Cleveland Clinic

Outcomes 2006

Head and Neck Institute




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Outcomes | 2006

Quality counts when referring patients to hospitals and physicians, so Cleveland Clinic has created a series of outcomes books similar to this one for its institutes and departments. Designed for a health care 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. We hope you find these data valuable. To view all our outcomes books, visit Cleveland Clinic's Quality Web site at clevelandclinic.org/quality/outcomes.



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Chairman's Letter



Clinical outcomes data are crucial for referring physicians, government agencies, insurers and, most importantly, patients. Access to outcomes data affords anyone the opportunity to choose the highest quality, most cost-efficient care facility. I am privileged to share our 2006 edition of *Outcomes* with you.

Quality has many variables. We continually monitor patient satisfaction within every facet of our Institute: ease of obtaining an appointment; interaction with schedulers, front desk personnel, financial counselors, secretaries and professional staff. We evaluate our staff satisfaction annually. If personnel are happy, they will provide the selfless, compassionate care we strive to achieve. No detail is too small: I personally inspect the shine on our floors daily. When patients frequently comment favorably about our employees, it is a source of pride for us all. Technical excellence is expected. Humanness, caring, and compassion are what sets us apart.

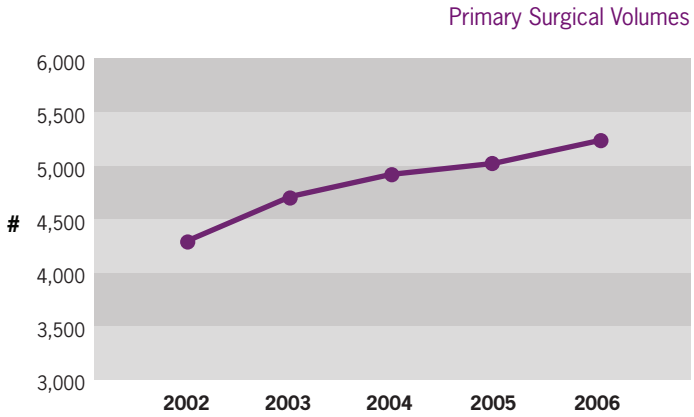
Please enjoy this year's edition of *Cleveland Clinic Head and Neck Institute Outcomes*.

Marshall Strome, M.D., M.S., F.A.C.S.
Professor and Chairman, Head and Neck Institute

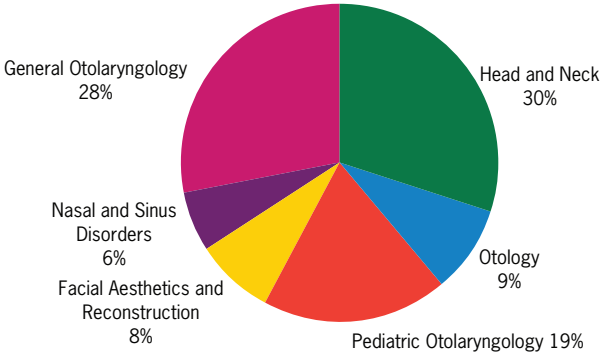
Department Overview

In 2006, the Head and Neck Institute was ranked No.7 in the United States and No. 1 in Ohio by *U.S. News & World Report*. Excellent outcomes are being seen and compassionate care is being provided to patients. In addition, our professional staff remains very active in research, education, speaking engagements and publications.

Surgical volumes continue to rise with a 4% increase from last year.

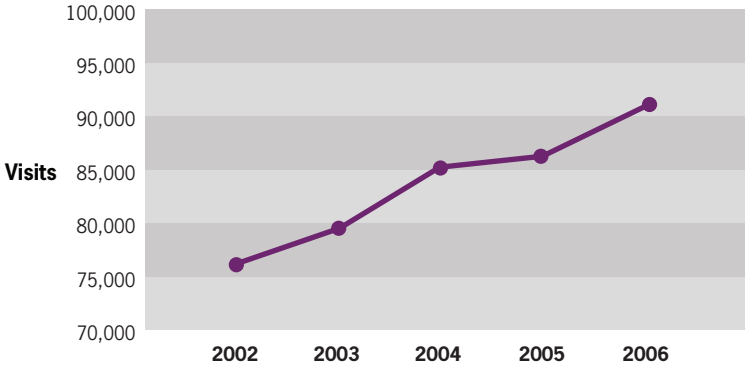


Distribution of Primary Surgical Cases



Total patient visits continue to rise with a 6% increase in 2006.

