



Cardiovascular Magnetic Resonance Imaging at Stony Brook *Clinical Applications in Pediatric Cardiology*

by Hong Meng, M.D., Thomas Biancaniello, M.D.,
Peter Morelli, M.D. and Rula Balluz, M.D.
Department of Radiology and Division of Pediatric Cardiology

Cardiovascular magnetic resonance imaging (CVMRI) is quickly becoming an essential non-invasive imaging modality for the assessment of cardiovascular disease. This new and exciting imaging technology was developed as a collaborative effort by radiologists from the Department of Radiology and pediatric cardiologists from the Division of Pediatric Cardiology at Stony Brook since 2004. It has been used by pediatric cardiologists to focus on improving pediatric surgical treatment planning and for post-surgical follow-ups by monitoring those who had repair for various congenital heart defect and vascular anomalies. The full spectrum of imaging and diagnostic services at Stony Brook Pediatric Cardiology includes the use of this advanced imaging technology, which is not available through many pediatric healthcare systems. It is currently available at only a few locations on Long Island and is exclusive to eastern Suffolk County.

According to the American Heart Association (AHA) 2005 Heart Disease & Stroke Statistical Update, there are more than one million Americans with congenital cardiovascular defects and about 40,000 babies born per year with congenital heart disease in the United States. Congenital cardiovascular disease is the most common cause of infant death from birth defects; one in three of these infants have a heart defect. Life years lost before age 65 due to deaths from congenital cardiovascular disease is comparable to the life years lost from leukemia, prostate cancer and Alzheimer's disease combined. In 2000, over 130,000 hospitalizations occurred in infants or children with congenital cardiovascular disease at a cost of \$6.5 billion for hospital charges alone.

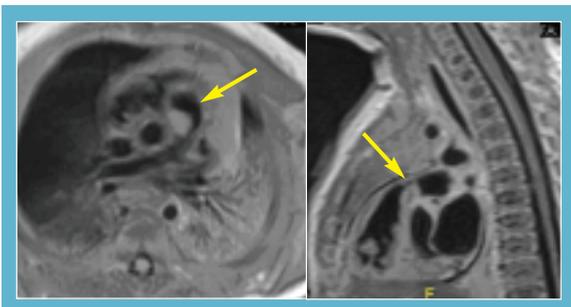


Figure 1. Cardiac tumor in a three week old infant with family history of tuberose sclerosis. A sub-centimeter mass in the right ventricular outflow track (arrow, axial and sagittal black blood T1 SE images) was surgically removed and proven to be a rhabdomyoma.

For decades, x-ray fluoroscopy guided catheterization has been the standard diagnostic and therapeutic procedure, although it is not without limitations and risk to patients. It has poor soft tissue details and relies on contrast shadows that do not convey three-dimensional information. In addition, ionizing radiation exposure in children also imparts a cancer risk. Echocardiography overcomes some of these limitations and has been the most commonly used non-invasive technique for cardiac diagnosis. However, echocardiography can be limited by suboptimal or unreliable imaging windows, geometric assumptions, limited imaging of anterior structures and great vessels around the heart, and operator-dependence.

CVMRI provides a non-invasive diagnostic tool complementing echocardiography and has advantages over echocardiography especially after corrective procedures. CVMRI uses a large magnet, radio waves and a computer to produce clear pictures of the heart and vessels without using harmful radiation. CVMRI enables the physician to evaluate not only anatomy but also physiology and function of the cardiovascular system, imaging heart and vessels from any angle. Using advanced post-processing software, a three-dimensional

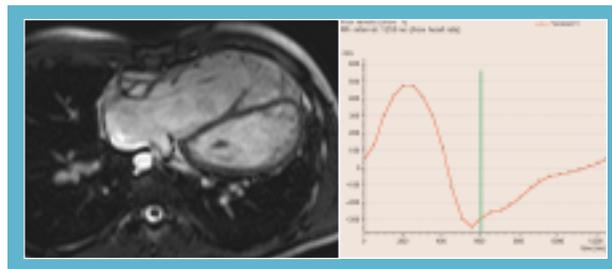


Figure 2. 19 year old male with Tetralogy of Fallot s/p repair. MRI revealed severely dilated right ventricle and RVOT, decreased RV ejection fraction and severe pulmonary valve insufficiency quantified by flow mapping.

model of the heart and vessels can be reconstructed which can be viewed from all sides. Contrast enhanced MR angiogram (CE-MRA) provides information which would otherwise be provided by invasive angiography. In the assessment of congenital cardiovascular disease, angiography requires the placement of catheters in various systemic and pulmonary vessels to derive optimum information regarding the vascular anomalies and associated shunts. CE-MRA is non-invasive and free of the hazards of ionizing radiation. It dispenses with the need for iodinated contrast media, which is subject to dose-restrictions in the evaluation of infants and young children due to nephrotoxicity and other potential side effects. Gadolinium-based MR contrast agent used by CE-MRA is safe to use even in the pediatric age group. In certain situations, MRI contrast is not necessary because of excellent

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Chairman's Corner

by Donald P. Harrington, M.D., M.A., F.A.C.R.



One of the missions of the department and the institution is the education of our medical students, residents and fellows. I would like to thank Steven Perlmutter, M.D., Director of the Radiology Residency Program, Harris L. Cohen, M.D., Director of the Body Imaging Fellowship Program, Clemente T. Roque, M.D., Director of the Neuroradiology Fellowship Program and Elaine S. Gould, M.D., Director of the

Musculoskeletal Fellowship Program and the entire faculty for their teaching skills and efforts. A special acknowledgement goes to Harris L. Cohen, M.D. who was awarded the Radiology Department Teacher of the Year Award and William H. Moore, M.D., who was awarded the 2006 Excellence in Teaching Award by the class of 2006.

I would like to wish the graduating fellows and residents the best in their new endeavors and look forward to seeing everyone again at our alumni and residency gatherings. Our new residents and fellows are on board and we look forward to working with them. Dr. Nancy Budorick also joined the faculty staff as a Professor of Clinical Radiology in the Division of Cross-sectional Imaging with expertise in obstetric and gynecological imaging.

A second part of that mission is the education of the technology staff to whom we offer congratulations to the first graduating class of the Nuclear Medicine Technology and Radiologic Technology Programs. This program is offered through the Health Sciences Center's School of Health Technology and Management.

In the clinical area, it's an exciting time for cardiovascular imaging. The department offers noninvasive cardiovascular imaging using state of the art MRI and CT. A recent clinical advance in conjunction with the cardiology division is the expansion of cardiovascular magnetic resonance imaging at Stony Brook and the remarkable changes this modality is making in the field of adult and pediatric cardiology. This expansion, in conjunction with cardiac CT angiography, is expected to surely affect the practice and treatment of cardiac patients in a non invasive environment.

We are also pleased with the installation of the FDG PET-CT Siemens biography 40 slice PET-CT scanner in the new Outpatient Imaging Center which is planned to open shortly. This facility, which will be located at the Ambulatory Care Pavilion, will provide an excellent quality of care and easy access for referring physicians and patients.

Donald P. Harrington

THE RADIOLOGY LETTER

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Donald P. Harrington, M.D., M.A., F.A.C.R. *Chairman*
Michael J. Cortegiano *Administrator*
Christine R. Hubbard *Editor and Staff Writer*

Residency and Fellow Graduation Dinner

The Residency/Fellow Graduation Dinner was held on June 15, 2006 at The Old Field Club in Setauket, New York. The event was sponsored by Fuji Medical Systems U.S.A. It was good to see Drs.

