



Radiology Department Sets a High Standard for Diagnostic Imaging

WHEN DIAGNOSING ILLNESS OR INJURY, a physician needs the best possible image to make an accurate assessment and prepare a treatment plan. With proven techniques and advanced technology, radiologists at the Massachusetts Eye and Ear Infirmary are making certain that doctors have clear images of the patient's head or neck.

Using magnetic resonance imaging (MRI) and computerized tomography (CT), the Department of Radiology captures images of the eye, ear, nose, throat, head and neck.

"We specialize in detecting illness or problems involving the head or neck," says Dr. Hugh Curtin, chief of Radiology. "Because we're looking at the head and neck repeatedly, it's given us the opportunity to become highly specialized in interpreting images in that region of the body."

In addition to MRI and CT scans, Infirmary radiologists utilize simple film X-rays and a procedure known as fluoroscopy. "Fluoroscopy is an X-ray that is set up so that you watch as a patient swallows or moves," says Dr. Curtin. "It provides us with a moving image of the motion we are trying to investigate."

An experienced staff

The Radiology Department has three full-time and one part-time radiologists who review scans in addition to 15 technologists who conduct the scans. Many of the scans focus on the sinus, oral cavity, larynx and temporal bones. Eye scans are done when a physician needs to see the nerves, skull base or brain.

"Many of the technologists have been here for more than a decade," says Dr. Curtin. "Because they do 10 to 15 scans a day, they are very experienced in obtaining high-quality images of the head and neck, which are challenging areas."

In recent years, Infirmary radiologists have improved the way in which images are shared with the medical staff. "Everything is read digitally on a shared network known as PACS, a picture archive and communication system," Dr. Curtin says. "Images are presented in a format that is clear and accurate. The end result is a more complete picture of what is going on inside the body."

Digital imaging gives physicians more diagnostic opportunities when reviewing a scan.

"The PACS system allows us to enlarge an image to get a closer look," Dr. Curtin explains. "If we see something in the bone, we can change the density. With this technology, we can get more information from each image."

Department staff members are sensitive to the anxiety a patient may experience when waiting for a scan to be done. "We try to see every patient as quickly as possible because people are sometimes nervous," Dr. Curtin says. Sometimes, to control patients' motion, they are placed under anesthesia

while undergoing an MRI. "Controlling motion is particularly important so that we get the highest-quality, most accurate image," he adds.

Radiology is constantly changing, and Dr. Curtin welcomes the advances that each improvement brings. "With CT scans, the resolution and speed with which we can do a scan has improved dramatically over the past 10 years — MRI machines are also much faster than they were just five years ago," he says.

In addition, the ability to save all of a patient's radiology images to a CD, rather than the large films that were used in the past, is another advantage of the newest technology.

As he looks to the future, Dr. Curtin anticipates that technology will continue to change. But he knows one thing will be a constant — the wealth of experience that his department's radiologists and technologists offer. "When it comes to head and neck scans, no one has the expertise that we do, and that will always translate to better diagnosis for patients," he says.



"When it comes to head and neck scans, no one has the expertise that we do," says Dr. Hugh Curtin.

Anesthesiology Department Offers Patient-focused Care

THE MASSACHUSETTS EYE AND EAR Infirmary's Department of Anesthesiology is dedicated to the relief of pain and total care of the surgical patient before, during and after surgery. The anesthesiologists often treat patients who have complex diseases and conditions involving the eye, ear, nose, throat, head and neck. They are also skilled in treating patients who require simpler procedures such as scar revisions and face lifts.

Types of anesthesia

Different types of surgical procedures require different types of anesthesia. *General anesthesia* is used when a surgery is expected to take a long period of time. A patient either inhales the medication that will put him or her to sleep, or the drug is administered through a vein.

The second most common form of anesthesia used at the Infirmary is *local anesthesia*. With local anesthesia, the patient remains awake; the drug numbs a small part of the body, blocking the pain signals that are sent. An Infirmary anesthesiologist may administer a local anesthetic as a spray, ointment or injection. Following surgery, local anesthesia will disappear within several hours.