Total Patient Visits



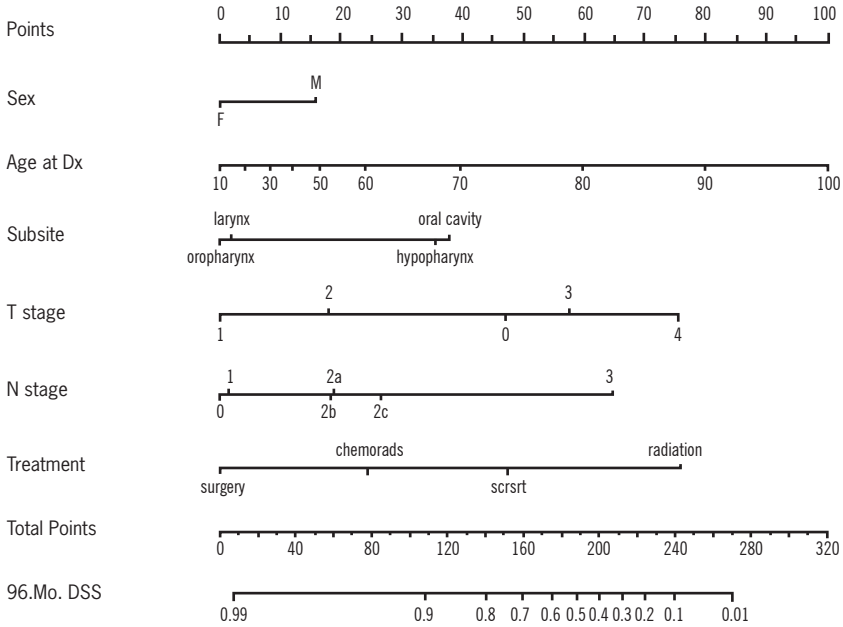
Quality & Outcome Measures

Head and Neck

Head and Neck Cancer: Disease-Free Survival Nomogram

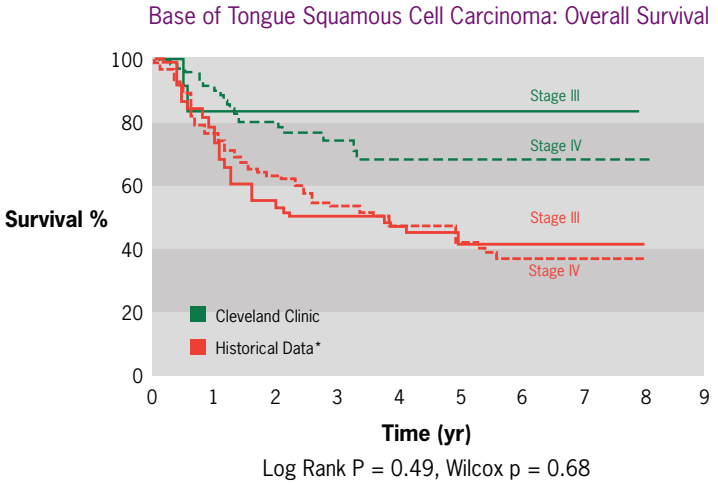
Nomograms in head and neck cancer with squamous cell cancer are new and represent a method of determining the predicted survival for any one particular patient based upon multiple individual characteristics. Based on the outcome of over 900 patients from 1997 to 2004 with a minimum of 2 years of follow-up, disease-free survival can be calculated for any given patient.

Instructions for physician: locate the patient's sex on the 'sex' axis. Draw a line straight upwards to the 'points' axis to determine how many points towards disease-specific death the patient receives for his or her sex. Repeat this process for the other axes, each time drawing straight upward to the 'points' axis. Sum the points achieved for each predictor and locate this sum on the 'total points' axis. Draw a line straight down to the disease-specific survival axes to find the patient's probability of survival, assuming the patient does not die of another cause first.



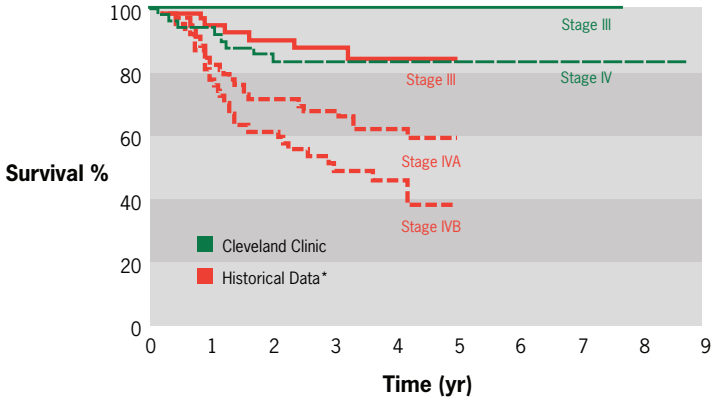
Oropharyngeal Organ Preservation Outcomes

Conventional wisdom within the field of head and neck cancer treatment holds no significant increases in survival have occurred in the last 50 years. Combined use of radiation and chemotherapy, or "organ preservation" protocols have been used at Cleveland Clinic for over 15 years. Mature results from our institution were reported in the *Journal of Clinical Oncology* in 2002, demonstrating a locoregional control rate of stage III and stage IV tumors of 91% at 3 years, with a control rate of 97% when surgical salvage was included. When updating the data to include outcomes from 2006, our survival data for these advanced tumors demonstrates significant improvement compared to historical statistics, especially in such sites as tonsillar cancer and the base of tongue.



Cleveland Clinic Kaplan-Meier curve of disease specific survivals, compared to historical data of radiotherapy alone *(Lee WR, et al, Head & Neck, 1993).

Tonsillar Squamous Cell Carcinoma: Disease Specific Survival



Log Rank P = 0.49, Wilcox p = 0.68

Cleveland Clinic Kaplan-Meier curve of overall survival, compared to historical data of radiation therapy alone *(Sessions, et al, Laryngoscope, 2003).

Treatment of Advanced Laryngeal Cancers Involving the Preepiglottic Space (PES)

Involvement of the preepiglottic space (PES) signifies advancement of a tumor into an anatomically sequestered region and may portend a worse prognosis. In supraglottic carcinoma, PES invasion is sufficient for at least a T3 tumor classification. Indeed, some argue PES invasion should justify T4 classification. Furthermore, given its location and the expected inflammatory response that occurs with radiation treatment, tumor status in the PES is difficult to evaluate after completion of such therapy, making assessment of clinical response difficult. Prognostic impact of PES invasion in patients with advanced squamous cell carcinoma treated with definitive concurrent chemoradiation therapy was evaluated. Treatment by our multidisciplinary team resulted in no difference between those tumors with or without PES involvement.

Local control of tumors with PES involvement	89%
Local control of tumors without PES involvement	89%
Mean follow-up	46 months

Rizzi M, Lee WT, Lorenz RR, Wood BG, Strome M, Scharpf J, Saxton JP, Adelstien JP, Esclamado RM. "Impact of preepiglottic space tumor involvement on concurrent chemoradiation therapy for squamous cell carcinoma." Presented at the 2006 Annual Meeting & Research Workshop on the Biology Prevention and Treatment of Head & Neck Cancer, Chicago IL, August 20.

Results of Treating Strictures After Concurrent Chemotherapy Radiation for Advanced Head and Neck Cancer

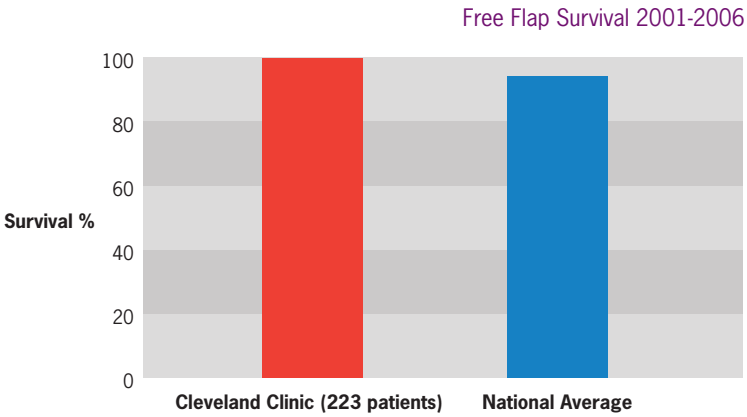
The treatment of head and neck cancer always involves decisions regarding potential cancer control with complications and treatment morbidity. For example, the formation of upper esophageal/hypopharyngeal strictures is a reported complication after the use of concurrent chemotherapy for advanced head and neck squamous cell cancers.

