

Outpatient Imaging Center Opens at Stony Brook

The new Outpatient Imaging Center at Stony Brook University Medical Center provides service to outpatients in a state-of-the-art 65,000 square ft facility. The grand opening of the Imaging Center was celebrated on February 15, 2007. The Center provides convenience and comfort for its outpatients with bright treatment areas in an easy and spacious atmosphere. The setting is ideal for patients, families, and Stony Brook health care professionals to partner in the management and treatment of a variety of medical conditions.

Stony Brook Imaging Center is a comprehensive imaging

facility. Patients receive the added benefits of having their studies interpreted by subspecialized physicians.

The Center is equipped with an advanced communication system and image capabilities; all cases are sent to the Radiology PACS (Picture Archive Communication System). This allows the radiologist, not only at the Imaging Center but radiologists at the University Medical Center, to interpret all the studies produced at the Center. This is made possible by the high speed data connections between the Imaging Center and the University. In addition to this, the images and reports are available to referring physicians electronically.

The imaging equipment includes 2 GE 1.5 Tesla MR units, 64-slice CT scan, and the first 40-slice PET/CT. The Center is also equipped with a digital diagnostic imaging room, and modern Bone Density room (DEXA).



The new center and patient waiting area

Continued on page 5

HIGHLIGHTS

Managed Care Update	2
New Faculty	3
Co-registration in Molecular Imaging	4
Dynamic MR Imaging of Pelvic Organ Prolapse	5
News in the Department	6
Lectures	7
Cardiovascular Section Team	7

Digital Breast Tomosynthesis

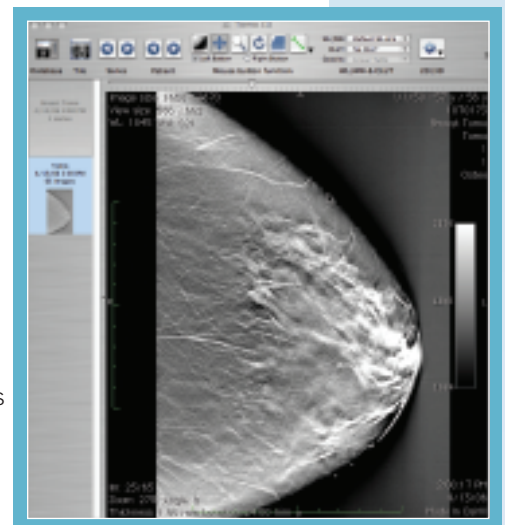
by Paul R. Fisher, M.D., Director of Breast Imaging

Digital Breast Tomosynthesis is an exciting new technological achievement used to find and diagnose early breast cancers. Mammography detects up to 85% of early diagnosis of breast cancer, and is the best modality to date for this important health screening. The remaining 15% of women who develop breast cancer are initially missed on mammography. These cases are often undetected because the breast tissue is dense which blocks the x-rays and produces poor image quality.

Recently, Stony Brook University Medical Center and the Carol Baldwin Breast Care Center (now located at the new Ambulatory Care Pavilion) have entered into an exciting collaboration with Siemens Corporation, testing and developing clinical applications for digital breast tomosynthesis. A state-of-the-art Siemens Digital Breast Tomosynthesis unit, one of only three in the world, was installed at the new Ambulatory Cancer Center. Patients will soon be enrolled in a number of clinical trials there. These screenings are part of a multi-center trial for

tomosynthesis screening in collaboration with Duke University and The University Hospital of Malmö, Sweden.

Digital Breast Tomosynthesis works by taking a series of projections through the breast using a modified x-ray tube and detector. Computer algorithms then reconstruct images for review by a radiologist, similar to the reconstruction performed for CT and MRI images. A series of 60 or more images are produced for each patient and reviewed on a high resolution mammographic display station. By constructing "slices" through the breast tissue, the images show lesions much more clearly, since they reduce the amount of overlapping breast tissue shown on a given slice. Ordinarily, dense breast tissue can obscure lesions, and early studies



Small cancer seen only on Tomosynthesis

Continued on page 7

Chairman's Corner

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



The Department is pleased to announce the opening of the new Outpatient Imaging Center located adjacent to the Ambulatory Surgery Center on the Medical Center's campus. Many of you are familiar with Elaine Gould, M.D. who has accepted the position of Medical

Director, Maryanna Mason, M.D. as Assistant Director and Charles Mazzarrese, M.P.S., R.T. as the Technical Director of the Imaging Center. The Carol M. Baldwin Breast Center has also moved from Tech Park to this location. The Centers will provide easy access to patients and their referring physicians.

The Department of Radiology is blessed with many outstanding faculty members. We are pleased to complement the group with the successful recruitment of Dr. Cliff Bernstein in the Division of Breast Imaging and Dr. Andrei Kranz in the Division of Interventional Radiology.

