Molecular imaging has played a prominent role in the assessment of lymphoma for almost three decades now since the introduction of 67Ga-citrate imaging for staging and restaging of both Hodgkin’s and non-Hodgkin’s lymphoma (HL and NHL). Since then, other molecular probes have been investigated for more accurate pre- and post-treatment assessment of lymphomas, but none of these probes were widely accepted and utilized until the emergence of 18F-fluorodeoxyglucose positron emission tomography (FDG-PET). FDG-PET or FDG-PET/CT, which combines FDG-PET with CT scanning, is now widely utilized for response assessment of lymphoma after completion of therapy (Fig. 1), for pretreatment staging (Fig. 2) and, increasingly, for assessment of response during therapy (therapy monitoring). Particularly for response assessment at therapy conclusion, FDG-PET has been shown to be considerably more accurate than CT or conventional MRI because of its ability to distinguish between viable tumor and necrosis or fibrosis in post-therapy residual mass(es) that are frequently present in patients with lymphoma without any other clinical or biochemical evidence of disease. FDG-PET/CT is therefore currently the noninvasive modality of choice for response classifications of HL and aggressive NHLs consistent with the recently revised, primarily FDG-PET/CT-based, response criteria for lymphoma. Our lymphoma group at The University of Iowa has played a key role in implementing this revision with formal FDG-PET integration into the response assessment of any cancer type for the first time ever. Furthermore, our group was instrumental in standardizing the use of FDG-PET, particularly in response

Figure 1: PET-negative residual mass in a patient with nodular sclerosis Hodgkin’s disease. This patient underwent a restaging PET/CT scan 1 month following treatment with 6 cycles of ABVD which showed a residual mass in the mediastinum measuring 5.0x3.7 cm, with FDG uptake clearly less than that of mediastinal blood pool structures (the mass actually appears photopenic compared with surrounding mediastinal background activity). This patient is currently without evidence of disease after 18 months of follow-up post-therapy.

(continued on page 3)
I am pleased to report that the academic and fiscal year 2010, which ended June 30, 2010, was again a very challenging but successful one for the Department of Radiology. On all fronts of our mission – clinical, educational, and research – we did well, thanks to the dedication and hard work of our faculty and staff.

From the clinical perspective, UI Radiology clinical volumes reached a high of 299,000 exams. This is most remarkable in light of the relative absence of any significant new imaging instrumentation or staff. In other words, it is almost entirely due to the efforts of staff and faculty who continue to improve our efficiency. The entire department deserves the highest kudos for this accomplishment. While many areas of the UI Health Care enterprise performed well last year, I am proud to claim that Radiology did our part and more.

Our Vice Chair for Education, Dr. Brian Mullan, continues to oversee an outstanding yet continually expanding and improving education program. Over the last year, he has worked with our residency program directors, Dr. Joan Maley and Dr. Bruno Policeni, to re-engineer the Radiology Residency curriculum and clinical experience to align with changes occurring at the national level. Of note, our educators have recognized and emphasized the so-called “non-interpretive skills” to bring new focus to important practice proficiencies such as ethics, professionalism, communication, error prevention and patient safety. The department’s primary medical student course/elective, directed by Dr. Eve Clark and Dr. Maheen Rajput, again was a highly ranked course within the Carver College of Medicine. The faculty enjoyed the services of a great group of residents and fellows and look forward to working with our new house staff over the next year. Another education highlight for this year is the continued integration of our Radiologic Technologist Program within the department. I am happy to recognize that the primary educators in these programs Jennifer Maiers, Interim Director, Radiation Science BS Degree Program; Kathy Martensen, Program Director, RT, CT, CVI and MRI Education; Stephanie Ellingson, Program Director, Diagnostic Medical Sonography Program; and Anthony Knight, Program Director, Nuclear Medicine Technology Program – are being appointed as Adjunct Instructor faculty within our department.

I also wish to recognize faculty in the department who, over the last 6 months, successfully competed for critical and prestigious NIH and other extramural funding (see pages 15-16 for complete list and highlights), including a $7,969,325 NIH award to Dr. Vincent Magnotta to establish a high field (7 Tesla) MRI research program within the department. I also wish to call attention to the numerous faculty who received honors during the past year, as noted on pages 6-9 of this newsletter.

Another noteworthy accomplishment this year is the publication of our department’s legacy and history. Titled, “Imaging, Science, and Service: A Century of Radiology at The University of Iowa,” this 400 page book is available to all faculty, staff, and alumni by contacting Nichole Jenkins at nichole-jenkins@uiowa.edu.

While last year was indeed a good year, I think we can look forward to another rewarding academic year during 2011. Of particular importance are the anticipated capital investments in the department, including a new state-of-the-art cyclotron for the UI Radiology-PET Center and critical remodeling of its radiochemistry laboratories to meet pending FDA current Good Manufacturing Practice (GMP) standards. In addition, a new angio-interventional suite is being completed in the Department of Radiology Interventional Radiology area.

In summary, despite a less than encouraging national economy, our department has enjoyed another good year. I personally want to thank each and every faculty member, our resident and fellow trainees, and our outstanding technologists, nursing, and support staff for their continuously impressive work on behalf of the patients we serve within the Department of Radiology.
Role of Positron Emission Tomography, continued from page 1

assessment and therapy monitoring (Juweid et al. Journal of Clinical Oncology, 2007). In this effort, we have not only emphasized the strengths but also the pitfalls of this approach (Fig. 3), including its relative limitation in distinguishing between residual disease and posttherapy inflammatory changes early after chemotherapy or radiation.