Under the direction of Dr. Salvatore Basta, the Department of Anesthesiology has 19 anesthesiologists (doctors who specialize in giving anesthesia) and 12 certified nurse anesthetists. It is common practice for an Infirmary anesthesiologist to meet with a patient before surgery.

Fifty percent of the staff anesthesiologists are bilingual, an ability that allows them to speak with many patients in the patient's own language.

"With anesthesia, it's very important to determine a patient's cardiovascular and respiratory status," says Dr. Basta. "Speaking with a patient in a language that is comfortable for him or her allows



DR. SALVATORE BASTA

us to ask all the necessary questions and gather the information we need."

Keeping a close watch

During surgery, Infirmary anesthesiologists carefully watch over a patient. "The role of the anesthesiologist is to closely monitor all aspects of the patient's condition, making any adjustments to the amount of anesthesia being used as needed," says Dr. Basta. "Our goal is to control pain and how deeply the patient is asleep so that the surgeon has the best conditions in which to do the procedure."

Once surgery involving general anesthesia is complete, the anesthesiologist slowly brings the patient back to consciousness. While a patient is regaining consciousness, the anesthesiologist continues the careful monitoring that he or she has done throughout surgery. A patient will regain consciousness in the recovery room.

"Our anesthesiologists place the greatest importance on patient safety, comfort and results."

— Dr. Salvatore Basta

Caring for children

At the Infirmary, the vast majority of the patients who require anesthesia are adults, but close to 30 percent are children. The Department is the second busiest pediatric anesthesia practice in Boston, providing more than 4,000 pediatric anesthetics each year.

Recognizing the importance of making children and their parents feel comfortable and secure during their stay, the Infirmary launched its Child Life Program in 1985. As part of its commitment to providing psychological and emotional support to its youngest patients and minimizing anxiety, the Infirmary was the first hospital in Boston to encourage a parent to enter the operating room with a child during the induction of anesthesia.

"We understand families are handling great amounts of stress," says Dr. Basta. "Our goal is to provide them with the tools and resources they need to get through a difficult time. We care for the patient, and we also care for the family."

Working overseas

The Department's ability to respond to international needs goes beyond the Infirmary walls. Each year, almost half of the anesthesiologists on staff spend several weeks of their vacation time delivering care and training local medical staff in medically underserved regions around the world. Many work with ORBIS International, a non-profit organization dedicated to preserving and restoring sight by strengthening the ability of local partners to prevent and treat blindness.

"I am very proud of the work that Infirmary anesthesiologists do," Dr. Basta says. "Whether in Boston or another part of the world, our anesthesiologists place the greatest importance on patient safety, comfort and results."

What's New at the Infirmary

Daniel G. Deschler, M.D., F.A.C.S., Director of Head and Neck Surgical Oncology, has an active clinical practice and treats patients with head and neck cancer, specializing in laryngeal disorders and microvascular free flap reconstruction.



Ramon Franco, M.D., is Medical Director of the Voice and Speech Lab and Acting Director of the Division of Laryngology. He performs reconstructive airway surgery, phono-surgery, pulsed dye laser treatment and Botox injections for neurolaryngological diseases.



Christopher J. Hartnick, M.D., Pediatric Otolaryngology Service, is Co-director of the Pediatric Airway/Swallowing/Voice Center, a joint program with Massachusetts General Hospital for Children. The Center focuses on enhanced and improved care for children who have difficulty eating, breathing or speaking, as well as the development of unique and cost-effective strategies to treat them.



George Papaliadis, M.D., Acting Director, Ocular Immunology and Uveitis Service, takes a multidisciplinary approach to the treatment of uveitis, the third leading cause of blindness in the United States, and other immunological disorders of the eye.



The **Retina Department** is now offering MACUGEN, a new, FDA-approved treatment for the wet form of age-related macular degeneration (AMD). Evangelos Gragoudas, M.D., Director of the Retina Service at the Infirmary, and two of his colleagues, Anthony P. Adamis, M.D., and Joan W. Miller, M.D., conducted some of the research that formed the basis for the development of the drug and designed the first clinical trial.