A 21% stricture rate after such treatment was reported in Lee WT, Akst LM, Adelstein DJ, Saxton JP, Wood BG, Strome M, Esclamado RM. "Risk factors for hypopharyngeal/upper esophageal stricture formation after concurrent chemoradiation." *Head Neck* 2006;28:808-812.

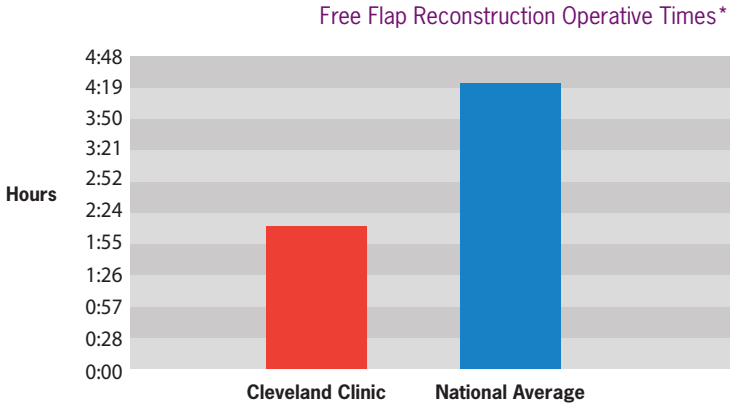
The Head and Neck Oncology Section successfully treated many of these strictures by esophageal dilatation. Between 1989-2002, of 41 patients who developed strictures, 80.5% of patients needed two or less dilatations for resolution, with 39% of the 41 patients needing only one dilatation.

Facial Aesthetics and Reconstruction

Surgeons in the section of Facial Aesthetics and Reconstruction perform complex facial reconstructions with state of the art microsurgical techniques. This allows patients to undergo aggressive cancer surgery with curative intent without suffering the previously debilitating consequences of large surgical resections in the head and neck. Patients with benign but progressive disease processes such as osteoradionecrosis of the jaw have also benefited from this type of reconstruction.



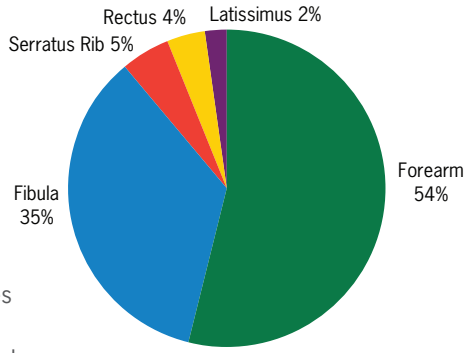
Success rates for microvascular reconstruction (Free Flap) surgery are unrivaled. Failure rates from a survey of major academic institutions that perform this type of surgery range from 2%-20% with a cumulative average of 6%. Data collected from 2001 to the present reveals a 99.6% success rate in our patients during this time period.



Concerns about traditionally prolonged operative times with free flap surgery have made brittle health status or advanced age a “relative contraindication” to undergo this form of reconstructive procedure. Based on two series, the average additional surgical time can be over 4 hours. Free flap surgery performed at the Cleveland Clinic adds an average of only 2:07 hours to the duration of the surgery.

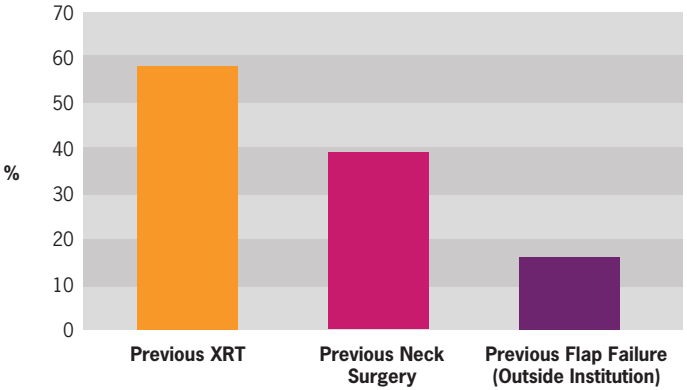
*Flaps are harvested in a two-team approach. This time is the measurement of the time of inset and microsurgery of the flap.

Free Flap Distribution



A broad range of procedures is performed to tailor the reconstruction to the surgical defect of the patient.

Complex Patient Volume



As a tertiary care institution, our patients present with complex comorbidities. Over half the patients have had preoperative radiation treatment. Many have had prior neck surgery. A full 16% of patients have undergone failed microvascular reconstructions at outside institutions before undergoing salvage procedures at Cleveland Clinic.

Nasal and Sinus Disorders

Revision Image-Guided Functional Endoscopic Sinus Surgery results in fewer complications for our patients. This is evidenced by the results of a study conducted on 105 patients undergoing this procedure between December 2005 and November 2006.

Patient demographics

Age	49
n	105
M	56
F	49

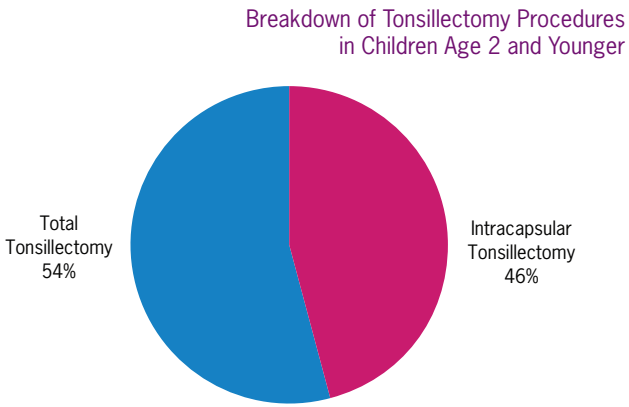
Complication	N	%	Long-Term Sequelae
Intracranial Injury	0	0%	0
Orbital Injury (major)	0	0%	0
Orbital Injury (minor)	0	0%	0
Mucocele	0	0%	0
Epistaxis (major)	0	0%	0
Epistaxis (minor)	1	0.95%	0
Synchiae, requiring repeat OR	0	0%	0
Postoperative pain syndrome	1	0.95%	0
Anesthetic complication	0	0%	0

Pediatric Otolaryngology

Since 2002, the Section of Pediatric Otolaryngology performed over 1,280 tonsillectomies or adenotonsillectomies. Prior analysis of our operative indications showed approximately 60% of pediatric patients undergo tonsillectomy secondary to obstructive symptoms and 40% to relieve chronic infections.

