinic.
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 $240 million in 2010. Research programs include cardiovascular, cancer, neuralgic, musculoskeletal, allergic and immunologic, eye, metabolic, and infectious diseases.

Cleveland Clinic Lerner College of Medicine

Celebrating its 10th anniversary in 2012, the Lerner College of Medicine of Case Western Reserve University is known for its small class size, unique curriculum and full-tuition scholarships for all students. The program graduated 31 students as physician investigators in 2011.

Graduate Medical Education

In 2011, nearly 1,800 residents and fellows trained at Cleveland Clinic and Cleveland Clinic Florida, the most ever hosted by Cleveland Clinic and 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 since 1995.

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

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

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 1,000 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 Patient’s 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 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 toll-free 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 (ccfcmce.com) is an educational resource for healthcare providers and the public. Available 24/7, it houses programs that cover topics in 30 areas – if not from A to Z, at least from Allergy to Wellness – with a worldwide reach. 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 under way. In 2011, the Center offered 15 simultaneous courses at Arab Health, a major world healthcare forum.
This project would not have been possible without the commitment and expertise of a team led by Peter K. Kaiser, MD, and Monica Jain, MBBS, MHA.
Every life deserves world class care.