Harold Atkins, Kathleen Finzel, Jane Bernier and Maureen Blazowski and Alice Jimenez. Congratulations to Douglas Dougherty, M.D., Ph.D., Rosemary Oliveri-Fitt, M.D., Nadia Shah, M.D., Sejal Shah, M.D., Ben Young, M.D., William Zucconi, M.D. in completing their four year Radiology Residency Program.

Almas Abbasi, M.D. completed an Abdominal Radiology Fellowship, Jack Fields, M.D. an MRI Fellowship, Robert Bernstein, M.D., Ph.D. a Neuroradiology Fellowship, and Paulito Tactacan, M.D. a Neuro-radiology Fellowship. Christopher



Graduating Residents Douglas Dougherty, M.D., Ph.D., Sejal Shah, M.D., Rosemarie Oliveri-Fitt, M.D., Ben Young, M.D., and William Zucconi, D.O. (left to right), Nadia Shah, M.D. (not shown)

Savrides, M.D. completed a year of training as a junior attending.

Dr. Harris Cohen was the recipient of the "Teacher of the Year Award" and William Zucconi the "Resident Teacher of the Year Award". Drs. Ferretti's "Unknown Case Contest" was won by William Zucconi, M.D. who received a textbook of his choice. William Zucconi, M.D. also received the "Roentgen Resident/Fellow Research Award" (RSNA Research and Educational Fund) for his accomplishments in radiological investigation.

Many thanks to Dr. Steven Perlmutter, Director of the Residency Program and Linda Erickson, Coordinator of the Residency Program for their efforts. Also many thanks to the faculty and support staff for their hard work and dedication.



Steven Perlmutter, M.D., Director of the Radiology Residency Program and Medical Director, Department Clinical Service



Christopher Savrides, M.D. (center) completes his one year training in Breast Imaging, Paul Fisher, M.D., Director of Breast Imaging (left) and Donald P. Harrington, M.D. (right)



Harris L. Cohen, M.D. (center) accepts the Teacher of the Year Award, William Zucconi, M.D. (left) and Donald P. Harrington, M.D. (right)

Cardiovascular Magnetic Resonance Imaging

Continued from cover

intrinsic contrast from blood within the cardiac chamber and vessels.

CVMRI is particularly useful to delineate complex congenital heart disease anatomy and vascular anatomy, to evaluate both right and left ventricular function, to quantify flow and pressure across valves, chambers, shunts or vessels, and to define cardiac tumors. CVMRI may aid clinical decision making in the following congenital cardiovascular diseases for both pre-surgical planning and post-surgical monitoring:

- Cardiac Tumors (fig. 1)
- Tetralogy of Fallot (TOF, fig. 2)
- Coarctation (fig. 3)
- Transposition of great vessels (TGV, fig. 4)
- Single Ventricle/hypoplastic left heart syndrome (HLHS, fig. 5)
- Partial anomalous pulmonary venous drainage (PAPVD, fig. 6)
- Vascular rings (figure 7)

Because any movement during the MRI will blur the picture, young patients usually are sedated. Most of the older patients (>7-8 year old) may be able to collaborate throughout the exam without any sedation.

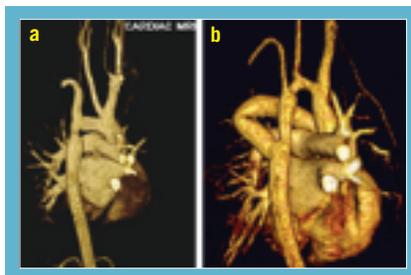


Figure 3. Aorta coarctation in two patients. (a) Posterior view of the coarctation at the isthmus just distal to the origin of the left subclavian artery (posterior view), a bovine arch is present. (b) Posterior view of a post-repaired coarctation with diffusely hypoplastic native arch which was bypassed anteriorly by a synthetic graft.

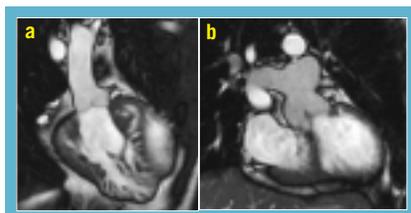


Figure 4. Repaired D-transposition of great vessels, s/p atrial switch. (a) Aorta and aortic valve with hypertrophied anatomic right ventricle. (b) Pulmonary valve and dilated pulmonary artery with anatomic left ventricle.

Patient appointments can be made by calling 631-444-3452. Dr. Meng can be reached at 631-444-8192. Drs. Biancianiello, Morelli and Balluz can be reached at 631-444-2725.

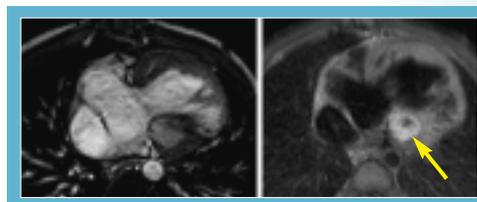


Figure 5. Hypoplastic left heart syndrome in a 3 year old male s/p Norwood, bidirectional Glenn and Fontan procedures. Very small left ventricle contains abnormal signal due to very slow flow and a central thrombus (arrow).

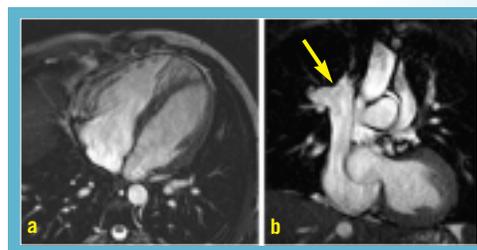


Figure 6. A 16-year-old male with severe coarctation and pre-surgical work-up revealed increased O₂ saturation in the SVC/RA/RV, suggesting intracardiac shunt vs. arteriovenous malformation. (a) Enlarged right heart due to flow overload by left to right shunt. (b) Partial anomalous pulmonary venous drainage with the right upper lobe pulmonary vein drains into SVC (arrow) and left upper lobe pulmonary vein drains into a persistent vertical vein which connects between the left brachiocephalic vein and left atrium.



Figure 7. Complete vascular ring (posterior view) caused by a double aortic arch in a two month old infant who presents with dyspnea and feeding difficulty.

News in the Department

New Positions and Promotions

Elaine Gould, M.D. was named Director of the Imaging Center at the Ambulatory Care Pavilion.

Charles Mazzaresse, M.P.S., R.T. was promoted to Technical Director of the Imaging Center at the Ambulatory Care Pavilion. **Louis Caronia, R.T.** was promoted to Assistant Director and Supervisor of the Cat Scan area.

Congratulations to **Electra Kaloudis, M.D.** on being selected by the Radiologic Society of North America (RSNA), Association of University Radiologists and American Roentgen Ray Society (ARRS) to attend the Introduction to Research Program at the RSNA.

Congratulations to **William Moore, M.D.** who received the Class of 2006 Award for Excellence in Teaching.

Congratulations to **Harris L. Cohen, M.D.** who was named as one of the best doctors in the *New York Magazine's* annual "Best Doctors in New York" issue.

Steven Perlmutter, M.D. was elected Vice President Suffolk County Medical Society and Vice President Suffolk Academy of Medicine.

