Physician Ownership

Houston Medical Imaging remains an independent radiologist owned facility.

“In the face of economic and political challenges, HMI continues to invest in new technology,” says Randall Stenoien MD, CEO. “Physicians must maintain and set standards for patient care.”

The physicians of HMI take a longterm perspective on diagnostic imaging; dedication to quality, service and compassionate patient care is our focus.

New Facility at I-10 and Campbell Road

Houston Medical Imaging is proud to announce the opening of a new facility in the Memorial and Spring Branch area.

Modalities available at this facility include digital mammography (Siemens Mammatom with R2 computer assisted detection), high field MRI (GE Sigma), multislice CT (GE), echovascular and ultrasound as well as x-ray.

Please contact us at 713-797-1919 with any questions or special needs.

New technology....

Siemens Avanto 1.5 T

HMI is pleased to announce the successful installation and implementation of the Siemens Avanto MRI at the Richmond location.

The Siemens Avanto is a high-end, 18 channel system with advanced neurovascular, breast, abdomen and extremity capabilities. The short bore design and rapid throughput ensure that your patient is imaged rapidly and comfortably (see page 3 for additional info).

HMI - A Tradition of Excellence in Patient Care

Houston Medical Imaging (HMI) is a radiologist owned and operated diagnostic imaging clinic offering a full array of diagnostic and therapeutic imaging services to the greater Houston community since its inception in 1998. HMI’s services include General Radiology and Fluoroscopy, Open MRI, Closed MRI, Multislice CT, CT/PET, Nuclear Medicine, DEXA Bone Densitometry, Pain Management, Ultrasound, Echocardiography and Digital Mammography.

Our staff physicians comprise Board Certified Radiologists, many with subspecialty (CAQ) qualifications. By combining the best imaging equipment with a superb team of physicians and the latest in digital imaging and storage, Houston Medical Imaging provides a level of quality that is recognized by over 500 referring physicians.

New Hitachi Hi Vision 900 Ultrasound

The HI VISION™ 900, Hitachi’s ultra-premium ultrasound system, combines innovative image acquisition techniques with operational enhancements designed to optimize clinical efficiency. With unique imaging methods like HI Definition dynamic Tissue Harmonic Imaging (HdTHI), excellent image quality is attainable with minimal effort. (see page 4 for additional info).

This unit is installed at 3310 Audley, and is used primarily for women’s imaging.
Siemens Avanto 1.5T

50 cm Field of View provides a perfect view of pathologies. MAGNETOM Avanto provides a new level of pristine image quality with unprecedented acquisition speed and ease of use. The unique combination of leading magnet and gradient technology together with revolutionary image acquisition techniques provides unsurpassed clinical benefits:

High diagnostic confidence due to exceptional magnet homogeneity for excellent fat saturation.

Large 50 cm Field of View (FoV).

Strong gradients for high resolution and short scan times.

Unparalleled flexibility, accuracy, and speed thanks to Tim (Total imaging matrix) technology.

Parallel imaging enables rapid acquisitions with high signal to noise images.

Dynamic imaging has gone through several changes and improvements, including the expansion of parallel imaging with the Tim (Total imaging matrix) technology, and more recently, the new k-space coverage now available with the syngo TWIST, Siemens’s new application for 4D MRA. syngo TWIST achieves significant improvements in temporal and spatial resolution and faster tracking of dynamic processes relative to the other versions of dynamic imaging introduced earlier. syngo TWIST offers a practical, flexible, and elegant way to perform sub-second, time-sequential 3D measurements using low contrast doses.
Imaging Modalities

High Field Closed MRI - Siemens Avanto 1.5 T, 18 channel
Mid Field Open MRI - Hitachi Avanto 0.7 T, 8 channel
Nuclear Medicine - GE Millenium dual Gamma Camera
PET/CT - Siemens Biograph 16
Helical CT - Siemens Biograph 16
Fluoroscopy and X-ray - Toshiba fluoro suite
Pain Management - Discography, ESI, facet injections
Echocardiography - Hitachi 9000 series
Diagnostic Ultrasound - GE Logique 700 series
Interventional - thyroid and breast biopsy, PICCline, Broviac catheter placements, thoracentesis, paracentesis

Hitachi Altaire 0.7 Tesla MRI

- ACR accredited
- 8 channel system with parallel imaging
- 8 channel neurovascular coil
- 8 channel spine and body coil

The Altaire, upgraded with 8 channel electronics, provides superb open MRI configuration imaging for large (table limit 450 lb.) and claustrophobic patients.