On a sad note, we all mourn the passing of Dr. Jack Deitch who was a devoted colleague and friend. Jack was a Professor on the Emeritus Staff and an active member of the Department for over twenty years. He was also a faculty member when the campus was being built and prior to the opening of University Hospital. We are also saddened by the passing of Dr. Paul Lauterbur who was a Professor of Chemistry and Radiology at Stony Brook in the 1970s and 80s. Dr. Lauterbur is renowned for his work in developing magnetic resonance imaging (MRI) technology and shared the 2003 Nobel Prize in Medicine for this accomplishment.

One of the exciting new areas is the formation of a Cardiovascular Section in the Department. Drs. Hong Meng, John Ferretti, William Moore, Erica Posniak and Marlene Zawin are working together as a team to provide excellent care for our cardiovascular patients. It is planned that the next issue of the Radiology Letter will include an article on CT cardiac angiography.

We are looking forward to a successful year and providing our patients with the best possible care.

THE RADIOLOGY LETTER

The Radiology Letter is published by the Department of Radiology, School of Medicine, University at Stony Brook, Stony Brook, New York 11794 (631) 444-2480

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

Managed Care Update

Aetna/US Healthcare
HMO and Open Access
Non-HMO
Managed Choice

Affinity

American Medical Life

APA Partners

Atlantis (POS Plan Only)

BCE Emergis (UP & UP)

BSC-Maxon
(Student Insurance)

Beechstreet

Empire BC/BS Managed Care Network
HMO-Healthy NY/Blue Choice
PPO
Federal Employee
Senior Plan (HMO)
Indemnity
Child Health Plus
Out of State
Direct POS and EPO
HMO Direct
CDHP
Empire PPO C93 AKA Suffolk County
Vytra W/Suff Prefix

Cambridge

CIGNA
HMO/POS
Open Access (PPO)
Government Plan (PPO)

First Health

GHI
HMO and PPO National
HMO Value Plan
HMO Value Plan Direct Access
PPO Flex Select
Medicare Choice PPO
Category "D"
Transit Workers

Guardian

Healthfirst
HMO
Healthfirst 1199
Medicaid
Child Health Plus
Family Health Plus
Health First N.Y. (COMM)
Health First (65) Plus

Healthnet (all plans)
Tricare Prime Remote and Standard Program

HIP/HIP Access II
HMO
Healthcare Partners/IPA
HIP Select (EPO, PPO)
VIP (Medicare)
Prime
Medicaid
Child Health Plus
CHP
Family Health Plus
DCN
Greater New York

Horizon
HMO
Vista
Vista Plus

PPO/EPO
Standard
Standard Plus

Independent Health

Island Group

JJ Newman

Local 1199
National Benefits Fund
Member's Choice

Magna Care – Local 947, Local 3, Local 707

Maxon (Student Insurance)

MDNY
Direct HMO/POS
Classic HMO/POS
Focus/Flex
PPO

Medicaid Managed Care
Affinity
Fidelis Care of New York
Care Plus

Medichoice

MET Empire

Multiplan
Best Western

Oxford
Freedom Plan / Freedom Plan Preferred
Liberty Plan/ Liberty Plan Preferred
Oxford HMO/Freedom Network
Oxford HMO/Liberty Network
Freedom Plan Select/Freedom Plan PPO
Liberty Plan Select/Liberty Plan PPO
Oxford HMO Select/Freedom Network
Oxford HMO Select/Liberty Network
Freedom Plan Metro
Oxford USA

Sierra

Suffolk Health Plan

Champus

United Healthcare
Child Health Plus Plan
Family Health Plus
United Medicare Complete

Americhoice
Child Health Plus Plan
Family Health Plus Plan
Medicaid
United Health Care

USI (Select Pro)

Vytra
HMO
Suffolk County Vytra/PPO
East End Health Plan (Vytra PPO Plan)
Direct Access HMO
Central Suffolk Hospital
(Peconic Health Corporation)
Southampton Hospital
Southside Hospital
Smart Start
Neighborhood Network Plan (EPO)
Suffolk Employees
School Health Plan (SSEHP)
Vytra Medicaid
PPO Cost Sharing Plan

Health Worldwide/SUNY Students

New Faculty

©Jeanne Neville, Media Services



Andrei Kranz, M.D. joined the faculty staff as an Assistant Professor of Clinical Radiology in the Division of Interventional Radiology. Dr. Kranz received his medical degree at the Institute of Medicine and Pharmacy in Cluj-Napoca, Romania. He completed a three-year Surgical residency at Wyckoff Heights Medical Center in Brooklyn, New

York, followed by a Radiology residency at the Nassau University Medical Center in East Meadow, New York. Dr. Kranz completed a Vascular and Interventional Radiology fellowship at the Montefiore Medical Center/Albert Einstein College of Medicine in the Bronx, New York. Dr. Kranz previously worked at Southside Hospital, Huntington Hospital and Brookhaven Memorial Hospital. He is a member of the American Medical Association, Medical Society of the State of New York, Society of Interventional Radiology and the American College of Radiology.

