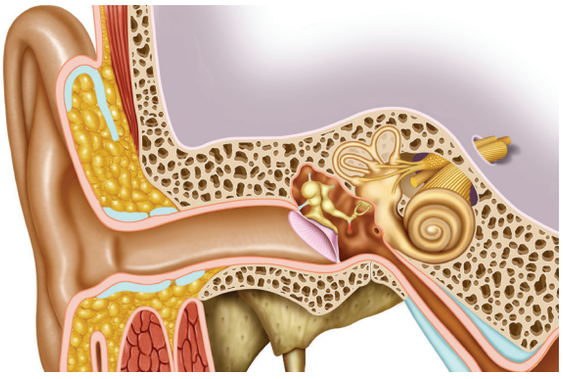
The Institute for ADVANCED OTOLARYNGOLOGY



NEW YORK METHODIST HOSPITAL

The Institute for Advanced Otolaryngology at New York Methodist Hospital brings together a unique team of specialists and medical services to provide coordinated, comprehensive diagnosis and treatment of a broad range of conditions related to the ear, nose, throat, sinuses and other structures of the head and neck. The Institute houses Brooklyn's largest group of board-certified, fellowship-trained otolaryngologists ("ENT specialists") and head and neck surgeons. In addition to treating patients with a range of disorders and diseases of the ear, nose and throat, these physicians provide specialized medical and surgical care for patients in the subspecialties of head and neck oncology, laryngology and voice disorders, ear disorders, infections and hearing impairment, congenital anomalies, and functional disorders of the nose and paranasal sinuses.

The Institute applies a multidisciplinary approach to patient care, working closely with neurologists, neurosurgeons, thoracic surgeons, specialists in sleep medicine and surgery, radiologists, radiation and medical oncologists, ophthalmologists, pulmonologists, allergists, dentists and pathologists. Speech, swallowing and voice therapists, audiologists, nutritionists and social workers also provide care to patients of the Institute.

Referrals to these specialists or to programs and services available at New York Methodist Hospital can be made through an individual's primary care physician or can by requested directly through the Institute's referral service. All diagnostic and therapeutic procedures are performed at New York Methodist Hospital or in physician's medical offices.

Doctors and other health professionals affiliated with the Institute are available to speak to community groups on a variety of topics related to the prevention and treatment of head and neck disorders. Other community outreach activities of the Institute include the distribution of informational materials, support groups and screening programs.

THE PROGRAMS AND SERVICES OF THE INSTITUTE ARE CONTAINED WITHIN FOUR MAJOR CENTERS:

- THE CENTER FOR EAR, NOSE AND THROAT MEDICINE
- THE CENTER FOR HEAD AND NECK SURGERY
- THE CENTER FOR PEDIATRIC OTOLARYNGOLOGY
- THE CENTER FOR SLEEP AND AIRWAY SURGERY

CENTER FOR EAR, NOSE AND THROAT MEDICINE

The Center for Ear, Nose and Throat Medicine provides care for patients with throat and voice disorders, allergy and nasal breathing disorders, ear disorders and hearing impairment, and sinus disease and disorders. Doctors at the Center work closely with physician specialists in other disciplines to provide patients with advanced, specialized care when necessary.