Postoperative hemorrhage remains one of the most common and potentially life-threatening complications of this procedure nationwide. Many children require return trips to the operating room to control post-tonsillectomy bleeding. Our overall 0.5% rate of return to the operating room to control hemorrhage is significantly lower than the national average of 1%-2%.

In recent years partial, or intracapsular, tonsillectomy gained in popularity amongst otolaryngologists nationwide. During this procedure, a small rim of tonsil tissue is left against the lateral pharyngeal wall to prevent exposure of the pharyngeal musculature. In the young patient, intracapsular tonsillectomy procedures are particularly attractive given the findings that children generally experience less pain and resume oral diet more quickly. Postoperative hemorrhage rates are also believed to be lower following this procedure. The potential for tonsil re-growth, as well as the lack of ability to treat the infectious indications for tonsillectomy, limit the number of patients who qualify for intracapsular procedures.



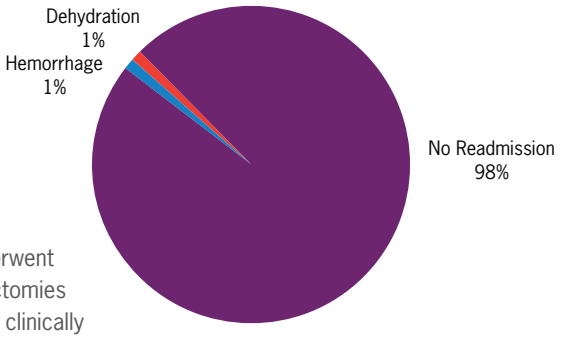
Since 2002, our section performed 140 tonsillectomies in children age 2 and younger, comprising approximately 11% of all tonsillectomies performed. Sixty-four of these tonsillectomies were intracapsular, comprising 46% of all tonsillectomies in the age 2 and younger group.

In general, this patient population is always kept for overnight observation with prolonged hospital stays being necessary for poor oral intake or airway symptoms. Discharge from the hospital after a one-night stay was possible in 81% of the patients who underwent intracapsular tonsillectomy and 53% of those who underwent traditional (total) tonsillectomy. Overall, 62% of patients spent only one night in the hospital after surgery.

A postoperative hemorrhage rate of 0.7% was observed in this population, nearly identical to our overall rate of 0.5%. Two studies which look specifically at the age 2-year and younger patient population cited postoperative hemorrhage rates of 5.7% and 4%. We had no postoperative hemorrhages in patients who underwent intracapsular tonsillectomies.

Overall, 3.6% of patients in this age group were evaluated by physicians for poor oral intake and dehydration in the postoperative period. A readmission rate of 1.4% was observed, lower than published rates of up to 3%-4%.

Readmission Rate in Children Age 2 and Younger Following Tonsillectomy or Adenotonsillectomy



No patients who underwent intracapsular tonsillectomies were seen to develop clinically significant dehydration.

Speech and Language Pathology

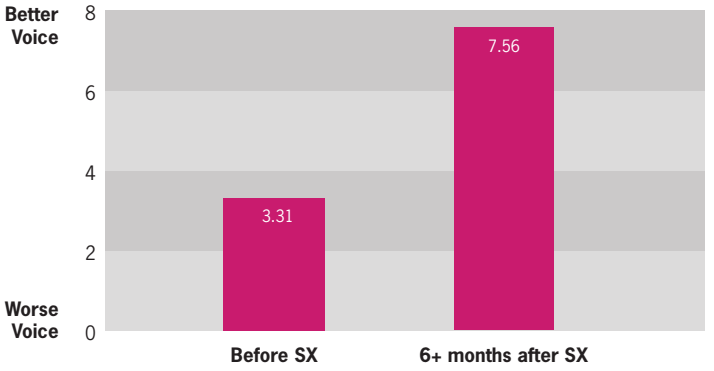
Advances in Treatment of Early Laryngeal Cancer with a Combination of Endoscopic Laser Treatment and Cryotherapy

Traditional treatments for laryngeal carcinoma include major transcervical surgery and/or radiation therapy. Both of these approaches, while offering high cure rates, often leave patients with major morbidities including hoarseness, dry mouth, loss of taste, difficulty swallowing and radiation burning to the neck skin.

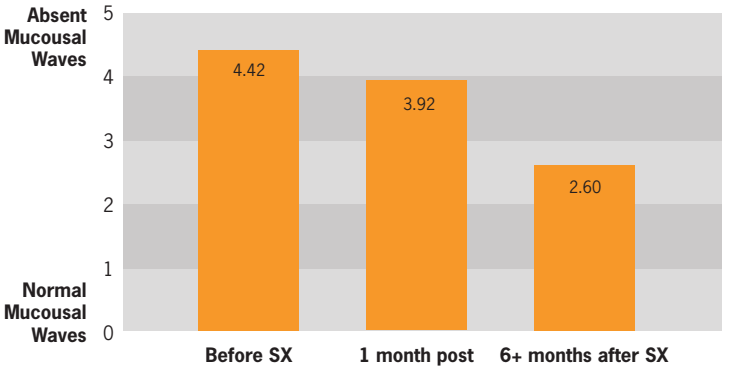
Marshall Strome, M.D. is pioneering a novel approach to the minimally invasive resection of early-stage malignancies of the larynx, employing transoral cryosurgery in addition to CO2 laser resection.

To date, 50 patients have undergone this procedure. In-house data collection results reveal significant improvements in subjective and objective measures of voice quality following this combined treatment. In addition, lab/animal studies confirm the patient data showing that the addition of cryotherapy decreases the surgical inflammatory process, decreases scar formation, and results in more pliable vocal fold tissue. This explains the significant improvement seen in our patients' quick recovery and excellent voice quality.

Voice Quality Rating



Vocal Fold Vibratory Pattern



Results:

All patients were tumor-free at an average of 27.6 months after surgery.