Elaine Gould, M.D. was named the Educational Chairperson (2005 -2006) and treasurer (2006-2007) of the Long Island Radiological Society, Inc.

Haifang Li, Ph.D. collaborated on a research project applying fMRI to study romantic love with Dr. Arthur Aron, Professor of Psychology at Stony Brook University and Dr. Helen Fisher, Research Professor of Anthropology at Rutgers University. The results suggest that romantic love uses subcortical reward and motivation systems to focus on a specific individual, that limbic cortical regions process individual emotion factors, and that there is localization heterogeneity for reward functions in the human brain. The research also reveals that men and women who have been rejected by a partner show increased activity in areas of the brain that link to anxiety, obsessive/compulsive behaviors, high-risk decision making, and anger management.

Joe Whitton and **Bill Stanley**, Program Directors of the Radiologic Technology and Nuclear Medicine Technology Programs offered through the School of Health Technology and Management, would like to take this opportunity to thank all those who participated in the successful clinical education of our students. As a result of your dedication and hard work, the 27 students who graduated from our programs in June have been very successful in passing their certification exams and beginning their careers as healthcare professionals. Their success would not have been possible without your efforts. Thank you.

New Faculty



Nancy E. Budorick, M.D. joined the faculty staff as a Professor of Clinical Radiology in the Division of Cross-sectional

Imaging. Dr. Budorick received her medical degree at Loyola University Stritch School of Medicine in Maywood, Illinois. After completing an Internal Medicine internship at the University of Chicago, she returned to Loyola University Medical Center for her residency in Diagnostic Radiology. Dr. Budorick subsequently completed a Cross-sectional Imaging fellowship at the University of California in San Diego, California, where she remained on staff until taking a position at Columbia University Medical Center in New York. She has had adjunct appointments at the Veterans Administration Medical Center in San Diego, California and in Northport, New York. Dr. Budorick is Board Certified in Radiology, with expertise in Obstetric and Gynecological imaging. She is a fellow of the American College of Radiology (ACR) and the Society of Radiologists in Ultrasound (SRU) and a member of the American Institute of Ultrasound in Medicine (AIUM), the Radiologic Society of North America (RSNA) and the New York State Radiological Society.

New Residents



Anthony Gilet, M.D. received his medical degree at SUNY Syracuse and completed a one-year Internal Medicine internship at Winthrop University Hospital in Mineola, New York.



Craig Hendler, M.D. received his medical degree at SUNY Buffalo and completed a one year Internal Medicine internship at Westchester Medical Center in Valhalla, NY.



Zareena Hussain, M.D. received her medical degree at the New York Medical College and completed a one year Internal Medicine at Kaiser Permanente Medical Center in Santa Clara, California.



Seth Klein, M.D. received his medical degree at SUNY Buffalo and completed a one year Surgery internship at SUNY Stony Brook in Stony Brook, New York.



George Wu, M.D. received his medical degree at the Northwestern University Medical School and completed a one year Transitional year at the Atlantic Health System/Overlook Hospital in Summit, New Jersey.

New Fellows



Neil Denbow, M.D. is a Musculoskeletal fellow. He received his medical degree and completed his residency at the McGill University in Montreal,

Canada, and then completed a Vascular/Interventional Radiology fellowship at the University of Montreal/Notre Dame Hospital. Following his fellowship, he was an Assistant Professor in the Interventional Radiology section at Yale University for the past eight years.



Annrose Thomas Deshong, M.D. is an Abdominal Radiology fellow. She received her medical degree at Albert Einstein School of Medicine in the

Bronx, New York and completed her Radiology residency at Beth Israel Medical Center, New York. Dr. Deshong also completed a Neuroradiology and Magnetic Resonance Imaging fellowship at SUNY Stony Brook.

Lectures

Walter Huda, Ph.D., Professor and Director of Radiological Physics in Radiology at the SUNY Health Science Center at Syracuse, New York presented a Grand Rounds on "Dose and Image Quality in CT" on Friday, March 31, 2006.

Mark Schweitzer, M.D., Director of Musculoskeletal Radiology, Professor of Orthopedic Surgery at the Hospital for Joint Diseases at New York University Medical Center in New York, New York presented a Grand Rounds on "Fracture Complications" on Tuesday, March 14, 2006.

Javier Beltran, M.D., Professor and Chairman, Department of Radiology at the Maimonides Medical Center at Brooklyn, New York presented a Grand Rounds on "Internal Impingement Syndromes of the Shoulder: Pathology, Biomechanics and MRI Manifestations" on Tuesday, November 7, 2006.

Medical Imaging Research News

by Jerome Z. Liang, Ph.D.

Proton beam has a unique advantage for radiation therapy because it loses a relatively small amount of energy along its path of traversing the body, therefore delivering most of its energy (energy peak) at the end of its path. This is very different from a therapeutic x-ray beam which loses its energy relatively-uniformly along its entire path. Accurately positioning the proton peak energy to target, the tumor will achieve a maximal dose while minimizing the damage to the surrounding normal tissues. Jerome Z. Liang, Ph.D., Professor of Radiology and Computer Science, has been collaborating with colleagues at Brookhaven National Laboratory, Loma Linda University Medical Center, and University of California at Santa Cruz to develop proton computed tomography to facilitate the utilization of proton therapy which is currently available in clinics only in Massachusetts General Hospital and Loma Linda University Medical Center. Recently, he was invited to write a chapter on this topic for a book series in CANCER IMAG-

ING. For information on his other research activities, please visit the Laboratory for Imaging Research and Informatics (IRIS): www.mil.sunysb.edu/iris.

Clinical applications and research in virtual imaging and computer aided diagnosis (CAD) performed at Stony Brook has expanded from beyond the highly successful work involving the colon to other clinical areas. The most recent area of application will be the urinary bladder. This work will be a collaborative effort with the Department of Radiology and the Department of Urology. A research proposal for MR virtual cystoscopy CAD has been reviewed recently by the NIH Scientific Study Committee with a rank in the highest 2.5 percentile. This project will be lead by principal investigator, Professor Jerome Z. Liang, Ph.D. He will be collaborating with physician co-investigators Hong Meng, M.D. and Harris L. Cohen, M.D. from the Radiology Department, as well as Christopher S.D. Lee, M.D. of Urology, and Professor John J. Chen, Ph.D., of Preventive Medicine. In this project, magnetic

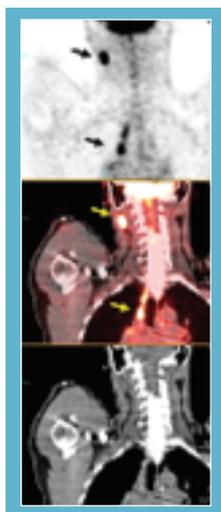
resonance imaging (MRI) techniques will be utilized to evaluate the inner surface of the urinary bladder followed by three-dimensional computer-aided image post-processing to generate virtual images that simulate findings with cystoscopy i.e. virtual cystoscopy. There are several beneficial factors of MR imaging, such as non-invasiveness, lack of radiation exposure, excellent soft tissue differentiation and contrast resolution, as well as the ability to use urine as an intrinsic contrast material within the bladder. MR virtual cystoscopy will encourage MR virtual colonoscopy to become a very unique imaging tool for clinical urologic diagnosis. Virtual cystoscopy may play a key role in screening of patients for bladder tumors as well as pre-surgical planning and post-surgical follow-up after local bladder tumor excision.