THE EARS

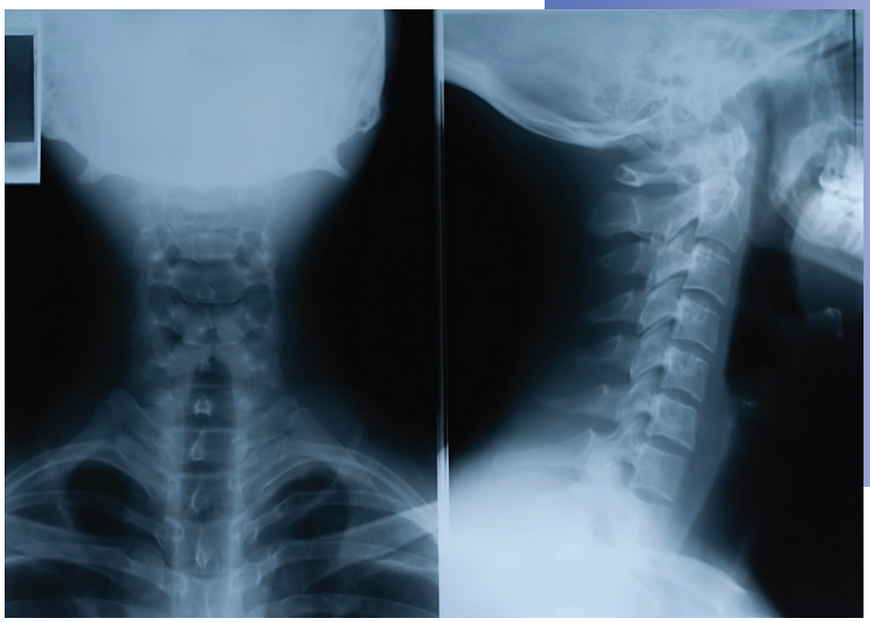
Physicians affiliated with the Institute are trained in the medical and surgical management of hearing disorders, ear infections, balance disorders, ear noise (tinnitus), nerve pain, and facial and cranial nerve disorders. Congenital (birth) disorders of the outer and inner ear are also treated or managed.

THE NOSE AND SINUSES

Institute doctors specialize in the medical and surgical care of sinusitis, nasal polyps, correction of deviated nasal septum and nose bleeds (epistaxis). Treatment for allergic rhinitis, with painless and convenient sublingual immunotherapy for environmental allergies, to improve nasal breathing and cosmetic appearance is also provided.

THE THROAT

Institute physicians are experts in managing diseases of the larynx (voice box) and the upper aero-digestive tract or esophagus, including voice and swallowing disorders.



CENTER FOR HEAD, NECK AND SKULL BASE SURGERY

Specialists at the Center for Head and Neck Surgery are able to utilize the excellent medical resources available at New York Methodist Hospital to deliver tertiary level care to patients with malignant and benign diseases of the head and neck. The head and neck region is a complex area of the body that includes the brain, ears, nose and throat, the eyes, the teeth and neck. These structures enable thought, vision, smell and taste, chewing, speech, swallowing and breathing.

The Institute's doctors treat patients with newly diagnosed, recurrent and advanced diseases. Patients are offered the latest advances in medical management for treatment; however, in some cases, surgery may be indicated as the best possible therapeutic option. The Center offers a full range of surgical programs and services for patients when head or neck surgery is indicated.

Doctors at the Center work closely with physician specialists in other disciplines to provide patients with coordinated advanced, specialized care when necessary. For example, speech and language therapists can provide care and support for patients who have undergone surgical or "organ sparing" treatment for head and neck cancer.

THE SKULL BASE SURGERY PROGRAM

Tumors (both benign and malignant) and several other conditions may affect the skull base. Most common among these are brain tumors, pituitary tumors, cerebrospinal fluid leak, acoustic neuromas, and meningiomas. Developmental abnormalities, trauma and infections may also involve the base of skull. Treating skull base tumors and conditions may be difficult because they are near critical nerves and blood vessels in the brain, eyes, head, neck, and spinal cord.

The surgery is usually performed endoscopically, through the nose, without cutting the face or skull. Other minimally invasive approaches involve accessing the brain or skull base via a small incision in the eyebrow or from behind the ear. In some cases, external surgery may be necessary.

Whatever the approach, state-of-the-art operating room equipment and facilities with nerve monitoring, intraoperative computerized navigation systems and microscopes ensure the surgeon's ability to manage skull base lesions with added patient safety. Microvascular free tissue transfer is used for reconstruction of the cranial base defect when required..

In addition to surgery, radiation and chemotherapy may be part of the recommended therapy.