There were 5 recurrences (10% of the population). All were retreated with the same combined therapy and all are currently tumor-free.

There was continued, significant improvement in objective and subjective measures of voice quality at 1, 3, 6 and greater than 6 months after the procedure.

There were significant improvements in laryngeal function measures with 70% improved vocal fold pliability and return of mucosal waves postoperatively.

Only two laryngeal webs were noted among 12 patients with anterior commissure involvement.

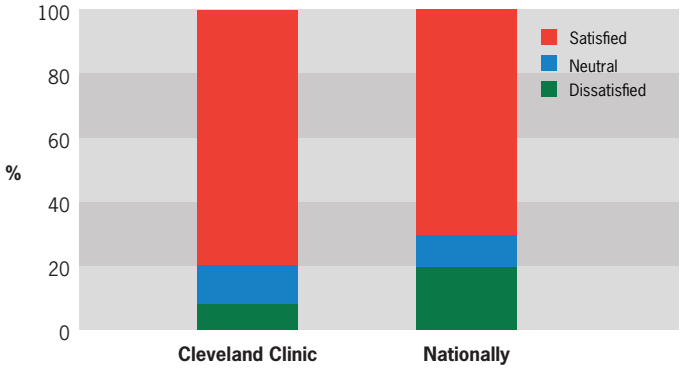
0% Complication Rate

Results show that combination treatment of CO2 laser and cryotherapy for early glottic carcinoma is a viable alternative to radiation therapy for selected patients with early-stage glottic carcinoma who desire curative therapy while optimizing voice outcomes. This combination technique provides excellent tumor control, no side effects, good-to-excellent voice quality outcomes, much improved phonatory function and high patient satisfaction with significant improvement in the patient's quality of life.

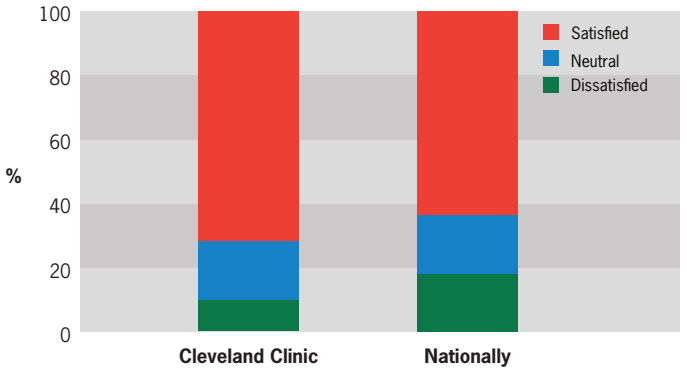
Audiology

Hearing aid satisfaction was measured in 197 patients and compared to results of a national survey (MarkeTrak VII). Cleveland Clinic patients reported greater overall satisfaction, greater perceived value (performance relative to price) and improved quality of life compared to the national average.

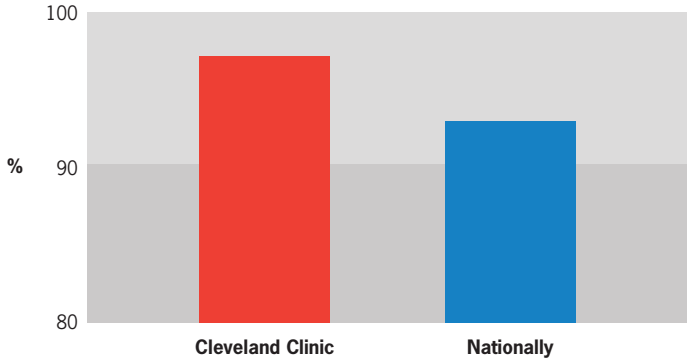
Overall Satisfaction with Hearing Aids



Satisfaction with Hearing Aid Value

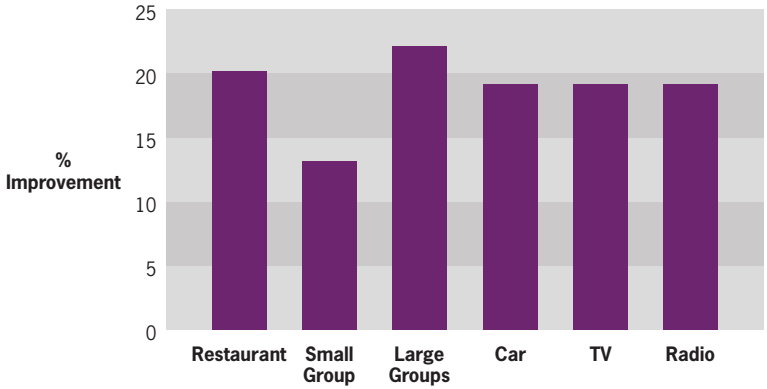


Improvement in Quality of Life with Use of Hearing Aids



The latest development in the hearing aid industry is the introduction of open-ear miniature behind-the-ear (BTE) digital hearing aids. These devices deliver digitally-processed sound through preformed ultra thin tubing that terminates in a dome ear tip. Patients using the newer open-fit BTEs (n = 80) report greater satisfaction in all listening situations compared to conventional digital technology using custom earmold and shells (n = 117).

Improved Satisfaction for
Open-Ear Fitting over Non-Open Ear Fitting



Otology

Bilateral cochlear implants can be implanted either simultaneously or sequentially. The latter has been done anywhere from three months to eleven years after the initial implant.

The rationale for performing a bilateral cochlear implant is three-fold. The ability to gain binaural hearing allows patients to hear much better if there is background noise that may interfere with the sound or conversation to which the patient is trying to listen. The second advantage of bilateral implantation is elimination of the squelch effect. The third advantage is safety. Although localization does not happen with every patient, sound localization is reported by the vast majority of patients.

Results in the table below suggest bilateral cochlear implantation, whether sequential or simultaneous, does not create significant, harmful effects to the patient compared to unilateral cochlear implants.