©Jeanne Neville, Media Services



Cliff S. Bernstein, M.D. completed a fellowship in Breast Imaging at Stony Brook and joined the faculty as an Assistant Professor of Clinical Radiology in the Division of Breast Imaging. Dr. Bernstein received his medical degree from the State University of New York at Stony Brook and completed a Radiology residency at the Harlem Hospital

Center. Dr. Bernstein is a member of the American College of Radiology, the Radiological Society of North America, and the Society of Breast Imaging. Dr. Bernstein is Board Certified in Diagnostic Radiology.

In Memory



Jack S. Deitch, M.D., who was Chief of Diagnostic Radiology and Head of Mammography from 1979 until 1999, passed away on January 4, 2007. He was one of the founders of the Department of Radiology at Stony Brook. Prior to coming to Stony Brook he worked at the Veterans

Administration Medical Center in Northport, New York. Dr. Deitch will be dearly missed by his family, friends and colleagues.



Morton A. Meyers, M.D., Jack S. Deitch, M.D., Donald P. Harrington, M.D. (left to right)

Paul C. Lauterbur Dies Won Nobel Prize for MRI



Paul Lauterbur, Ph.D., who shared the 2003 Nobel Prize in Medicine for his work in developing magnetic resonance imaging (MRI) technology while a member of the Stony Brook University faculty in the 1970s and 80s, passed away on March 28, 2007.

Dr. Lauterbur was a Professor of Chemistry and a Professor of Radiology at Stony Brook when he began using magnetic resonance spectroscopy to study living organisms. He eventually learned that, by placing an organism inside a constant magnetic field then applying a second magnetic field of varying strength, he could produce sharper images of the different tissues in the organism than previously possible.

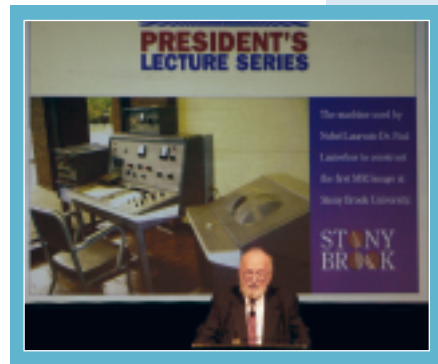
The MRI went on to revolutionize diagnostic medicine in the latter quarter of the 20th Century and remains one of the most important developments in medical technology. Dr. Lauterbur received the Nobel for Medicine and returned to Stony Brook with his Nobel Medal in September 2004 to deliver a lecture and meet with students. He was honored in a campus ceremony attended by many of his early colleagues. His original MRI device remains on display in the University's Chemistry Building along with a replica of his Nobel Medal – the first one ever awarded to a faculty member for research conducted while at Stony Brook.

Lauterbur's breakthrough was in realizing that by varying the strength of the magnetic field and analyzing the frequency of resulting radio signals, he could use nuclear magnetic resonance to create a two or three-dimensional picture. This laid the foundation for what eventually became the MRI.

The research began in 1971 when Lauterbur watched as colleagues used nuclear magnetic resonance (NMR) to examine tissue from a cancerous tumor. Two years later, in 1973, the British scientific journal *Nature* published an article by Lauterbur describing an NMR technique for taking three-dimensional pictures of body organs and vessels, without the use of ionized radiation or toxic dyes. It was this technique that was used as the basis for MRI equipment.



Copyright © Nobel Web AB 2003. Photo: Hans Mohlin



Dr. Lauterbur lectures at Stony Brook University.

Paul C. Lauterbur receiving his Nobel Prize from His Majesty King Carl XVI Gustaf of Sweden at the Stockholm Concert Hall, December 2003.

Co-registration in Molecular Imaging

Robert Matthews M.D., William Stanley C.N.M.T.,
and Nand Relan Ph.D.

Figure 1. Comparing new PET scan (A) with prior PET scan (B) can be an arduous and time consuming task for the nuclear medicine physician, especially in patients where there is both progression and regression of individual lesions. This patient has multiple lesions in both the neck and lungs.