Houston Medical Imaging has the ability to provide mild IV conscious sedation with state-of-the-art monitoring of pulse, BP and MRI-compatible oxygen saturation monitoring.

The physicians of HMI seek the highest quality images without compromising the safety of your patients.

We have extensive experience with both geriatric and pediatric populations.
Womens’ Imaging

HMI provides a separate imaging facility that is focused on women’s imaging. Our skilled technologists are warm and caring individuals who dedicate themselves to making certain that your patient receives her care in a timely and professional manner.

The Siemens Mammmomat Novation is a Full Field digital unit that meets the highest standards in image resolution and quality. HMI is an ACR accredited facility for mammography.

The Opdima stereotactic unit is an upright device, providing the capability to image challenging patients who might not be able to undergo biopsy in a prone position.

Dr. Randall Stenoien, Dr. Gregory Chapman, Dr. George Boutros, Dr. John Marriott and Dr. Dan Cowman are radiologists who all devote a substantial portion of their practice to mammography. The group rigorously adheres to American College of Radiology standards of quality assurance.

Innovative’s radiologists also provide breast image expertise at Conroe Regional Medical Center, Cleveland Regional Hospital and the University of Texas Imaging Center.

Imaging Modalities

- Full Field Digital Mammography - Siemens Mammmomat Novation
- DEXA Bone Densitometry - Hologic Discovery
- Stereotactic Breast Biopsy - Siemens upright Opdima stereotactic device
- Ultrasound - Hitachi Hi Vision Ultrasound

Insurance Plans

- Aetna
- Affiliated Healthcare
- Amerigroup
- Blue Cross Blue Shield
- Cigna
- First Health
- Great West
- Humana
- Medicaid/Medicare
- Molina - HMI net
- Prudential
- Teacher Retirement Plan of Texas
- Texas True Choice
- United Healthcare
- Unicare
- Wellcare

Breast Intervention

The radiologists of Innovative Radiology and Houston Medical Imaging believe that in order to provide the highest quality of imaging, it is imperative that breast biopsy correlation is performed.

Adhering to the standards of the American College of Radiology, there is a rigorous quality assurance program in place that correlates all biopsy results with imaging recommendations. This consistent and constant process provides educative feedback to the interpreting radiologist.

Services provided include stereotactic breast biopsy with the Mammmotome needle, ultrasound-guided mammmotome and core techniques, MRI-guided biopsy, needle localization and tissue marker deployment.
56 y/o female presents with diagnosis of invasive ductal carcinoma, accomplished with minimally invasive ultrasound-guided biopsy.

Contrast enhanced MIP (maximum intensity projection) image demonstrates one of two enhancing nodules within the outer right breast.

T1-weighted image demonstrates spiculated mass.

Quantitative analysis is performed on the Dynacad workstation. Note second enhancing nodule just anterior to the biopsy proven carcinoma. This occult lesion represents a malignant satellite lesion.

Dynamic imaging analysis provides us with a time-activity curve in order to plot kinetic characteristics. Rapid wash-in with plateau or washout curves represent indeterminate and potentially suspicious characteristics. In combination with morphology analysis, MRI provides improved sensitivity and specificity compared to mammography.

**Indications for Breast MRI:**

- High risk patients (personal or family history).
- Staging prior to surgery or chemotherapy (contralateral disease, adenopathy, chest wall, mets).
- Workup of indeterminate lesions.
- Assessment of chemotherapy response.
- Breast implant evaluation.