For more information on clinical aspects of MRI use in bladder evaluation, please contact Hong Meng, M.D., Assistant Professor of Clinical Radiology and Chief of Body MRI, hmeng@notes.cc.sunysb.edu.

FDG PET-CT Imaging for Benign Processes

By Robert Matthews, M.D.

FDG PET-CT imaging has emerged as the best tool for the clinician in the staging and restaging of various malignancies. FDG is a radioactive glucose analog that is injected intravenously into the patient where it becomes trapped in cells to provide a record of glucose metabolism. FDG PET-CT tumor imaging is based on malignancy having a higher metabolic rate compared to normal surrounding tissue. Thus, cancer



cells appear as hot spots compared to normal uptake. Unknown to many in the medical field, PET cameras were commer-

Figure 1. FDG PET-CT showing patient with active sarcoidosis within lymph nodes of the neck and mediastinum.

cially available even before CT or MRI imaging systems were invented.

FDG PET-CT imaging is not only limited to evaluation of malignancy. Many benign processes related to infection and inflammation also have enhanced uptake on PET scan and can be diagnosed and monitored. One good example of this is the use of FDG PET-CT imaging for the evaluation of systemic sarcoidosis (fig 1). PET scan can accurately show the extent of both pulmonary and extrapulmonary sarcoidosis, as well as, provide surveillance of treatment response. Another indication for PET scan is the estimation of viable myocardium within infarcted heart muscle (fig 2). This can be used to determine if patients are candidates for revascularization procedures, such as bypass surgery or angioplasty.

FDG PET-CT has many neurological applications. PET imaging is well established for seizure focus determination. This not only facilitates the diagnosis of seizures, but aids both clinicians and surgeons in seizure treatment. FDG PET-CT can also be used for the diagnosis of Alzheimer's disease

allowing for early patient management (fig 3).

The Department of Radiology is expecting the arrival of a permanent Siemens Biograph 40 slice PET-CT scanner in the new Outpatient Imaging Center.

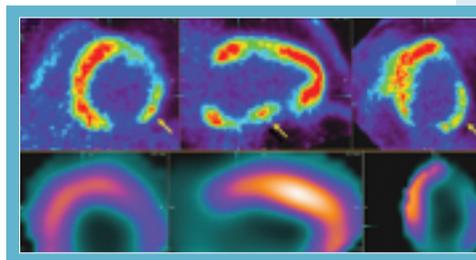


Figure 2. FDG Cardiac PET showing viable myocardium within the inferior and lateral walls of the heart that were thought to represent infarcted tissue on the sestamibi perfusion scan.

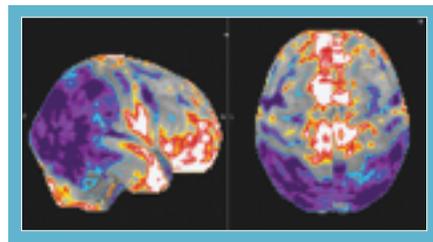


Figure 3. 3D reconstructed PET images demonstrating decreased parietotemporal metabolism in a patient with severe Alzheimer's disease.

27th Annual Radiology Research Seminar

The twenty-seventh annual Radiology Research Seminar was held on Monday, May 15, 2006. This program is designed to provide a forum for exchange of information and discussion about clinical and basic research in the area of diagnostic radiology and other imaging modalities. Presentations were given by the following residents from the Department of Radiology, Stony Brook School of Medicine and Winthrop University Hospital, Mineola.



(top from left to right) Terry M. Button, Ph.D., Director of the Medical Physics Track in Biomedical Engineering, Charles Girard, M.D., David Winger, M.D., John Fantauzzi, M.D.; (bottom from left to right) Harris L. Cohen, M.D. (Associate Chair of Research Activities), Khaldoon Al Dulaimy, M.D., William Zucconi, M.D., Mohit Naik, M.D.

Charles Girard, M.D.

Application of Texture Analysis to Dynamic Contrast Enhanced Breast Magnetic Resonance Imaging

David Winger M.D.

Infectious Spondylitis: MR and Clinical Predictors of a Positive Biopsy Result

William Zucconi, M.D.

LVEF Assessment by Simplified Single Slice Vertical Long Axis Measurement Using Steady State Free Processing (SSFP) acquisitions: How Reliable is it?

John Fantauzzi, M.D.

Use of Percutaneous Discectomy Device for Aspiration and Drainage of Infected Intervertebral Discs

Mohit Naik, M.D.

Multi-detector CT Pulmonary Angiogram in the Assessment of Myocardial Infarction

Khaldoon Al Dulaimy M.D.

Dynamic Infrared Imaging for the Detection of Malignancy

Publications 2005-2006

Al Dulaimy K, Cohen HL, Vitulli P, and Moore WH. Case 3. Diagnosis: Infarcted leiomyoma after uterine embolization procedure. *Ultrasound Quarterly* 2006;22:106-109.

Aron A, Fisher HE, Mashek DJ, Strong G, Li H, and Brown LL. Reward, Motivation and Emotion Systems Associated with Early-Stage Intense Romantic Love. *J. Neurophysiology*, 2005, 94(1): 327-337.

Cohen HL. Physiologic ovarian cysts in a newborn. In: Hertzberg B, Hill M, Cohen HL (eds) *Ultrasound (Third Series) Test and Syllabus*. Baltimore MD, American College of Radiology Publications-Cenveo 2005;248-256.

Cohen HL, Al Dulaimy K, and Moore WH. Case 4. Diagnosis: Fibromatosis colli. *Ultrasound Quarterly* 2006;22:109-111.

Cohen HL, Strain JD, Fordham L, Gelfand MJ, Gunderman R, McAlister WH, Slovis TL, and Smith WL. Expert Panel on Pediatric Imaging. Vomiting in infants up to 3 months of age. (online publication). Reson (VA): American College of Radiology (ACR); 2005. 7 p. (39 references).

Cortegiano, MJ. Ninth Annual Academic Radiologist Productivity Report 2005 National Benchmark. *RBMA Bulletin* March/April 2006, pp 11-16.

Eremina D, Li X, Zhu W, Wang J, and Liang Z. Investigation on an EM Framework for Partial Volume Image Segmentation. *Proc SPIE Medical Imaging* vol.6144, 61444D(1-9), 2006.

Harrington DP. Priority Setting, NIBIB Style. *JACR* 2005; 12(2).pp1033-1034.

Harrington DP. Open-Source Software Opportunities and Challenges. *JACR* 2006;3(1). pp14-15.

Harrington DP. Imaging and Informatics at the National Cancer Institute (Part I). *JACR* 2006; 3(2). pp88-89.

Harrington DP. Imaging and Informatics at the National Cancer Institute (Part II). *JACR* 2006; 3(3). pp169-170.

Harrington DP. Multiple Pls: A Win for Imagers and Team Science. *JACR* 2006;3(4). pp289-295.

Harrington DP. Imaging Biomarkers and The Future of Radiology. *JACR* 2006;3(5). pp317-318.

Harrington DP. Quantum Grants: Request for Applications from the NIBIB. *JACR* 2006;3(6). pp398-399.