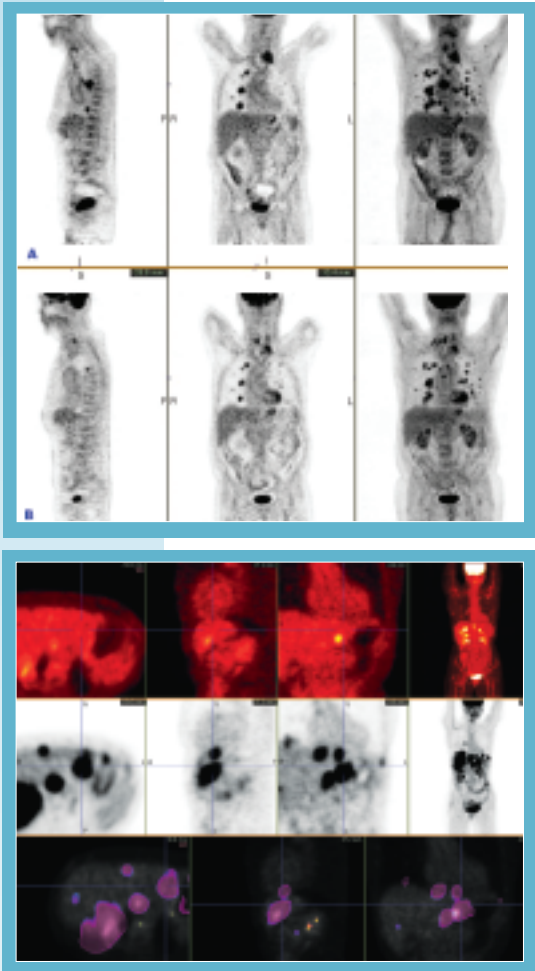


Figure 2. Fusion subtraction technique is applied combining the new PET images (first row) with the prior PET images (second row). In this case, the PET-PET fusion images (third row) demonstrates that cancer in the liver has regressed.

Fusion imaging has been increasingly employed over the past few years, especially with the introduction of hybrid PET-CT cameras. PET and other molecular imaging techniques used in nuclear medicine demonstrate functional or physiological bio-mechanisms, while CT and other anatomical imaging modalities provide structural detail. In the evaluation of malignancies with PET, current and prior studies are often referenced for comparison. Newly developed software applications not only allow co-registration of functional and anatomical images, but allow a variety of fusion combinations. PET-PET fusion imaging offers an innovative approach for assessment of

malignancies in patients with prior and follow-up studies.

These topics were discussed in a paper entitled "Evaluation of Co-registration in Molecular Imaging: PET-PET Fusion" presented by three nuclear medicine technologist students, Jamie Bevilacqua B.S., Jasmine Guevara B.S., and Joseph Weiss B.S. at the Greater New York Society of Nuclear Medicine Symposium held in Atlantic City.

Fourteen cases, each with old and new PET scans, were evaluated for overall quality of fusion, quality of lesion co-registration, and changes in both standard uptake value (SUV) and tumor volume. A PET-PET fusion subtraction

method, developed by MIM Vista, was subsequently implemented to evaluate the progression or regression of individual lesions. Quality of subtraction was rated based on changes in volume and SUV of the lesion.

When gross quality of fusion was rated high, rating of individual lesions during the subtraction method also were rated high. The most challenging anatomical region for

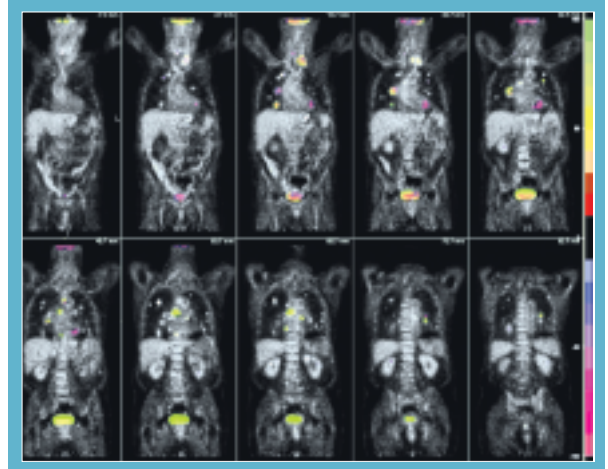
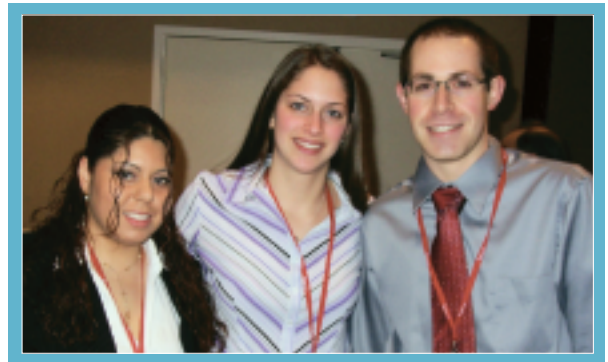


Figure 3. PET-PET fusion subtraction combines the new and prior studies displaying worsening lesions in yellow/green while regressed lesions in purple. Lesions that have not changed in volume or SUV remain in gray.

subtraction was the neck region where patients tended to change the position of the heads between old and new PET studies. Overall, average distance of misalignment was observed only to be 1.01+0.15 centimeters in all anatomical regions.

PET-PET fusion with subtraction technique proved to be an efficient and accurate diagnostic tool for evaluating the different stages and status of malignancies. But for subtraction technique to be effective, good quality of co-registration is important. Under optimal conditions, PET-PET fusion subtraction method can provide greater confidence for the physician in the final interpretation of PET studies.