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**Imaging Modalities**

- High Field MRI - GE Signa 1.5 T MRI
- Full Field Digital Mammography - Siemens Novation Mammomat
- Computed Radiographic x-ray - Toshiba
- Multislice CT - GE lightspeed Ultra 8
- Ultrasound and Echovascular - GE Logiq 500
Case Report:
Clinical: 33 y/o female presents with fever and RUQ pain. Outside ultrasound performed demonstrates no gallstones, with a hypoechoic mass within the anterior and inferior right hepatic lobe adjacent to GB.
History: positive for travel in Northern Africa, mideast and Mediterranean.
PMH: noncontributory
PE: VS WNL, afebrile, normal CBC

Focal Nodular Hyperplasia
Focal nodular hyperplasia (FNH) is the second most common tumor of the liver, surpassed in prevalence only by hepatic hemangioma. FNH is believed to occur as a result of a localized hepatocyte response to an underlying congenital arteriovenous malformation. FNH is a hyperplastic process in which all the normal constituents of the liver are present but in an abnormally organized pattern. Results of liver function tests in these patients usually are within the reference range.

Focal nodular hyperplasia is a localized, well-delineated focal lesion (not a diffuse mass) within an otherwise normal liver. It is composed of multiple, spherical aggregates of hepatocytes held together in a fibrous meshwork with a dominant scar or scars.

Focal nodular hyperplasia is found most commonly in women (80-95% of cases) who are in their third or fourth decade of life.

Patients using oral contraceptives are more likely to present with symptoms, because contraceptive use is often linked to tumor hemorrhage or infarction. The relationship between focal nodular hyperplasia (FNH) and the use of oral contraceptives, however, is often misunderstood; FNH itself is not caused by or even associated with the use of oral contraceptives.
A chain is as strong as its weakest link...
The Houston Medical Imaging team has worked hard to create an infrastructure that will promote security, reliability and HIPAA compliance. The process starts with a request that is faxed to HMI. (PDF forms are available on our website at www.hmixray.com, via email or on paper.) Once faxed, the document is labeled and digitized, and the patient record created. Using Philips XIRIS (radiology information system), the patient is carefully tracked through the authorization, verification and notification processes.
Upon arrival, waiting times for imaging, reporting and transcription are monitored. Autofax or online review capabilities are provided as requested to provide rapid access with minimal effort.
QA is traced internally, adhering to ACR standards.

www.hmixray.com
HMI has worked hard to provide information in order to assist you as well as your patients.
Please visit us for comprehensive information on our facilities, equipment, procedures and personnel. PDF forms for both physician and patients may be downloaded in order to minimize the check-in process.
The site has been translated into Spanish for our hispanic clients.
Review our videos to learn about the center, the mission statement and our vision.
Check out our latest news releases and news letters to see what is happening at Houston Medical Imaging.
We look forward to your next visit!

A picture is worth a thousand words....
Let’s face it; as much as we would like to deny it, you are at times more interested in your patient’s images than in our interpretation.

In order to facilitate your patient care, HMI offers multiple ways to review images. While we are happy to provide hard copy x-ray and CD’s for your review, we encourage you to take advantage of our advanced RIS and PACS capabilities. We have invested substantially in our bandwidth and computer infrastructure to make images retrievable both easily and fast.

Please contact our marketing team at 713-797-1919 to schedule an information technology (IT) appointment.
Dr. Staewen is chief radiologist at Foundation Surgical Hospital. He has been in private practice in Houston since 1995. Dr. Staewen completed a fellowship in MRI at the University of Minnesota. In 1994, he completed a residency in diagnostic radiology as well as a fellowship in musculoskeletal imaging at the University of California San Francisco. Dr. Staewen has been in private practice in Houston since 1995. He has a keen interest in the diagnosis of sports injuries. Dr. Staewen is chief radiologist at Foundation Surgical Hospital.

Dr. George Boutros was born and raised in Egypt. He received his Bachelor of Science from the University of Alexandria located in Alexandria, Egypt. Dr. Boutros moved to Canada to complete Medical School at the University of Western Ontario. He received his Doctor of Medicine in 1970. Dr. Boutros is a specialist in mammography and breast intervention. Outside of his primary duties at Foundation Surgical Hospital, he pursues special interests in cross-sectional imaging.

Dr. Marcos Calderon was born in Mexico City. He received a BS and MD from Universidad Nacional Autonoma de Mexico. Dr. Calderon arrived in 1967 to train at the Albert Einstein Medical Center in Philadelphia. He completed training in Nuclear Medicine at the Baylor College of Medicine. He is board certified in Nuclear Medicine. In 1972, Dr. Calderon founded Houston Imaging Center, one of the first outpatient imaging centers in the nation. Presently, Dr. Calderon is the President of both Houston Medical Imaging and Third Millenium Medicine.