Hsiao I, Lin K, Huang H, Wietholt C, Chen C, and Gindi G. The Investigation of Emission Reconstruction with Fewer Projection Views for Brain SPECT Imaging. *Proc. of IEEE NSS/MIC, M07-272*, pp.2220-2203, Oct. 2005.

Khurd P, and Gindi G. Decision Strategies that Maximize the Area Under the LROC Curve. *IEEE Trans. Med. Imaging*, 24(12), pp.1626-1636, Dec. 2005.

Khurd P, Kulkarni S, and Gindi G. Noise Propagation from Scatter Correction in SPECT MAP Reconstruction. *Inter. Conf. on Fully 3D Image Reconstruction in Radiology and Nuclear Medicine*, pp.97-100, Salt Lake City, 2005.

Kravets F, Cohen HL, Sheynkin Y, and Sukkarieh T. Intraoperative sonographically guided needle localization of non-palpable testicular tumors. *AJR* 2006;186:141-143.

Kulkarni S, Khurd P, Hsiao I, and **Gindi G.** Effect on Lesion Detectability of Proximity to Anatomical Boundaries in Emission Tomography. *Proc. of IEEE NSS/MIC, M07-227*, pp.2150-2154, Oct. 2005.

Langer JE, and **Cohen HL.** Case 1. Diagnosis: Paratesticular adenomatoid. *Ultrasound Quarterly* 2006;22:101-104.

Lehnert J, and Zhao W. High voltage protection in active matrix flat-panel imagers. *Proc. SPIE* 6142, 0S-1-10.

Li B, Lu H, Cai W, Li X, Meng J, and Liang Z. Computer Aided Diagnosis and Treatment Planning for Developmental Dysplasia of the Hip. *Proc SPIE Medical Imaging* vol.5744, 781-788, 2005.

Li L, Li X, Wei Z, Sturm D, Goldberg R, Lu H, and Liang Z. Feasibility Study in Quantitative Analysis of Multiple Sclerosis. *Proc SPIE Medical Imaging* vol.6143, 61430U(1-5), 2006.

Li T, You J, Wen J, and Liang Z. An Efficient Reconstruction Method for Non-uniform Attenuation Compensation in Non-parallel Beam Geometries Based on Novikov's Explicit Inversion Formula. *IEEE Transactions on Medical Imaging* vol.24, no.10, 1357-1368, 2005.

Li T, and Liang Z. Toward a Dedicated System for Quantitative SPECT Mammotomography. *Physica Medica*, vol. XXI, Supplement 1, 115-118, 2006.

Li T, Liang Z, Singanallur J, Satogata TJ, Williams D, and Schulte R. Reconstruction for Proton Computed Tomography by Tracing Proton Trajectories - A Monte Carlo study. *Medical Physic.* vol.33, no.3, 699-706, 2006.

Li X, Huang W, Yankeelov TE, **Tudorica A,** Rooney WD, and **Springer CS.** Shutter-speed analysis of contrast reagent bolus-tracking data: preliminary observations in benign and malignant breast disease. *Magn Reson Med* 2005; 53:724-729, 2005.

Li X, Li L, Lu H, and Liang Z. A Partial Volume Segmentation of Brain Magnetic Resonance Images Based on Maximum a Posteriori Probability. *Medical Physics* vol.32, no.7, 2337-2345, 2005.

Liang Z, Lakare S, Wax M, Chen D, Li L, Anderson J, Kaufman A, and Harrington DP. A Pilot Study on Less-stressful Bowel Preparation for Virtual Colonoscopy Screening with Follow-up Biopsy by Optical Colonoscopy. *Proc SPIE Medical Imaging* vol.5746, 810-816, 2005.

Liang Z, Chen D, Wax M, Lakare S, Li L, Anderson J, Kaufman A, and Harrington DP. A Feasibility Study on Laxative-free Virtual Colonoscopy. *Proc SPIE Medical Imaging* vol.5746, 415-423, 2005.

Lu H, Liang Z, and Wen J. Quantitatively Analytical Reconstruction for SPECT with Parallel Geometry. *Chinese Transactions on Biomedical Engineering*, vol.24, no.5, 524-530, 2005.

Lu H, and Liang Z. Spatial Resolution Characteristics of K-L Domain Adaptive Wiener Filtering on SPECT Sinogram Poisson Noise. *Int'l Conf Fully 3D Image Reconstruction in Radiology and Nuclear Medicine* pp. 242-245, Salt Lake City, Utah, USA, 2005.

Lubinsky AR, Yip KL, Trauernicht DP, and Yorkston J. Substrate Effect on Indirect Digital Radiography System Performance. *Proc. SPIE*, 6142, 614235.

Lubinsky AR, Zhao W, Ristic G, and Rowlands JA. Screen optics effects on detective quantum efficiency in digital radiography: Zero frequency effects. *Med. Phys.* 33, 1499-1506.

Mathews R. Before the Fallout: From Marie Curie to Hiroshima. *J Nucl Med.* 2006;47:897.

Moore WH, and Francheschi D. PET findings in Pulmonary Drifilariasis. *J Thor Imag.* 2005;20:305-306.

Moore WH, and Baram D. Pulmonary Infiltration from Chronic Lymphocytic Leukemia. *J Thor Imag.* 2006;21, 172-175.

Perlmutter S, Heimann A, Oldan J, **Naik M, Posniak EJ, and Shindo M.** Ultrasound and Ultrasound-guided Fine Needle Aspiration Biopsy for Surveillance and Diagnosis of Recurrent and Metastatic Thyroid Carcinoma. *Radiological Society of North America Scientific Assembly and Annual Meeting Program*, Chicago, Ill., p 797 (2005).

Slesarenko Y, Sampson S, and **Gould ES.** Chondromyxoid Fibroma of the First Metatarsal Bone. *The Foot* 15(2005) 167-169.

Slesarenko YA, Sampson SP, **Gould ES,** and Dagum AB. Recurrent Enchondroma Protuberans: A Case Report. *J Hand Surg* 2005; 1318-1321.

Slesarenko YA, Sampson SP, and **Gould ES.** Giant Cell Tumor of the Distal Phalanx of the Hand. *Hand Surg* 2005 Dec;10(2-3):289-91.

Slesarenko S, Sampson S, and **Gould E.** Giant Cell Tumor of the Distal Phalanx of the Hand. *Journal of Hand Surgery* June 2005.

Strain JD, **Cohen HL,** Fordham L, Gunderman R, McAlister WH, Slovis TL, Smith WL, and Rotherner AD. Expert Panel on Pediatric Imaging. Headache-child. (online publication). Reson (VA): American College of Radiology (ACR); 2005. 6 P. (36 references).

Waghshul ME, Chen JJ, Egnor MR, **McCormack EJ,** and **Roche PE.** Amplitude and Phase of Cerebrospinal Fluid Pulsations: Experimental Studies and Review of the Literature. *J Neurosurg* 104:810-819.

Wang D, Lu H, Zhang J, and Liang Z. A Knowledge-based Fuzzy Clustering Method with Adaptation Penalty for Bone Segmentation of CT Images. *Int'l Conf of IEEE Engineering in Medicine and Biology*, Shanghai, China, in CD-ROM.

Wang Z, Han G, Li T, and Liang Z. Speedup OS-EM Image Reconstruction by PC Graphics Card Technologies for Quantitative SPECT with Varying Focal-length Fan-beam Collimation. *IEEE Transactions on Nuclear Science* vol.52, no.5, 1274-1280.