University Medical Center at Stony Brook offers a 40-slice PET CT. Appointments can be made by calling (631) 444-1880.



Jamie Bevilacqua, B.S. (center), Jasmine Guevara, B.S. (left) and Joseph Weiss, B.S. (right) won second place for their presentation entitled "Evaluation of Co-registration in Molecular Imaging: PET-PET Fusion" at the Annual Greater New York Chapter Symposium of the Technology Section of the Society of Nuclear Medicine.

Dynamic MR Imaging of Pelvic Organ Prolapse

by Hong Meng, M.D. and Jamil Rehman, M.D.
Department of Radiology and Department of Urology

With the installation of our state-of-the-art 1.5 Tesla and 3 Tesla whole body magnets in the spring of 2004, the Department of Radiology at Stony Brook University Medical Center has been able to broaden the clinical applications for body imaging to assist clinicians from various specialties in diagnosis and management of benign or malignant diseases. One of the more specialized imaging techniques is dynamic magnetic resonance (MR) imaging of pelvic organ prolapse, which assists the urologist and gynecologist in the management of patients suffering from varying degrees of pelvic floor weakness and dysfunction.

Pelvic organ prolapse is a relatively common condition primarily affecting women. It can be debilitating as well as embarrassing and significantly impacts their quality of life. It may involve one or multiple pelvic organs including urethra, bladder, uterus, vagina vault, rectum, and small

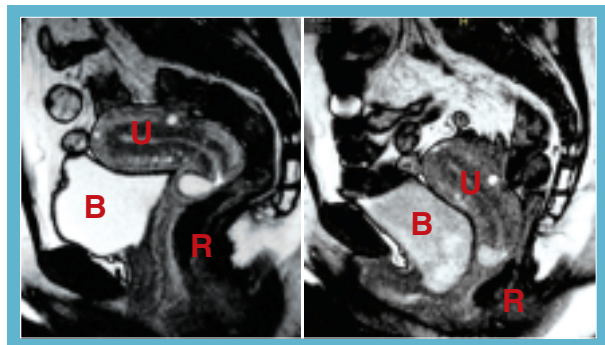


Figure 1. A 46 year old female with pelvic organ prolapse. At rest (left), normal position of pelvic floor structures and organs (B-bladder, U-uterus, R-rectum). At maximal straining during graded Valsalva maneuver, midline sagittal image from cine movie acquisition (right) reveals severe pelvic floor weakness and all three organ prolapse with associated cystocele, uterine prolapse and rectocele.

bowel. Patients may present with pain, pressure, urinary and fecal incontinence, constipation, urinary retention and defecatory dysfunction. Pelvic organ prolapse has a significant impact on society. Urinary incontinence alone affects 10 million women in the United States at an annual health care cost of approximately ten billion dollars.

Imaging Center Opens

Continued from cover

Medical Director, Dr. Elaine Gould, Assistant Director Dr. Maryanna Mason, Technical Director, Charles Mazzaresse, as well as all the attending radiologists, technologists and staff have contributed to the Center's success. Patient appointments can be made by calling (631) 444-1880.

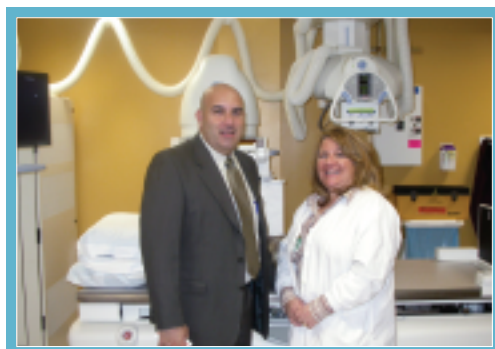
Pelvic organ prolapse is diagnosed primarily via pelvic examination. Imaging is useful for patients when clinical diagnosis is uncertain and/or for pre-surgical planning. MR imaging has an advantage over other imaging techniques in evaluating pelvic organ prolapse due to its lack of ionizing radiation, excellent depiction of pelvic organs and pelvic floor soft tissue, and multiplanar and dynamic imaging capability. Also, contrast administration is not needed.

For patients with clinical concern of pelvic organ prolapse, dynamic MR imaging sequences are added to our routine female pelvic imaging protocol. The patient is in a supine position with knees mildly flexed.

The phase-array body coil is tightly placed over the pelvic region to cover the pelvic floor structure at the center of the imaging field of view. The patients are carefully coached to collaborate with graded straining, mimic laboring or defecation. Real time imaging is acquired

at 2-3 image frames/second for about 100 dynamic images during patient's graded Valsalva maneuver, from rest to maximal straining. These images are reviewed in cine movie mode for real-time assessment of pelvic floor movement and organ descent, and static images are used for measurement of pelvic floor landmarks and organ prolapse (figure 1-3).