Cochlear Implant Surgical Results

Result/Complication	Single Side CI Bilateral CI (N = 100)	Sequential Bilateral CI (N = 51)	Simultaneous (N = 18)
Facial Nerve Paralysis	0	0	0
Long Term Vertigo/Disequilibrium	0	0	0
Short Term Vertigo/Disequilibrium	11	4	2
New or Worse Tinnitus	2	1	0
Wound Infection	1	0	0
Meningitis (from implant)	0	0	0
Significant Hearing Improvement	100	51	18
CSF leak (requiring lumbar drain)	2	0	0
Average time in OR (minutes)	98	98	158

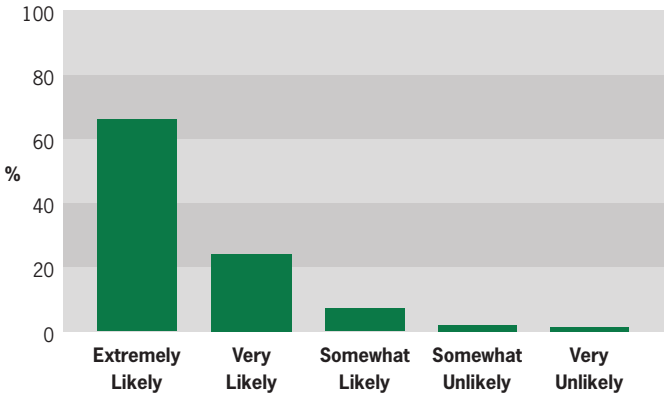
Patient Experience

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.

Outpatient
Overall Rating of Care 2006



Outpatient
Would Recommend Provider 2006



Innovations

Audiology

A major challenge faced by audiologists working in a busy hearing aid dispensing practice is the selection of the most appropriate amplification system in a time-efficient manner for patients. The Section of Audiology developed a self-reporting, pre-fitting hearing aid assessment tool, the Characteristics of Amplification Tool (COAT), with the following characteristics:

- It is brief and easy to complete either at home or in the office.
- COAT serves as a springboard for patient counseling.
- It promotes accountability for both the patient and clinician. The tool provides guidance in the selection of specific devices by assessing a broad range of non-audiologic variables shown to influence hearing aid success.

The application of COAT improved the efficiency for determining the most appropriate hearing aid style and fitting option for a patient, given both audiologic (hearing loss severity, hearing aid style preference) and non-audiologic (motivation to wear hearing aids, financial considerations) variables. The use of COAT streamlined the hearing aid selection process for both patients and clinicians.

Similar to COAT, the Audiology section developed a questionnaire useful in prescribing a specific sound therapy device for tinnitus relief. The 11-item tool is known as Sound Therapy Option Profile (STOP).

Following principles similar to COAT, STOP was developed as a brief and easy-to-complete tool to serve as a springboard for patient counseling and to provide guidance in the selection of specific sound generator devices. Completion of the tool creates a profile of the patient: motivation, willingness to seek treatment, willingness to pay for treatment, preference for specific type of sound generators, expectation level (realistic or not), and the need for psychological involvement. Within a few short minutes, the profile directs the clinician to the selection of the following: broadband noise vs. music; ear level devices vs. body worn/hand held devices; and custom vs. non-custom products. Finally, the tool promotes accountability for both the patient and clinician – an important feature, given the increased emphasis on evidence-based practice.

Facial Aesthetic and Reconstructive Surgery

The Section of Facial Aesthetic and Reconstructive Surgery is currently developing a minimally invasive procedure to improve breathing in patients with chronic nasal obstruction. The technique involves the intranasal placement of a thin titanium nasal suspension plate which acts in a manner similar to an internal “breathe right” strip. This plate stents open the nasal passages and greatly improves the airway at a critical point of obstruction, known as the nasal valve.

The short, outpatient procedure is done without the need of any nasal packing. Unlike externally applied stenting apparatus like the commonly used “breathe right” strip, this implant is internal and offers a permanent solution to the obstructive pathology.

Head and Neck

Annually, there are 700,000 new strokes in this country. Swallowing and, more importantly, aspiration, are serious considerations for the significant numbers of patients afflicted by stroke.

Based on information from our human transplantation experience, a patient in his forties with multiple episodes of aspiration and facing the potential of a laryngeal closure procedure or laryngectomy was treated surgically with complete relief of his symptomatology.

Sensory testing identified the larynx as completely insenate. A modified barium swallow revealed aspiration of every intraoral bolus. The surgical procedure involved elevating the larynx under the hyoid bone. A 6-cm myotomy was performed both above and below the cricopharyngeus and the greater auricular nerve was transposed into the internal branch of the superior laryngeal nerve. Three months following the reinervation, the patient’s sensation began to return. At six months, a modified barium swallow showed neither penetration nor aspiration. Today, he swallows everything completely normally.

Patients who present with an insensate larynx with recurrent pneumonia following a cerebral vascular accident can potentially regain normal swallowing with the aforementioned procedure.

Nasal and Sinus Disorders

Diagnosis and Management of Inhalant Allergies

Timely diagnosis and treatment of inhalant allergies is an important integral component in the management of patients with paranasal sinus inflammatory disease.

The Section of Nasal and Sinus Disorders offers a comprehensive strategy in diagnosis of inhalant allergy, including screening Multitest II™ and modified RAST testing, to define the allergic profile. Intradermal testing is also performed to further characterize the allergic response and to identify the safe starting point for immunotherapy. Skin testing to mold antigens is performed to define the allergic sensitivity in patients with a suspected fungal etiology for chronic rhinosinusitis.

Treatment paradigm encompasses a three-fold approach with environmental control measures and medical therapy as first-line measures and subcutaneous immunotherapy reserved for refractory cases.

Prospective clinical research trials have been integrated into the clinical practice to evaluate testing techniques in inhalant allergies. Projects performed to date include comparison of Multitest and RAST testing to common inhalant antigens and comparison of arm and back subsites to identify the optimal site for skin testing.

Residents at the Head and Neck Institute are also given hands-on training in skin testing and immunotherapy techniques as part of core curriculum training in rhinology.

New Knowledge

Highlighted Publications

Citardi MJ, Song W, Batra PS, Lanza DC, Hazen SL. Characterization of oxidative pathways in chronic rhinosinusitis and sinonasal polyposis. *Am J Rhinol* 2006;20:353-359.

Lee WT, Akst LM, Adelstein DJ, Saxton JP, Wood BG, Strome M, Butler RS, Esclamado RM. Risk factors for hypopharyngeal/upper esophageal stricture formation after concurrent chemoradiation. *Head & Neck* 2006;28:808-812.