Wang Z, Han G, Li T, and Liang Z. Penalized Weighted Least-squares Approach to Sinogram Noise Reduction and Image Reconstruction for Low-dose X-ray Computed Tomography. *Proc SPIE Medical Imaging* vol.6142, 614247(1-12).

Wang Z, Han G, Li T, and Liang Z. Noise Reduction of Low-dose Helical CT by 3D Penalized Weighted Least-squares Sinogram Smoothing. *Proc SPIE Medical Imaging* vol.6142, 61424E(1-8).

Wang Z, Han G, Li T, and Liang Z. Sinogram Noise Reduction for Low-dose CT by Statistics-based Anisotropic Diffusion Filter. *Proc SPIE Medical Imaging* vol.5747, 2058-2066.

Wang K, He Y, Qin H, **Fisher PR**, and **Zhao W.** Temporal registration of 2D x-ray mammogram using triangular B-splines finite element method (TBFEM). *Proc. SPIE* 6144, 614436-1 (2006).

Wang K, Qin H, **Fisher PR**, and **Zhao W.** Automatic Registration of Mammograms using Texture-based Anisotropic Features. *Proceedings of 2006 IEEE International Symposium on Biomedical Imaging: From Nano to Macro*, Arlington, Virginia, USA, April 6-9, 2006.

Wang Z, Lu H, Li T, and Liang Z. An Alternative Solution to the Non-uniform Noise Propagation Problem in Fan-beam FBP Image Reconstruction. *Medical Physics* vol.32, no.11, 3389-3394.

Wang Z, Liang Z, Li L, Li X, Li B, Anderson J, and Harrington DP. Reduction of False Positives by Internal Features for Polyp Detection in CT-based Virtual Colonoscopy. *Medical Physics* vol.32, no.12, 3602-3616, 2005.

Wang Z, Li X, Li L, Li B, Eremina D, Lu H and Liang Z. An Improved Electronic Colon Cleansing Method for Detection of Colonic Polyps by Virtual Colonoscopy. *Intl Conf of IEEE Engineering in Medicine and Biology*, Shanghai, China, in CD-ROM, 2005.

Wang Z, Li B, and Liang Z. Feature-Based Texture Display for Detection of Colonic Polyps on Flattened Colon Volume. *Intl Conf of IEEE Engineering in Medicine and Biology* Shanghai, China, in CD-ROM, 2005.

Wen J, and Liang Z. An Inversion Formula for the Exponential Radon Transform in Spatial Domain with Variable Focal-length Fan-beam Collimation Geometry. *Medical Physics* vol.33, no.3, 792-798, 2006.

Yankeelov TE, Rooney WD, Huang W, Dyke JP, Li X, **Tudorica A**, Lee JH, Koutcher JA, and **Springer CS.** Evidence for shutter-speed variation in CR bolus-tracking studies of human pathology. *NMR Biomed* 2005; 18:173-185.

You J, Zeng L, and Liang Z. FBP Algorithms for Attenuated Fan-beam Projections. *Inverse Problems* vol.21, no.5, 1179-1192, 2005.

Zhao B, and Zhao W. Temporal performance of amorphous selenium mammography detectors. *Med. Phys.* 32, 128-136.

Zhao W, Li D, Reznik A, Lui BJM, Hunt DC, Rowlands JA, Ohkawa Y, and Tanioka K. Indirect flat-panel detector with avalanche gain: Fundamental feasibility investigation for SHARP-AMFPI (Scintillator HARP Active Matrix Flat Panel Imager). *Med. Phys.* 29:54-2966.

Zhao W, Hunt DC, Tanioka K, and Rowlands JA. Amorphous selenium flat panel detectors for medical applications. *Nuclear Instruments and Methods in Physics Research A*, 549, 205-209.

Zhao W, Li D, Reznik A, Lui BJM, Hunt DC, Tanioka K, and Rowlands JA. Indirect flat-panel detectors with avalanche gain: Design and operation of the avalanche photoconductor. *Proc. SPIE* 5745, 352-360.

Zhao W, Deych R, and Dolazza E. Optimization of operational conditions for direct digital mammography detectors for digital tomosynthesis. *Proc. SPIE* 5745, 1272-1281.

Zhou L, Oldan J, Fisher P, and Gindi G. Low Contrast Lesion Detection in Tomosynthetic Breast Imaging Using a Realistic Breast Phantom. *Proc. SPIE Med. Imaging*, Vol. 6142, pp.61425A-1-61425A-12. 2006.

ABSTRACTS AND ORAL PRESENTATIONS

Button TM, Li H, and Walsh S. Factors controlling image quality in dynamic infrared imaging (DIR). *BIROW III*, 2005.

Cohen HL. Pediatric and adolescent gynecologic ultrasound. *Lecture. Armed Forces Institute of Pathology Course.* Washington, DC April 2005.

Cohen HL. The role of sonography in the evaluation of the vomiting infant. *Lecture. Society of Radiologists in Ultrasound.* 15th Annual Meeting, Chicago, October 2005.

Cohen HL. Topics in perinatal genitourinary pathology. *Lecture. Indian Radiological & Imaging Association.* 59th Annual Congress, Chennai, January 2006.

Cohen HL. Pediatric and adolescent gynecologic ultrasound. *Indian Radiological & Imaging Association.* 59th Annual Congress, Chennai, January 2006.

Cohen HL. Topics in perinatal neurosonology. *Indian Radiological & Imaging Association.* 59th Annual Congress, Chennai, January 2006.

Cohen HL. Cases in pediatric and fetal ultrasound. *Lecture - Satellite symposium.* Sri Ramachandra Medical College and Research Institute (Deemed University). Porur, Chennai, Jan 2006.

Dougherty D, Gould E, and Penna J. Virtual MR Arthroscopy of the Shoulder following MR Arthrography. *Poster Presentation at the American Academy of Orthopaedic Surgery* March 2006.

Cortegiano MJ. Top Three Challenges to Academic Radiology. *Association of Administrators in Academic Radiology (AAARAD).* National Meeting in Napa, California, October 2005.

Cortegiano MJ. Productivity Standards and Reporting. *Association of Administrators in Academic Radiology (AAARAD).* Annual Meeting, Chicago, IL, May 2006.

Cortegiano MJ. Joint Venture Arrangements and Entrepreneurial Partnerships. *Association of Administrators in Academic Radiology (AAARAD).* Annual Meeting, Chicago, IL, May 2006.

Egnor MR, **Wagshul ME**, and **McCormack EJ.** Phase Relationships Between Carotid Arterial Pressure and Intracranial Pressure in Dogs. *American Society of Pediatric Neurosurgeons Annual Meeting*, Exuma, Bahamas Feb. 2006.

Harrington DP. Minimum Procedural Experience. *Society of Chairmen of Academic Radiology Departments Intersociety Summer Conference*, July 2005.

Harrington DP, Madewell J, and Baker SR. Training Innovation Updates. *Society of Chairmen of Academic Radiology Departments Fall Meeting*, October 2005.

Harrington DP, Channin D, Pentecost M, Vasilescu E, and Siegel E. Possible Solutions. *Open Source Strategy for Multi-Center Image Management Workshop* in Las Vegas, Nevada organized by the ISIS Center, Georgetown University Medical Center, March 2006.