MINIMALLY INVASIVE SURGERY FOR HEAD & NECK TUMORS

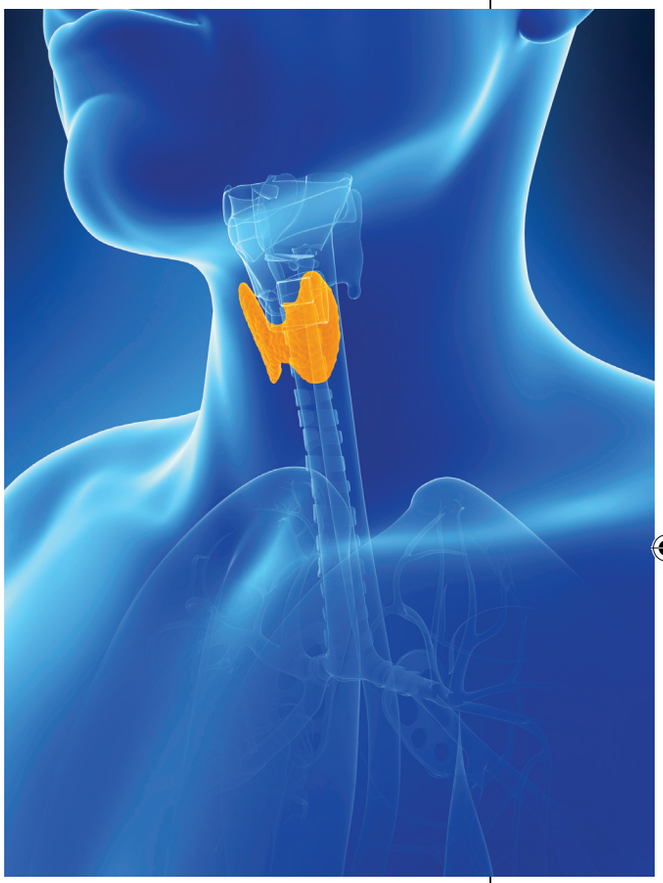
The center is one of the few in the nation to offer patients the benefits of minimally invasive surgery for head and neck tumors. Many head and neck tumors or cancers of the throat and oral cavity can be removed using minimally invasive techniques that do not require any incisions in the face or neck. Studies have shown that patients who receive minimally invasive surgery recover faster, have less pain and return to function more quickly than patients who receive conventional surgery.

Robotic equipment and lasers provide access to areas that were traditionally not within reach with a minimally invasive technique. In contrast to robotic surgery in other areas of the body, transoral robotic surgery (TORS) for oral and throat cancers does not even require incisions for access as the surgery is done entirely through the mouth. Assessment of whether minimally invasive surgery is possible requires a thorough evaluation by a surgeon who is an expert in these techniques.

The Center also offers evaluation and treatment for salivary submandibular and parotid gland stones including minimally invasive procedures with transoral stone extraction, using the sialendoscopy technique.

RESECTION & RECONSTRUCTION

Advanced recurrent cancers of the head and neck require prompt evaluation and treatment. A multidisciplinary approach that involves working with radiation oncologists, medical oncologists, neurosurgeons, thoracic surgeons and others to provide the most effective and safest treatment of these advanced tumors is employed. Removal of these tumors often requires cutting-edge techniques for reconstruction to restore the patient's appearance and important functions such as eating and speech. These advanced techniques may include microvascular reconstruction where tissue is moved from another part of the body to recreate important structures such as the tongue or throat and nerve reconstruction to restore function. The Center's surgeons have experience in the treatment of the most advanced cancers, with the goals of providing a cure as well as return to normal function



ENDOCRINE SURGERY PROGRAM

The Center offers state-of-the art care for the surgical treatment of a full range of benign and malignant conditions of the thyroid and parathyroid glands. Each patient's treatment plan is developed and managed by a multidisciplinary team that brings together the expertise of endocrinologists, surgeons, radiologists and pathologists. The Center's surgeons are highly experienced in performing a variety of thyroid operations, including total thyroid removal for cancer, lymph node dissections, and thyroid surgery for benign conditions such as symptomatic goiters. When appropriate, a minimally invasive thyroid surgery, which leaves minimal scarring, may be offered.