Patient appointment can be made by calling (631) 444-6919. Dr. Meng (Radiology) can be reached at (631) 444-8192. Dr. Rehman (Urology/Urogynecology) can be reached at (631) 444-3641. Dr. Budnick (Urology/Urogynecology) can be reached at (631) 444-4686.



Charles Mazzaresse, M.P.S., R.T., and Karen O'Toole, R.T.

Figure 2. A 68 year old female s/p hysterectomy. At rest (left), normal position of pelvic floor structures and organs (B-bladder, S-small bowel). At maximal straining during graded Valsalva maneuver, midline sagittal image from cine movie acquisition (right) reveals a mild C-cystocele and large S-enterocele.

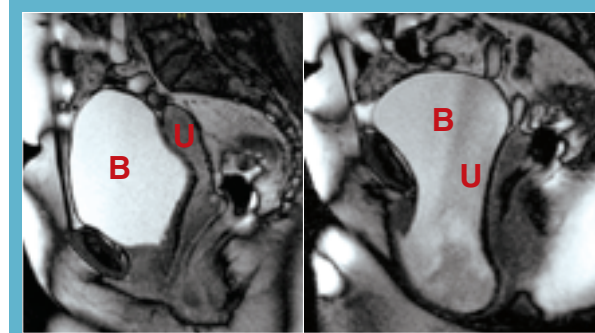
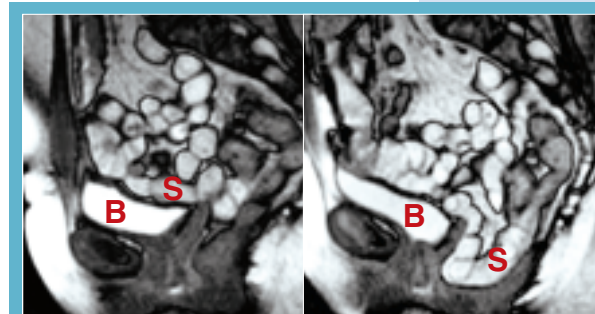


Figure 3. A 54 year old female with stress incontinence. At rest (left), normal position of pelvic floor structures and organs (B-bladder, U-uterus). At maximal straining during graded Valsalva maneuver, midline sagittal image from cine movie acquisition (right) reveals a large C-cystocele and U-uterus prolapse.

News in the Department

Clinical Trial

A phase II clinical trial sponsored by ActivBiotics has been recently approved by the University IRB Committee and recruitment has begun. This project is lead by the principal investigator Dr. Hong Meng in the Department of Radiology in collaboration with the co-investigator Dr. Apostolos Tassiopoulos from the Division of Vascular Surgery. This study is for randomized evaluation of short-term Rifaximin treatment on carotid atherosclerosis using 3 Tesla high-resolution MR imaging of the carotid wall and atherosclerotic plaques. Any patient who has significant atherosclerotic disease in any part of body including coronary artery disease, peripheral vascular disease and cerebrovascular disease may be eligible for participation. For additional information and patient enrollment, please contact Eileen Finnin at (631) 444-5454 and Aimee Minton at (631) 444-2471.

© Jeanne Neville, Media Services



Iakavos (James) Koutras, M.D. named Chief Resident.

© Jeanne Neville, Media Services



Aimee Minton joins the Department as Co-Research Coordinator.

© Jeanne Neville, Media Services



Erin McCormack, Ph.D. defends Ph.D. thesis and stays on as Post-doc.

© Jeanne Neville, Media Services



Christine Rivera, Radiology Librarian, proudly displays the catalogued books in the Radiology Library.

© Jeanne Neville, Media Services



Congratulations to **Iakavos (James) Koutras, M.D.** who was appointed Chief Resident. Welcome to our new Clinical Research Associate, **Aimee Minton**. Aimee will serve as a Co-Research Coordinator with Veronica Geronimo. Congratulations to **Erin McCormack, Ph.D.** who defended her Ph.D. thesis in Biomedical Engineering entitled "Quantitative Measurements of Intracranial Cerebrospinal Fluid Dynamics: Methods to Evaluate Changes in the Biomechanics of the Brain in the Presence of Disease". Dr. McCormack will be staying on as a postdoc for another year.

Christina Rivera, Radiology Librarian, has done a phenomenal job in organizing The Morton A. Meyers, M.D. Department of Radiology Library.

Jerome Liang, Ph.D. received the IEEE Long Island Section's Fellow Award at the IEEE Long Island Section Annual Awards Banquet on Friday, April 13, 2007 at the Huntington Hilton in Melville, New York. The citation on the Award is "For contribu-

tions to medical imaging reconstruction and virtual colonoscopy." Congratulations Jerome! **Michael J. Cortegiano** was appointed President of AAARAD (Association of Administrators in Academic Radiology) for 2007 - 2008.