Harrington DP. Translational Research "A new way or another slogan?" *New York Biotechnology Association Meeting* in New York City sponsored by Columbia University Medical Center, April 2006.

Harrington DP. Research Initiatives at NIBIB. *Association of University Radiologists 54th Annual Meeting*, April 2006.

Hazel RD, Manganas L, Zhang S, Yu M, Djuric P, Benveniste H, **Wagshul ME**, and Maletic-Savatic M. Identification of Neural Stem Cells in Rat Brain Using Their Specific Magnetic Resonance Spectroscopy Signature. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 1488.

Hazel RD, **McCormack EJ**, Miller J, Li J, Yu M, Benveniste H, McAllister JP II, Egnor MR, and **Wagshul ME.** Measurement of Cerebrospinal Fluid Flow in the Aqueeduct of a Rat Model of Hydrocephalus. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 30.

Hsiao IT, **Khurd P**, Rangarajan A and **Gindi G.** An Overview of Fas Convergent Ordered-Subsets Reconstruction Methods for Emission Tomography Based on the Incremental EM Algorithm. *Third Intl Conf. on Imaging Technology in Biomedical Sciences*, p. 75, Sept. 2005.

Korgaonkar MS, Fiore S, Perkins SJ, Squires NK, and **Wagshul ME.** Functional MRI Activation Patterns Based on Subject's Reaction Times in a Verb Generation Task. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 163.

Li D, Zhao W, Pang G, and Rowlands JA. A new concept of indirect flat-panel detector: SAPHIRE (Scintillator Avalanche Photoconductor with High Resolution Emitter readout). *AAPM Annual Conference*, August, 2005, Seattle, WA.

Liang Z, Wang Z, Li B, and Lu H. Improved Electronic Colon Cleansing with Less-Stressful Bowel Preparation for Computer-Aided Detection of polyps in CT Colonography. *The 91st Annual Meeting of the Radiological Society of North America (RSNA)*, pp.440, 2005.

Lubinsky AR, and Zhao W, Ristic G, and Rowlands JA. Screen Optics Effects on Detective Quantum Efficiency of Cesium Iodide Scintillators for Digital Radiography: Zero Frequency Effects. *RSNA Annual Meeting*, Chicago, 2005

Lubinsky AR, Yip KL, Trauernicht DP, and Yorkston J. Substrate Effect on Indirect Digital Radiography System Performance. *Proc. SPIE*, 6142, 614235.

Machac J, **Matthews R**, Almeida O, Youssef IM, Krynycki BR, Kim CK, Padilla M, Iannuzzi M, and Teirstein A. Characterization of Patients at Risk of Cardiac Sarcoidosis with PET Stress and Rest Rubidium-82 and F-18 Fluorodeoxyglucose Imaging. *Society of Nuclear Medicine*, 52nd Annual Meeting, Toronto, 2005.

Manganas L, Zhang S, Djuric P, **Wagshul ME**, and Maletic-Savatic M. Identification of the Neural Stem Cells in the Human Brain by Magnetic Resonance Spectroscopy. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 1889 (2006).

McCormack EJ, Egnor MR, and Wagshul ME. Improvements in Cerebrospinal Fluid Flow Measurements with Phase Contrast Balanced Steady State Free Precession. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 2408.

Schachter M, Connors P, Mathew J, Naik M, Girard C, Matthews R, and Stanley W. Benefits of SPECT and PET Fusion with Anatomical Imaging Modalities. [Abstract and Oral Presentation] *Technologist Section, Greater New York Chapter, Society of Nuclear Medicine*, 35th Annual Meeting, Atlantic City, 2006. 2nd Prize Winner.

Segui JA, and Zhao W. Comprehensive image quality analysis of amorphous selenium based flat panel x-ray detectors for digital mammography. *RSNA Annual Meeting*, Chicago, 2005.

Tudorica LA, Gabis L, Azizian A, Sclafani S, Bilski J, Roche P, De Vincent C, Pomeroy J, and Huang W. Cerebral metabolic abnormalities and correlation with cognition in children with pervasive developmental disorder: a preliminary proton MRS study. *Proc Intl Soc Magn Reson Med* 2006;904.

Tudorica LA, Fisher P, Dulaimy K, O'Hea B, Button T, and Huang W. Combined MRI/MRS protocol for specificity improvement in breast cancer detection. *Proc Intl Soc Magn Reson Med* 2006;3488.

Wagshul ME, Egnor MR, Manzione J, McCormack DJ, Voorhees A, and Wei T. Measurement of Subpixel Motion of the Lateral Ventricular Walls. *Proc. Int Soc Magn Reson Med*, Seattle, WA, p. 1594 (2006).

Wang K, Qin H, **Fisher PR**, and **Zhao W.** Registration of Temporal Mammogram Pairs using Triangular B-spline Finite Element Model (TBFEM). *RSNA Annual Meeting*, Chicago, 2005.

Wen J, Bu F, and Liang Z. An Inversion Formula for the Exponential Radon Transform in Spatial Domain with Variable Focal-Length Fan-Beam Collimator. *The 52nd Annual Meeting of the Society of Nuclear Medicine (JNM)*, vol.46, no.5, pp.471), 2005.

You J, Li T, Lu H, and Liang Z. A Preliminary Study on Analytical Inversion of the Attenuated Radon Transform with 180° Acquisition. *The 52nd Annual Meeting of the Society of Nuclear Medicine (JNM)*, vol.46, no.5, pp.471), 2005.

Youssef IM, Travis AR, **Matthews R**, Almeida O, Krynycki BR, Kim CK, and Machac J. Localization of Disease in Patients with Coronary Artery Disease with Rubidium-82 Stress and Rest PET Myocardial Perfusion Imaging. *Society of Nuclear Medicine*, 52nd Annual Meeting, Toronto, 2005.

Youssef IM, Colon D, Rafique A, Sata S, Kim CK, Krynycki BR, **Matthews R**, and Machac J. The Benefit of Two CT Transmission Scans for Rubidium-82 Cardiac PET Myocardial Perfusion Imaging. [Abstract and Oral Presentation] *Society of Nuclear Medicine*, 52nd Annual Meeting, Toronto, 2005.

Zhao B, Zhou J, and Zhao W. Focal spot blur in breast tomosynthetic systems. *RSNA Annual Meeting*, Chicago, 2005.

Zhao W. XRII vs. FPI: a critical comparison. *Imaging Physics Symposium, AAPM Annual Meeting*, Seattle, WA, August, 2005.