Hyperparathyroidism is the principal parathyroid condition requiring surgery. Removal of the parathyroid gland (parathyroidectomy) is performed using a minimally invasive technique with intra-operative parathyroid hormone (PTH) monitoring. This surgery cures hyperparathyroidism and its resultant elevated calcium level (hypercalcemia).

Surgeons at the Center are also proficient in the evaluation and management of more complex parathyroid conditions, such as familial, recurrent or multi-gland disease.

CENTER FOR PEDIATRIC OTOLARYGOLOGY

The Center for Pediatric Otolaryngology specializes in the evaluation and treatment of a variety of ear, nose and throat disorders in children. These include infectious diseases (tonsillitis, otitis, rhinosinusitis), congenital and acquired benign and malignant diseases and disorders of the head and neck, ear disorders and hearing impairment, nasal and sinus abnormalities, sleep disorders and a variety of pediatric airway, voice and swallowing disorders.

The Center also cares for children with a wide variety of sinus conditions. These include inflammatory lesions, congenital masses, and both benign and malignant neoplasms. Children with sinusitis can develop significant complications such as sub-periosteal abscesses and orbital abscesses. The latest technologies, including image-guided tracking systems and balloon sinuplasty technology, are available to provide the safest and least invasive surgeries for children with acute or chronic sinusitis.

In collaboration with a multidisciplinary team, the Center for Pediatric Otolaryngology provides collaborative care to children with facial skeletal diseases including cleft lip and cleft palate repair.

THE PEDIATRIC AIRWAY, VOICE AND SWALLOWING PROGRAM

The Pediatric Airway, Voice and Swallowing Program provides care for children with congenital and acquired disorders of the aero-digestive tract that may affect their ability to breathe, speak, or eat. These disorders include breathing difficulties, chronic cough, recurrent croup, feeding difficulties, laryngopharyngeal reflux, chronic sinusitis, and problems with voice and speech.

The causes of these disorders may be straightforward, but often require expertise from several disciplines, including pediatric otolaryngology, gastroenterology, and pulmonology, creating a multi-disciplinary collaboration between specialties. Children with congenital and acquired airway disorders may be treated with open airway procedures (made with a neck incision into the airway) or endoscopic procedures (performed through the mouth, eliminating the need for a neck incision).

PEDIATRIC HEAD AND NECK LESIONS PROGRAM

Head and neck masses that occur in children include inflammatory lesions, congenital masses, and both benign and malignant neoplasms. The vast majority of head and neck masses in children are not cancer. They are inflammatory lesions that either resolve spontaneously or respond to appropriate medical therapy. However, if the masses persist, operative biopsy or excision may become necessary. Infections can also progress to abscess formation, requiring surgical intervention.

Congenital Abnormalities

Congenital anomalies of the head and neck are present at birth but can remain unnoticed until later in life due to expansion or infection. Congenital lesions can also cause a draining sinus or fistula opening. These lesions are treated with surgical excision.

The Center for Pediatric Otolaryngology also manages hemangiomas and vascular malformations of the head and neck. One in three children is born with a vascular birthmark, and some of these children require medical evaluation due to cosmetic or functional concerns.

Primary Malignant Tumors

Although rare, an estimated five to ten percent of primary malignant tumors in children originate in the head and neck. In collaboration with the head and neck reconstructive team, members of the Center care for pediatric patients with head and neck malignancies, and the challenges that can arise from these tumors, including speech and swallowing difficulties. A solid neck mass with rapid or persistent growth, skin involvement, or neck immobility may be malignant and should be evaluated.