Dan Cowman was born and raised in Nampa, Idaho. He completed medical school at Stanford University School of Medicine in 1981. Dr. Cowman served the United States Navy from 1981 - 1985. Dr. Cowman completed his residency in Diagnostic Radiology at the University of Texas Medical Center in Houston. Dr. Cowman began private practice in the Conroe/Woodlands area in 1989 and has remained in this area since. Dr. Cowman works full-time at Conroe Regional Medical Center. He is a specialist in mammography and breast intervention.

Dr. John Marriott graduated from Creighton University in 1979. He graduated from the Iowa University of Health Sciences in Des Moines, Iowa in 1987. He completed a transitional internship at William Beaumont Army Medical Center, and subsequently served as a flight surgeon in the 185th fighter wing and later, Brigade surgeon with the 82nd Airborne Division. Dr. Marriott completed his residency at St. Elizabeth Medical Center in Youngstown, Ohio in 1994. Dr. Marriott has special interests in cross sectional imaging, mammography and breast intervention.

A native of San Antonio, Dr. Staewen attended the Texas A & M University, receiving a BS degree. He graduated from the University of Texas Medical School in 1987. He completed a residency in diagnostic radiology as well as a fellowship in MRI at the University of Minnesota. In 1994, Dr. Staewen completed a fellowship in musculoskeletal imaging at the University of California San Francisco. Dr. Staewen has been in private practice in Houston since 1995. He has a keen interest in the diagnosis of sports injuries. Dr. Staewen is chief radiologist at Foundation Surgical Hospital.

Mona Bloom attended the University of Pennsylvania, graduating in May 1986. She completed medical school at Baylor College of Medicine in 1990. She served a one year transitional internship at St. Vincent’s Hospital and then pursued her Diagnostic Radiology residency at Michael Reese Hospital in Chicago, Illinois. A one year body imaging fellowship at the University of Texas Health Science Center at Houston completed Dr. Bloom’s post-graduate training. Dr. Bloom has a special interest in cross-sectional imaging.

A native of Detroit, Michigan, Dr. Linda Hankins attended the University of California at Irvine. She graduated from the University of Texas Medical School at Houston in 1985. She completed a residency in diagnostic radiology and a fellowship in neuroradiology at the University of Texas at Houston. Dr. Hankins is a senior member in the American Society of Neuroradiology. Dr. Hankins spent eleven years on the faculty of the UT Houston Medical School. Her interests include all aspects of neuroradiology, including myelography and some aspects of pain management.

Dr. Chapman is a native of West Texas, born in Lubbock in 1951. After graduating from the USAF Academy in 1973, he attended the University of Texas Medical School at Houston. In San Antonio he completed an internship in medicine and residency in diagnostic radiology at Wilford Hall, USAF Medical Center. After completion of his Air Force service, he returned to Houston in 1985 where he has been in the private practice of diagnostic radiology. Dr. Chapman joined Innovative Radiology in 2007. He has special interests in PET imaging and nuclear medicine.

Dr. Chapman is a native of the San Francisco bay area. He is former Chief Resident in Diagnostic Radiology from the University of California Los Angeles School of Medicine. He has been on the teaching and research faculties of the University of Texas M. D. Anderson and Harvard Medical School. Dr. Pagani has been in the private practice of Diagnostic and Interventional Radiology for more than twenty years. Dr. Pagani joined Innovative Radiology in 2003. He is Vice President of Innovative Radiology and chief of radiology at Conroe Regional Medical Center.

A native of Minneapolis, Minnesota, Dr. Stenoien attended Bjørkelandes Videregåaende Skole in Norway in 1978. He received a Bachelor’s Degree in Biology from Trinity University in San Antonio in 1981, and graduated from the University of Texas at San Antonio Medical School in 1984. He completed a four year Diagnostic Radiology residency at UT Southwestern in Dallas in 1988. Dr. Stenoien is President of Innovative Radiology and the CEO of Houston Medical Imaging. He has special interests in Digital Mammography, thyroid and breast biopsy, and oncology.