INTERNET ARTICLES

Agarwal D, and Cohen HL. Appendicitis. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1HUOQ QHW 7/27/05>

Cohen HL. Holoprosencephaly. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1HGOLT8Q 7/1/05>

Cohen HL. Grade III Intraventricular Hemorrhage. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1H40UHRN 8/29/05>

Cohen HL, Wachsberg RH, Zucconi WB, Dougherty D, and Langer JE. COD52. *RSNA Unknown Cases of the Day 2004.* (Internet Learning Program 2005) http://www2.rsna.org/Timssnet/products/TNT_products.cfm?prod=COD52 8/29/05

Cohen HL. Hypertrophic Pyloric Stenosis Displaying the Antral Nipple Sign. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1GIOPN56 9/13/05>

Cohen HL. Periventricular Leukomalacia. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1H40X9 F9 9/30/05>

Dougherty D, Mark R, Meng H, and Gould E. Angiosarcoma. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1PV008S0 7/6/06>

Franceschi D, and Cohen HL. Incidental diagnosis of primary colon tumor. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1NTONKWI 3/21/06>

Mangrulkar V, and Cohen HL. Choroid Plexus Papillomas. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1JF0VBO 9/7/05>

Moore W, Zawin M, and Cohen HL. Aortic Graft Infection. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1HGOKHE5 8/3/05>

Moore WH, Bennie A, and Ferretti J. Median Arcuate Ligament Syndrome. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1H70NM2M 7/11/05>

Moore WH, and Mankes S. Lymphoma of the Small Bowel. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1I00NEIZ 8/10/05>

Naik M, and Gould E. Bennett's Fracture. *ACR Case in Point.* <http://caseipoint.acr.org/edactic/QMachine.ASP?UID=1NQOSB Y4 2/22/06>

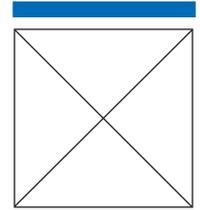
BOOKS/DISSERTATION

Hertzberg B, Hill M, and **Cohen HL.** (eds) *Ultrasound (Third Series) Test and Syllabus*, American College of Radiology, Virginia 2005.

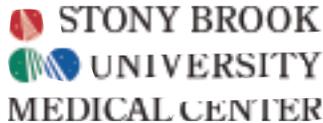
Jambawalikar S (advisor **T. Button**). *Application of Texture Analysis to Dynamic Contrast Enhanced Breast Magnetic Resonance Imaging*. August 2005.

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DEPARTMENT OF RADIOLOGY
Room 120, L4 Health Sciences Center
State University of New York at Stony Brook
Stony Brook, New York 11794-8460



Faculty & Staff

Donald P. Harrington, M.D., M.A., F.A.C.R.
Professor and Chairman
Professor of Biomedical Engineering
Radiologist-in-Chief

Harris L. Cohen, M.D., F.A.C.R.
Professor of Radiology
Associate Chair for Research Activities
Director of Body Imaging
Chief, Ultrasound
Chief, Pediatric Body Imaging

Dvorah Balsam, M.D.
Professor of Radiology
Chief, Pediatric Radiology

Arie E. Kaufman, Ph.D.
Professor of Radiology and Computer Science

Jerome Z. Liang, Ph.D.
Professor of Radiology and Computer Science

Harold L. Atkins, M.D.
Professor Emeritus of Radiology

Jack S. Deitch, M.D.
Professor Emeritus of Clinical Radiology

John A. Ferretti, M.D.
Professor of Clinical Radiology and Surgery
Associate Chair, Quality Assurance
Director, Angiography and Interventional Radiology

Morton A. Meyers, M.D.
Professor Emeritus of Radiology

Zvi H. Oster, M.D.
Professor Emeritus of Radiology

Robert G. Peyster, M.D.
Professor of Radiology and Neurology
Division of Neuroradiology

Terry M. Button, Ph.D.
Associate Professor of Clinical Radiology
Director of the Medical Physics Track
in Biomedical Engineering
Director Medical Imaging Technology Program
in School of Health Technology and Management

Paul R. Fisher, M.D.
Associate Professor of Clinical Radiology and Surgery
Division of Diagnostic Radiology and Breast Imaging
Director, Breast Imaging

Gene R. Gindi, Ph.D.
Associate Professor of Radiology and
Electrical Engineering

Elaine S. Gould, M.D.
Associate Professor of Clinical Radiology and Orthopaedics
Director, Core/Orthopaedic Radiology
Administrative Director MR

James V. Manzione, M.D., D.M.D.
Associate Professor of Clinical Radiology and Surgery
and Neurological Surgery
Director, Division of Neuroradiology

Steven Perlmutter, M.D., F.A.C.R.
Associate Professor of Clinical Radiology
Medical Director, Department Clinical Service
Division of Diagnostic Radiology and
Cross-sectional Imaging
Director, Residency Program

Clemente T. Roque, M.D.
Associate Professor of Clinical Radiology, Neurosurgery
and Neurology
Division of Neuroradiology

Sol Spector, M.D.
Associate Professor of Clinical Radiology
Division of Diagnostic Radiology
Chief, GI/GU, Emergency

Wei Zhao, Ph.D.
Associate Professor of Research Radiology
Medical Physicist

Alan B. Bennie, M.D.
Assistant Professor of Clinical Radiology
Division of Angiography and Interventional Radiology

Nancy E. Budorick, M.D.
Assistant Professor of Clinical Radiology
Division of Cross-sectional Imaging

Corazon J. Cabahug, M.D.
Assistant Professor of Clinical Radiology
Director, Division of Nuclear Medicine

Bruce M. Chernofsky, D.O.
Assistant Professor of Clinical Radiology
Division of Neuroradiology

Sheri L. Ford, M.D.
Assistant Professor of Clinical Radiology
Division of Breast Imaging

Dinko Franceschi, M.D.
Assistant Professor of Clinical Radiology
Division of Nuclear Medicine

Margaret Johnstone, M.D.
Assistant Professor of Clinical Radiology
Division of Breast Imaging

Seth O. Mankes, M.D.
Associate Professor of Clinical Radiology
Division of Cross-sectional Imaging

Maryanna Mason, M.D.
Assistant Professor of Clinical Radiology
Division of Diagnostic Radiology

Robert Matthews, M.D.
Assistant Professor of Clinical Radiology
Division of Nuclear Medicine

Hong Meng, M.D.
Assistant Professor of Clinical Radiology and Surgery
Division of Cross-sectional Imaging and
Diagnostic Radiology
Chief, Body MRI and Cardiovascular MRI

William H. Moore, M.D.
Assistant Professor of Clinical Radiology
Division of Diagnostic Radiology
Chief of Thoracic Imaging

Roxanne B. Palermo, M.D.
Assistant Professor of Clinical Radiology
Division of Breast Imaging and Cross-sectional Imaging

Erica J. Posniak, M.D.
Assistant Professor of Clinical Radiology
Division of Cross-sectional Imaging

G. Lucy van de Vegte, M.D.
Assistant Professor of Clinical Radiology
Division of Cross-sectional Imaging

Paul L. Vitulli, D.O.
Assistant Professor of Clinical Radiology
Division of Angiography and Interventional Radiology

Mark E. Wagshul, Ph.D.
Assistant Professor of Clinical Radiology
Director of MRI Research

Barbara Wajsbrot-Kandel, M.D.
Assistant Professor of Clinical Radiology
Division of Breast Imaging and Cross-sectional Imaging

Zengmin Yan, M.D.
Assistant Professor of Clinical Radiology
Division of Neuroradiology and
Cross-sectional Imaging

Marlene L. Zawin, M.D.
Assistant Professor of Clinical Radiology and Surgery
Division of Cross-sectional Imaging
Chief, Cardiovascular CT Imaging
Chief, Computed Tomography

ADMINISTRATIVE STAFF

Michael J. Cortegiano
Administrative Officer

Patricia George
Medical Practice Plan Administrator

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Associate Hospital Director of Radiology
and Cardiology

Maria Wolfe, R.T.
Hospital Director of Radiology and Cardiology