PEDIATRIC HEARING AND NEWBORN SCREENING PROGRAM

Physicians at the Center care for children with a wide variety of disorders of the ears, including mild to profound hearing loss, and dizziness. Our multidisciplinary team gives careful consideration to a range of medical and surgical interventions to ensure the most advanced and effective care plan for each child. The Center's fellowship-trained surgeons specialize in conductive and sensorineural hearing loss, cochlear implants, and chronic ear disease, including cholesteatoma and tympanic

membrane perforation. Audiologists and speech therapists provide pediatric audiology testing and evaluation hearing aid services and speech therapy. Members of the Center are also involved in New York Methodist Hospital's Newborn Hearing Screening Program.

PEDIATRIC SLEEP APNEA PROGRAM

Sleep apnea is a common sleep disorder characterized by brief interruptions of breathing during sleep. Many episodes last 10 seconds or more and occur repeatedly throughout the night. In children, the most common type is obstructive sleep apnea (OSA) and it is caused by enlarged tonsils and/or adenoid tissue. Frequent symptoms of OSA in children include restless sleep, loud snoring, daytime sleepiness, behavior changes, and morning headaches.

The Pediatric Sleep Apnea Program works closely with New York Methodist Hospital's Center for Sleep Disorders to identify children who suffer from OSA and arrange treatment plans for them. A sleep study or polysomnogram (PSG) is an overnight test that can be used to diagnose sleep apnea. One parent stays with the child throughout the night during this painless test. Treatment approaches for OSA include inpatient and outpatient surgical intervention, and CPAP (continuous positive airway pressure) devices when appropriate.

CLEFT AND CRANIOFACIAL PROGRAM

Cleft lip and cleft palate are among the most common birth anomalies seen in infants. Orofacial clefts affect the ability of infants to feed and speak properly and the deformity affects future dental development and breathing through the nose. Consequently, the rehabilitation of patients with cleft lip and palate requires the services of multiple clinical specialists, staged surgical procedures and long-term follow up. For some patients, the cleft is part of a syndrome or the patient may have associated malformations that also require attention.

Ultrasound imaging in the second trimester of pregnancy can depict many details of the child's face. If he or she has a cleft lip, it may be detected during pre-natal ultrasound evaluation. The obstetrician can refer the family to the cleft team prior to delivery so they can meet the surgical team and begin to prepare for treatment

The Cleft and Craniofacial Program provides services to affected patients and their families and includes a core team of specialists. The Cleft Team members are drawn from the areas of pediatric otolaryngology, plastic surgery, speech and language pathology, dental medicine, genetics, audiology, pediatrics and neonatology.

Care is coordinated among all clinical team members with close communication with parents and primary care providers. The infant will be evaluated in the neonatal

intensive care unit once a referral is made to the cleft team and follow-up shortly after discharge will be arranged with the surgeon who will repair the child's cleft. Additional follow-up appointments will also include the child's pediatrician, a feeding specialist, a genetics specialist, and possibly other pediatric specialists, depending on any other medical issues discovered during the child's initial evaluation in the Hospital.

Repair of the cleft lip is performed when the child is between six and 12 weeks of age and may be performed in one or two stages. Typically, the repair is completed by the time the child is six months old.

Cleft palate surgery is performed when the child is older, between nine and 15 months of age. Older children may have types of clefts that do not become apparent until school age and these patients will be evaluated by the team. Additionally, many adult patients who had surgery for a cleft lip or palate may have continued functional problems and may also seek evaluation and care with clinicians in the cleft program.

The Cleft Program also accepts referrals for microtia (small, underdeveloped ears), velopharyngeal insufficiency, micrognathia (small jaw)/Pierre Robin sequence, Treacher Collins syndrome and other craniofacial syndromes.