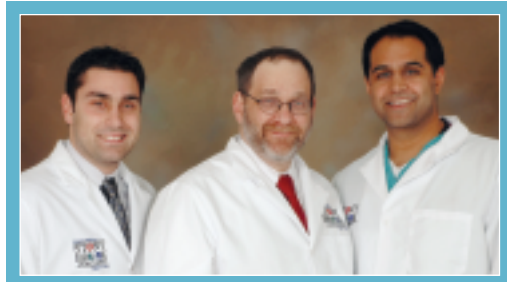
Drs. **Mohit Naik** and **Iakavos (James) Koutras** assisted in coordinating the 2006 Unknown Cases Ultrasound Project for the Radiological Society of North America's Annual Meeting in December 2006. The five cases used and their posters and presentations were the result of the collective efforts of many members of the Department. Included are **Dr. Nancy Budorick, Jared Dunkin, Ekta Gupta, Iakavos (James) Koutras, Amer Naeim, Mohit Naik, Vaibhav Mangrulkar, Erica Posniak, Hsiu Su, Nandita Wadhwa, and Marlene Zawin**. **Dr. Harris L. Cohen** was the faculty coordinator of the project. The excellent work on a similar RSNA project in 2005 by Drs. Mohit Naik and Amit Patel and a similar SRU project coordinated by Dr. Kal Al-Dulaimy, was given by the RSNA as the reason for the project being re-offered to Stony Brook in 2006.

© Jeanne Neville, Media Services



Harris L. Cohen, M.D., seen displaying his work as co-editor of the American College of Radiology PSE test and syllabus 51st text in the third series - Neuroradiology.

Dr. Harris L. Cohen was a participant of the organized Radiology's Editors Forum held at the RSNA offices in Chicago in September 2006. The Organization includes the Editors-in-Chief of key radiology publications in the United States and abroad. Dr. Proto of *Radiology* and Dr. Olmsted of *RadioGraphics* helped organize the 2006 meeting. Dr. Cohen was there as Editor-in-Chief of the American College of Radiology's Syllabus (PSE) series. Dr. Proto was a former Editor-in-Chief of the PSE series. The American College of Radiology published the 51st text in its PSE Syllabus series in December 2006. The book, entitled *Neuroradiology III* was edited by Drs Mauricio Castillo (University of North Carolina, Chapel Hill), James G. Smirniotopolis (Uniformed Services University of Health Sciences, Bethesda) and Harris L. Cohen (University Medical Center at Stony Brook, Stony Brook). A new text, *Chest VI* is being coordinated with Dr. Jeffrey S. Klein (Fletcher Allen Health Care, Burlington, Vermont), his Associate Editor and Dr. Cohen with an expected date of publication, Dec 2007.



Iakavos (James) Koutras, M.D., Harris L. Cohen, M.D., Mohit Naik, M.D. (left to right) pose at the Annual 2006 Radiological Society North America (RSNA) Meeting.

© Jeanne Neville, Media Services

Lectures

Vincent J. Vigorita, M.D., Professor of Pathology & Orthopaedic Surgery, Director of Research, Chairman Emeritus, Department of Pathology at the Lutheran Medical Center, Brooklyn, New York presented a Grand Rounds on “Osteosarcoma and Its Variants” on Wednesday, February 7, 2007.

Ronald S. Adler, Ph.D., M.D., Chief, Division of Ultrasound and Body CT, Radiology and Imaging at the Hospital for Special Surgery presented a Grand Rounds on “Musculoskeletal Ultrasound” on Tuesday, February 20, 2007.

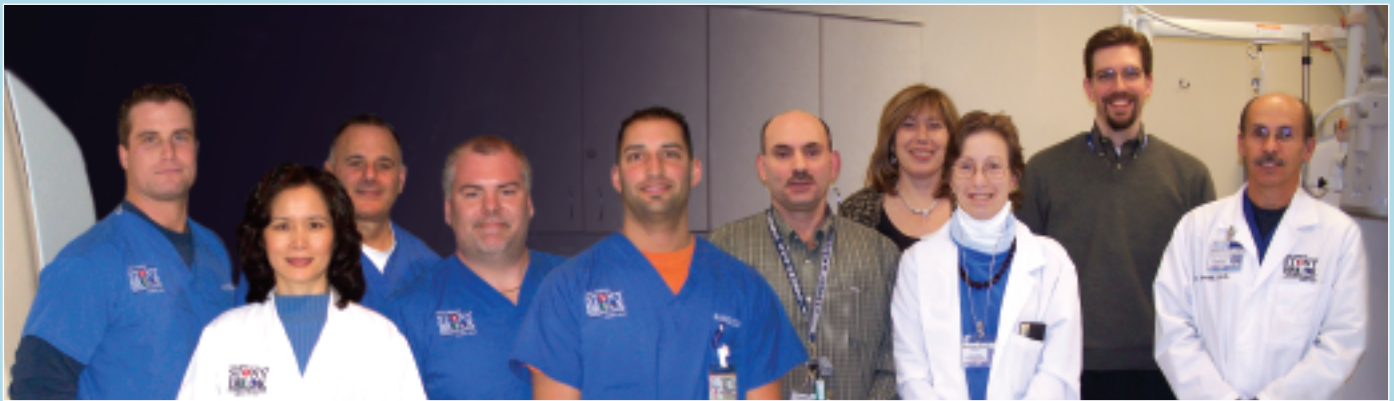
Abraham Dachman, M.D., Professor of Radiology, Director Tomography at the University of Chicago presented a Grand Rounds on “Virtual Colonoscopy” on Wednesday, March 7, 2007.