Adelstein DJ, Saxton JP, Rybicki LA, Esclamado RM, Wood BG, Strome M, Lavertu P, Lorenz RR, Carroll MA. Multiagent concurrent chemoradiotherapy for locoregionally advanced squamous cell head and neck cancer: mature results from a single institution. *J Clin Oncol* 2006;24:1064-1071.

Ahmed TF, Khandwala F, Abelson TI, Hicks DM, Richter JE, Milstein C, Vaezi MF. Chronic laryngitis associated with gastroesophageal reflux: prospective assessment of differences in practice patterns between gastroenterologists and ENT physicians. *Am J Gastroent* 2006;101:470-478.

Akst LM, Dan O, Strome M. The effect of donor-specific transfusion upon rejection in a rat model of laryngeal transplantation. *Am J Otolaryngol* 2006;27:13-17.

Baek MJ, Park HM, Johnson JM, Altuntas CZ, Jane-Wit D, Jaini R, Solares CA, Thomas DM, Ball EJ, Robertson NG, Morton CC, Hughes GB, Tuohy VK. Increased frequencies of cochlin-specific T cells in patients with autoimmune sensorineural hearing loss. *J Immunol* 2006;177:4203-4210.

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Staff Listing | Chairman



Marshall Strome, M.D., M.S., F.A.C.S
Professor and Chairman, Head and Neck Institute

Appointed: 1993

Medical School: University of Michigan Medical School, Ann Arbor, MI

Specialty Training: Internship - Philadelphia General Hospital, Philadelphia, PA
Residency: Harper Hospital, Detroit, MI
Residency: University of Michigan Health Systems, Ann Arbor, MI

Other Education: L. S. & A. - University of Michigan, Ann Arbor, MI

Specialty Interests: laryngology, head and neck surgery (cancer), sleep surgery

Staff Listing

Chairman
Marshall Strome, M.D., M.S., F.A.C.S

Audiology
Craig Newman, Ph.D.,
Vice Chairman and Section Head
Donald Goldberg, Ph.D.
Co-Director, Hearing Implant Program
Sharon Sandridge, Ph.D.

Center for Surgery Research
Suyu Shu, Ph.D

Community Otolaryngology
Robert Katz, M.D., *Section Head*
Tom Abelson, M.D.
Steven Ball, M.D.
Michael Byrd, M.D.
Edward Fine, M.D., Ph.D.
Richard Freeman, M.D., Ph.D.
George Ozbardakci, M.D.

Facial Aesthetic and Reconstructive Surgery
Daniel Alam, M.D., *Section Head*
Michael Fritz, M.D.

General Otolaryngology
Alan Kominsky, M.D.,
Vice Chairman and Quality Review Officer
Catherine Henry, M.D.

Head and Neck Surgery
Robert Lorenz, M.D., *Section Head*
Walter Lee, M.D.
Joseph Scharpf, M.D.
Marshall Strome, M.D.
Benjamin Wood, M.D.

Laryngology
Marshall Strome, M.D.

Nasal and Sinus Disorders
Martin Citardi, M.D.,
Section Head and Associate Residency Program Director
Pete Batra, M.D.

Otology
Gordon Hughes, M.D., *Section Head*
Peter Weber, M.D.
Residency Program Director and Co-Director, Hearing Implant Program

Pediatric Otolaryngology
Keiko Hirose, M.D., *Section Head*
Chris Discolo, M.D.
Paul Krakovitz, M.D.

Speech and Language Pathology/ Voice Center
Douglas Hicks, Ph.D., *Section Head, Director, Voice Center*
Claudio Milstein, Ph.D.

Vestibular and Balance Disorders
Judith White, M.D., Ph.D., *Section Head*

Cleveland Clinic Florida
Gilberto Alemar, M.D.
Eloy Villasuso III, M.D.

Department Contacts | How to Refer Patients

How to Refer Patients

Head and Neck Cancer Physician Referral Line
866.430.9583, Monday-Friday, 8 a.m. to 5 p.m. EST

For Hospital Transfers or Physician Consults
800.553.5056, 24 hours a day, seven days a week

Cleveland Clinic Toll Free Line
800.223.2273
This is a Cleveland Clinic operator-assisted number. State physician's name and you will be connected directly to the office. Available 24 hours, seven days a week

Appointments can be made at the following locations:

Main Campus
Head and Neck Institute
216.444.6691

Hillcrest Hospital Atrium Head and Neck Institute
440.312.3681

Beachwood Family Health and Surgery Center
216.839.3740

Independence Family Health Center
216.986.4160

Lorain Family Health and Surgery Center
440.204.7400

Solon Family Health Center
440.519.6950

Strongsville Family Health and Surgery Center
440.878.2500

Westlake Family Health Center
440.899.5630

For more information about the Head and Neck Institute, visit clevelandclinic.org/headandneck

For more details about maps and locations, visit clevelandclinic.org/maps

Locations



Main Campus
Head and Neck Institute
9500 Euclid Avenue/A71
Cleveland, Ohio 44195
Appointments: 216.444.6691

Community Locations:
Hillcrest Hospital Atrium
Head and Neck Institute
440.312.3681

Regional Family Health and Surgery Centers ENT Locations:
Beachwood Family Health and Surgery Center
216.839.3740

Independence Family Health Center
216.986.4160

Lorain Family Health and Surgery Center
440.204.7400

Solon Family Health Center
440.519.6950

Strongsville Family Health and Surgery Center
440.878.2500

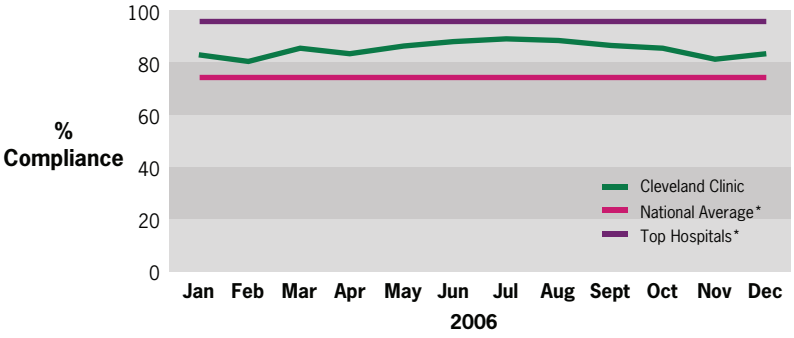
Westlake Family Health Center
440.899.5630