CENTER FOR SLEEP/AIRWAY SURGERY

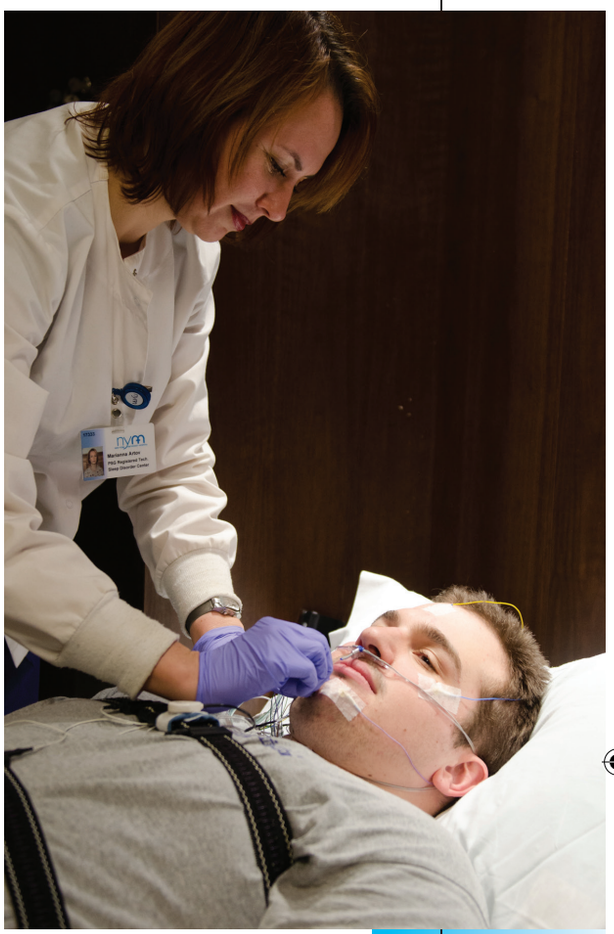
Snoring and other sleep disturbed breathing phenomena are common but frequently go undiagnosed. Obstructive sleep apnea (OSA) is a disorder that is characterized by pauses in breathing or shallow breathing that disrupts sleep and leads to a significant number of physical and mental problems. Patients with obstructive sleep apnea syndrome are at risk for heart disease, stroke, memory loss and motor vehicle accidents. This serious condition can be exacerbated by excessive weight gain and compounded by poor sleep hygiene or irregular rest hours.

Our Center for Sleep Disorders can help patients with sleep problems receive an accurate diagnosis and treatment. If a diagnosis of sleep apnea is established by polysomnography (sleep test), a trial of continuous positive air pressure (C-PAP) treatment is frequently recommended.

If a patient wishes to explore surgical options as treatment for obstructive sleep apnea, a thorough evaluation is performed with complete head and neck examination, often including nasal endoscopy, flexible laryngoscopy and, in some cases, drug induced sleep endoscopy to identify anatomic and physiologic levels of obstruction during apneic episodes. An individualized treatment plan can then be developed. Patients may need nasal surgery to relieve nasal congestion and obstruction during sleep. In some cases, anatomic variations may dictate a need

for palatal surgery. The Center offers transoral robotic procedures (TORS) for OSA as well. Palate stiffening procedures are also available for severe snoring in the absence of sleep apnea.

Extensive counseling and support is available for patients with obstructive sleep apnea. Weight loss programs are coordinated with endocrinologists and nutritionists or with bariatric surgeons. This approach, integrating medical and surgical treatment options, leads to outstanding outcomes with improved quality of life.



LARYNGOLOGY, VOICE AND SWALLOWING PROGRAM

The larynx is the organ that enables sound creation using air pressure from the lungs. The vocal cords occupy the central region of the larynx and vibrate like stretched rubber bands when air passes across them. When dysfunction occurs in the larynx or the nerves that control it, the voice can be adversely affected. Larynx problems can stem from lesions, both benign and cancerous; from neurological disorders like vocal fold paralysis or medical illnesses; and from trauma, for example injury sustained during endotracheal intubation. These conditions may result in voice disturbances, swallowing disorders, airway obstruction or cancer of the larynx.

Symptoms of a serious voice disorder may include hoarseness (dysphonia), a weak or "breathy" voice, difficulty in projecting the voice or easy vocal fatigue, voice loss or breathing difficulties (stridor).