Mark Ruschin, Ph.D., Department of Medical Radiation Physics, Lund University, Malmö University Hospital, Malmö, Sweden presented a Grand Rounds on “Improved In-plane Visibility of Tumors Using Breast Tomosynthesis” on Wednesday, March 7, 2007.

Mark Murphey, M.D., International Course Director, Chief, Musculoskeletal Section, Department of Radiologic Pathology, Armed Forces Institute of Pathology, Baltimore, Maryland presented a Grand Rounds on “MR Imaging of Muscle Abnormalities” on Thursday, March 8, 2007.

Arra Suresh Reddy, M.D., Chief, Section of Interventional Neuroradiology, Department of Radiology, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, Massachusetts presented a Grand Rounds on “Minimally Invasive Cranial & Spinal Neurosurgery” on Friday, April 27, 2007.

Cardiovascular Section Team



(Left to right) Shane DeCamp, R.T., Hong Meng, M.D., Chief, Cardiovascular MRI, Gary Leisner, R.T., Scott McVicker, R.T., Louis Guerriero, R.T., Louis Caronia, R.T., Erica Posniak, M.D., Marlene Zawin, M.D., Chief, Cardiovascular CT Imaging, William Moore, M.D., and John Ferretti, M.D.

Digital Breast Tomosynthesis

Continued from cover

have confirmed that lesions are much more conspicuous on the tomosynthesis images (perhaps as much as four times for an equivalent x-ray dose). The overall radiation dose is comparable to standard Two-Dimensional mammography, but the exposure time is significantly longer (approximately 12 seconds on our prototype unit). The clinical trials will offer us insight into the stringent demand for breast immobilization for such a long exposure and will help illustrate how well our patients at The Carol Baldwin Breast Center can tolerate the tomosynthesis exams.

The cover image shows a single slice from a tomosynthesis study, performed at Duke recently. The woman's mammogram was read as normal, while a small cancer

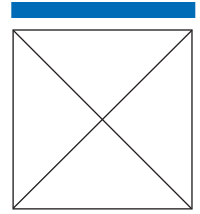
was detected only on their tomosynthesis unit.

There are many questions that remain unanswered about this exciting new technology. They include how best to obtain the images, how best to process them, and even how best to compress the breast for the longer time demands for image acquisition. We will examine how often this new research tool detects cancers missed by the currently used mammography modalities. Just as importantly, we will examine how many “false alarms” are generated by tomosynthesis. Stony Brook Radiology will remain at the forefront of research to answer these and other questions, as we gain experience in this exciting new technology of breast tomosynthesis.

RADILOGY LETTER

A Radiologist's Approach to Imaging Vistas ■ State University of New York at Stony Brook

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*

Harold L. Atkins, M.D.

Professor Emeritus of Radiology

Dvorah Balsam, M.D.

*Professor of Radiology
Chief, Pediatric Radiology*

Nancy E. Budorick, M.D.

*Professor of Clinical Radiology
Division of Cross-sectional Imaging*

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*

John A. Ferretti, M.D.

*Professor of Clinical Radiology and Surgery
Associate Chair, Quality Assurance
Director, Angiography and Interventional Radiology*

Arie E. Kaufman, Ph.D.

Professor of Radiology and Computer Science

Jerome Z. Liang, Ph.D.

Professor of Radiology and Computer Science

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
Medical Director, Imaging Center*

Seth O. Mankes, M.D.

*Associate Professor of Clinical Radiology
Division of Cross-sectional Imaging*

James V. Manzione, M.D., D.M.D.

*Associate Professor of Clinical Radiology, Surgery
and Neurological Surgery
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*

Solomon 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*

Cliff S. Bernstein, M.D.

*Assistant Professor of Clinical Radiology
Division of Breast 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*

Andrei Kranz, M.D.

*Assistant Professor of Clinical Radiology
Division of Angiography and Interventional Radiology*

Maryanna Mason, M.D.

*Assistant Professor of Clinical Radiology
Division of Diagnostic Radiology
Assistant Director, Imaging Center*

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

Anthony Indelicato

*Associate Hospital Director of Radiology
and Cardiology*

Maria Wolfe, R.T.

Hospital Director of Radiology and Cardiology