Division of Surgery Overview

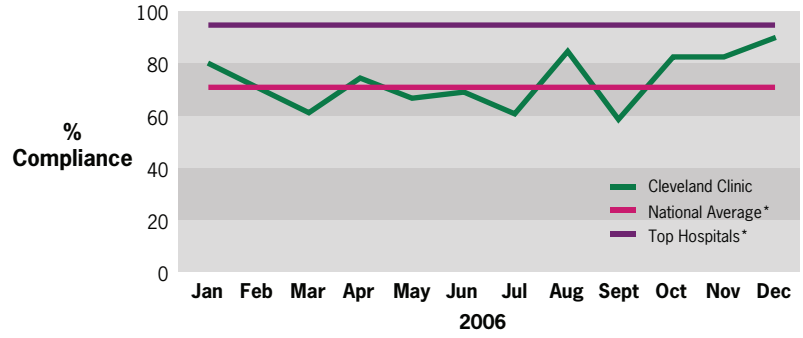
Surgical Infection Prevention

Surgical site infections contribute to surgical morbidity and mortality in all specialties. The timely administration and the appropriate selection of antibiotics prior to surgery in appropriate patients have been shown to reduce surgical site infections. A multidisciplinary team, involving Surgery, Infectious Disease, Anesthesia, Nursing and Quality has been working to ensure that our patients receive their antibiotics in a timely fashion. Data collected show our successful results:

Appropriate Preoperative Prophylactic Antibiotic Timing

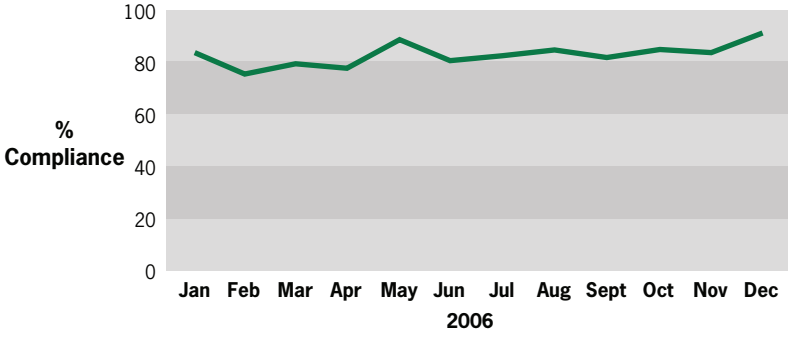


Prophylactic Antibiotics Discontinued within 24 Hours after Surgery



* Source: United States Department of Health and Human Services, Hospital Compare
Most current reported discharges April 2005 to March 2006.

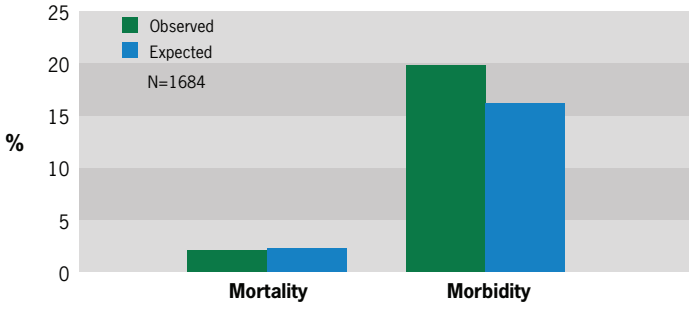
Appropriate Prophylactic Antibiotic Selection



National Surgical Quality Improvement Program

The American College of Surgeons' National Surgical Quality Improvement Program (NSQIP) is a national program that objectively measures surgical outcomes. It reports risk-adjusted 30-day mortality and morbidity outcomes. Currently, the program includes surgical cases from Cleveland Clinic's departments of 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 departments. We view NSQIP as the most valid, independent way to document our surgical outcomes and provide a basis for ongoing performance improvement.

NSQIP July 1, 2005 to June 30, 2006



Cleveland Clinic Overview

Cleveland Clinic, founded in 1921, is a not-for-profit academic medical center that integrates clinical and hospital care with research and education. Today, 1,700 Cleveland Clinic physicians and scientists practice in 120 medical specialties and subspecialties.

Cleveland Clinic's main campus, with 41 buildings on 130 acres in Cleveland, Ohio, includes a 1,000-bed hospital, outpatient clinic, subspecialty centers and supporting labs and facilities. Cleveland Clinic also operates 13 family health centers, eight community hospitals, two affiliate hospitals, and a medical facility in Weston, Florida.

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.

For more details 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 opinions through a secure Web site to patients around the world; personalized medical record access for patients; patient treatment progress access for referring physicians (see below); and imaging interpretations by the Department of eRadiology's subspecialty trained academic 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, our new eCleveland Clinic service, Dr**Connect**, can streamline communication from Cleveland Clinic physicians to your office. This new 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 Dr**Connect** Web site. To establish a Dr**Connect** account, visit eclevelandclinic.org or e-mail drconnect@ccf.org.

MyConsult

My**Consult** Remote Second Medical Opinion is a secure, online service providing specialist consultations and remote second medical opinions for more than 600 life-threatening and life-altering diagnoses. My**Consult** remote second medical opinion service allows you to gather information from nationally recognized specialists without the time and expense of travel. For more information, visit eclevelandclinic.org/myconsult, e-mail eclevelandclinic@ccf.org or call 800.223.2273, ext 43223.

Cleveland Clinic Contact Numbers

How to Refer Patients
24/7 Hospital Transfers or Physician Consults
800.553.5056

General Information
216.444.2200

Hospital Patient Information
216.444.2000

Patient Appointments
216.444.2273 or 800.223.2273

Medical Concierge
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
216.444.6404 or visit www.clevelandclinic.org/ic

Cleveland Clinic in Florida
866.293.7866

www.clevelandclinic.org

Cleveland Clinic is determined to exceed the expectations of patients, families and referring physicians. In light of this goal, we are committed to providing accurate and timely information about our patient care. Through participation in national initiatives, we support transparent public reporting of healthcare quality data and participate 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)

In addition, this publication was produced to assist patients and referring physicians in making informed decisions. To that end, information about care and services is provided, with a focus on outcomes of care. For more information, please visit the Cleveland Clinic Quality Web site at clevelandclinic.org/quality.



Cleveland Clinic

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Cleveland Clinic is a not-for-profit 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 division and a research institute.

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