The **Laser Vision Correction Center** has a new procedure to offer patients, Refractive Intraocular Lenses (IOLs), that allows correction for higher degrees of nearsightedness, farsightedness and astigmatism.

Visit www.meeilaser.com for more information about procedures and the Center.

Balance Center researchers have made great progress with a device to treat chronic balance problems. The device detects when a person begins to keel in one direction and triggers vibrations to help him or her regain stability.

The **Neil and Louise Tillotson Laboratory** for Cell Biology of the Inner Ear launched in May, 2005. Hearing loss impacts more than 30 million Americans alone. One in three people over age 70 have a debilitating hearing loss. The Infirmary has the world's largest hearing research laboratory and is determined to find a cure.

COMING SOON.....

A new Infirmary cafeteria and a complete redesign and expansion of the Infirmary's surgical facilities.

Phyllis G. Redstone Family Waiting Room



Construction of the new family waiting room, funded by Phyllis G. Redstone, was completed in January, 2005. The room is located on the seventh floor of the Infirmary.

**For more information,
visit our website,
www.meei.harvard.edu**



Massachusetts Eye and Ear Infirmary

MASSACHUSETTS EYE AND EAR INFIRMARY
 INTERNATIONAL PATIENT OFFICE
 243 CHARLES STREET
 BOSTON, MASSACHUSETTS 02114
 USA

DIRECTOR: CAMILLE CONDON
 PHONE: (617) 573-4362
 (24-HOUR VOICEMAIL)
 FAX: (617) 573-5513
 EMAIL: INTERNAT@MEEI.HARVARD.EDU
 INTERNET: WWW.MEEI.HARVARD.EDU

CONSISTENTLY RANKED AMONG
 THE TOP HOSPITALS IN THE
 UNITED STATES BY
 US NEWS & WORLD REPORT.

MASSACHUSETTS EYE AND EAR INFIRMARY INTERNATIONAL NEWSLETTER
 © MEEI 2005 ALL RIGHTS RESERVED.

Every Patient Deserves the World's Best Medical Care

Thanks to generous donors, the Massachusetts Eye and Ear Infirmary has been able to assist destitute foreign patients who need advanced treatment that is often hard to obtain elsewhere for the most difficult conditions of the eye, ear, nose, throat, head and neck.

Our resources for treating these patients will soon be exhausted. If the Infirmary is to continue to help such patients, it will need to replenish and build these funds.

HERE AT THE INFIRMARY, surgeons removed a tumor, estimated to weigh 5 lbs., from the face of a 4-year-old girl from China named Lu Yao. The tumor covered her eye and cheek. Without the generosity of a donor, this beautiful child would not have survived.

Please take this opportunity to bring healing and hope to patients from all over the world.



Yes, I want to help make the best medical care in the world available to patients in need.

There are three easy ways to make a gift:

BY CHECK. Please make your check payable to the Foundation of MEEI, Inc., and mail with the reply slip below.

BY CREDIT CARD. Complete and mail the reply slip below.

Thank you for your generosity.

Your gift will enable the Massachusetts Eye and Ear Infirmary to provide the best medical care to patients from around the world.

BY BANK FUND WIRE TRANSFER. Send funds to Fleet Bank, 100 Federal Street, Boston, MA 02110 (telephone: (00) 1-617-434-6892). Indicate the transfer is for the Foundation of MEEI, Inc., International Compassionate Clinical Care Fund, Account Number 0056937485, ABA Number 011000138. For international wire transfers, please use Swift code FNBBUS33.

Please return your gift and the reply slip below to the Massachusetts Eye and Ear Infirmary, Development Office, 243 Charles Street, Boston, MA 02114, USA. For more information, contact Camille Condon at (00)-1-617-573-4362, fax number (00)-1-617-573-5513 or Camille_Condon@meei.harvard.edu.

Name _____ Telephone _____

Address _____

City _____ State _____ ZIP/Country Code _____ Country _____

I would like to make a gift by (check one) Check Credit Card Wire Transfer

Circle one: Visa MasterCard American Express Discover

Card # _____ Expiration _____ Name on card _____

Signature _____ Date _____