Physicians trained in this specialized field of otolaryngology diagnose and treat patients with many varieties of laryngeal pathology. Voice preservation and therapy (with emphasis on the professional voice) is an important aspect of the program.

Narrowing of the airway, called laryngotracheal stenosis, can lead to serious breathing obstruction, in some cases severe enough to require a tracheotomy, a surgical opening in the windpipe below the obstruction to enable breathing. An alternate solution, airway reconstruction to correct stenosis can restore natural breathing without the need for tracheotomy. In some cases, airway reconstruction can also restore airway function in patients who already have a tracheotomy, doing away with the need for the tracheal tube.

A variety of tools and techniques are employed to correct laryngotracheal stenosis. Airway dilation is the least invasive of these treatment techniques. The

same-day procedure stretches the upper airway to increase airflow. The results are immediate but the procedure must be repeated over time. Endoscopic surgery results in less damage to healthy tissue, few breathing and swallowing problems and faster recovery times. If the problem cannot be corrected with airway dilation or endoscopic surgery, traditional surgical techniques are employed.

A number of conditions can lead to swallowing disorders including narrowing and obstructions, stroke and other problems of the brain and nervous system. The laryngology staff prefers, when possible, to employ a strategy combining swallowing therapy, dilation and the use of botulinum toxin (Botox) to relax the upper esophagus, clearing the way for food and liquids into the upper gastrointestinal tract.

CLINICAL RESEARCH PROGRAM

Physicians at the Center conduct clinical and basic science research both to improve patient care and to better understand cancer biology. Clinical research helps clinicians improve their ability to effectively diagnose, treat and provide the best possible quality of life for patients with head and neck cancer. Patients with head and neck cancer may have the opportunity to participate in a variety of clinical trials and research studies.

REFERRAL

For referral to a physician affiliated with the **INSTITUTE FOR ADVANCED OTOLARYNGOLOGY** or to schedule an appointment for a test or procedure, please call (toll-free) **844.ENT.DOCS (844.368.3627)**.

For community support services (printed materials, community lectures, support group information) call **718.780.5367**.

INSTITUTE FOR ADVANCED
AND MINIMALLY INVASIVE SURGERY
877.DOCS.14U / 877.362.7148

INSTITUTE FOR ASTHMA
AND LUNG DISEASES
866.ASK.LUNG / 866.275.5864

INSTITUTE FOR CANCER CARE
866.411.ONCO / 866.411.6626

INSTITUTE FOR CARDIOLOGY
AND CARDIAC SURGERY
866.84.HEART / 866.844.3278

INSTITUTE FOR DIABETES AND
OTHER ENDOCRINE DISORDERS
866.4.GLAND.2 / 866.445.5262

INSTITUTE FOR DIGESTIVE
AND LIVER DISORDERS
866.DIGEST.1 / 866.344.3781

INSTITUTE FOR HEALTHY AGING
844.780.9355

INSTITUTE FOR NEUROSCIENCES
866.DO.NEURO / 866.366.3876

INSTITUTE FOR ORTHOPEDIC
MEDICINE AND SURGERY
866.ORTHO.11 / 866.678.4611

INSTITUTE FOR VASCULAR
MEDICINE AND SURGERY
866.438.VEIN / 866.438.8346

INSTITUTE FOR WOMEN'S HEALTH
877.41.WOMAN / 877.419.6626

OUR LOCATION

506 Sixth Street, Brooklyn, NY 11215

By Bus: #67 runs along Seventh Avenue.

By Subway: Take the **F** or **G** to the Seventh Avenue station. Walk two blocks to the Hospital. You can transfer to the **F** or **G** from the **R** at the Fourth Avenue/Ninth Street station. Transfer to the **F** from the **A** at the Jay Street/MetroTech station.

For Cars: The parking garage entrance is on Sixth Street opposite the Hospital, between Seventh and Eighth Avenues.

NEW YORK METHODIST HOSPITAL

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