An important advance in the area of molecular imaging of lymphoma and other malignancies is the development of 18F-fluorothymidine as an in vivo marker of cell proliferation. FLT uptake in lymphomas has been shown to be proportional to Ki-67 index, a recognized histopathological marker of tumor cell proliferation. Importantly, FLT has also been shown to be less affected by posttherapy inflammatory changes caused by macrophages/monocyte infiltration and is thus more tumor-specific than FDG. This higher tumor-specificity may prove particularly advantageous early after therapy when inflammatory changes from radiation therapy or combined modality therapy have not yet subsided. Because of these properties, our lymphoma group intends to compare the predictive values of interim FLT-PET/CT and FDG-PET/CT in diffuse large B cell lymphoma (DLBCL) patients after 2 cycles of R-CHOP chemotherapy, the standard front-line therapy of DLBCL. Our hypothesis is that FLT-PET/CT will have a substantially higher positive predictive value compared with FDG-PET/CT with a similar or only slightly lower negative predictive value. This study will be conducted under an RO1 grant recently funded by the National Institute of Health. Several sites will be participating in addition to our institution, including Stanford University, MD Anderson Cancer Center, the University of Nebraska and the Technical University in Munich, Germany.

Figure 2: A pretreatment PET/CT scan in a 48-year-old patient with Burkitt's lymphoma showing widespread nodal and extranodal disease including peri-aortic, iliac and mediastial lymphadenopathy in addition to extensive involvement of the bone/bone marrow, both thyroid lobes and focal liver involvement.

Figure 3: Posttreatment PET/CT scan in a 20-year-old patient with Hodgkin lymphoma showing thymic hyperplasia with otherwise no PET evidence of disease. Thymic hyperplasia should not be confused with persistent mediastinal lymphoma.
Sectional Update
Iowa City Veterans Hospital Imaging Service
by David L. Bushnell, Jr., MD, Professor; Chief, Diagnostic Imaging Service VAMC; Vice Chair, VAMC Department of Radiology

These past few years have seen important equipment upgrades in the Imaging Service at the Iowa City VAMC. Permit me to provide a brief synopsis of these changes in addition to some that are planned for the near future.

PET/CT imaging has become a vital component of the management and care of oncology patients, as well as in some cases patients with coronary artery disease. We purchased a PET/CT machine last year from Siemens, which is very similar to the PET/CT unit that we have at UIHC. It worked great for F-18 FDG imaging but had a bit of a problem when it came to performing Rb-82 stress myocardial perfusion exams. As it turns out, the folks at Siemens suggested that the problem was likely related to the limited capabilities of the Nuclear Medicine physicians reading the PET images at the VA. Now to be sure, said Nuclear physicians have been the source of more than a few problems in their day, but only the older one has ever been suspected of having limited capabilities! So in this instance we’re fairly certain that the machine is the culprit. Sadly, for now the VA PET/CT system remains idle and VA patients are currently being scanned in the PET facility at UIHC.

We have also added a completely new Interventional Radiology suite at the VA with Siemens biplane and tilt capable equipment that also has hemodynamic monitoring capabilities. The new interventional cardiology suite is right next door with very similar equipment. Our nurses and IR technologists work in both locations as needed throughout the day. And I’m pleased to take this opportunity to introduce our new VA IR physician, Dr. Peter Mygdal, who tells me he is very excited to be able to work with all of the new equipment.

Changes are forthcoming for MRI at the VA. We are in the process of evaluating vendors for purchase of a large bore unit, as well as an upgrade from our existing 1.5 Tesla machine to a 3 Tesla machine planned for the coming year. New lower extremity boot coils have notably upgraded our ability to image distal lower extremities. Upgraded software for motion sensitive imaging has improved our neuroimaging exams as well.

Finally, all of our staff radiologists now have new offices and dictation suites. Dr. Stan Parker’s is of course the largest and nicest, as it should be. Mine remains the smallest and is old and outdated. As it should be.

Education Update
American Board of Radiology Exam
by Brian F. Mullan, MD, Clinical Professor, Vice Chair for Education

Goodbye, Louisville! This year’s entering class of residents will be the first that will not have to make the annual late spring migration to the halls of the Executive West Hotel. In order to more accurately reflect real world clinical practice and to improve the overall quality of the exam, the ABR is moving from the old three exam (written physics, written diagnostic and oral) model for board certification to one that includes only two exams.

The first exam will be the Core Exam, given 36 months after the start of residency. It will test knowledge and comprehension of anatomy, pathophysiology, all aspects of diagnostic radiology and physics concepts important for diagnostic radiology. It will last for a day and a half covering 18 categories including all body parts and modalities in addition to physics and safety. If a candidate fails one to five categories, they will condition the exam and have to repeat those categories. If more than five categories are failed then the entire exam must be repeated. It will be given twice each year.

The most novel change will be the Certifying Exam. This will replace the oral exam and will take place 15 months after completion of the residency. Also, as an image-rich computer-based exam, it will focus on higher level thinking emphasizing synthesis of information, differential diagnosis and patient management. Physics, basic science and patient safety will be included. It will consist of five modules. One module, Non-interpretive Skills will focus on topics such as radiation safety, recognition and management of contrast reactions, error prevention, communication skills, professionalism, ethics and other aspects of practice. A second, Essentials of Diagnostic Radiology, will cover basic knowledge that every radiologist should know such as recognizing child abuse, pneumothorax, shock bowel and subdural hematoma. Both of these will be required of all candidates. The other three modules will be in clinical practice areas (such as chest, body imaging, etc.) that the candidate selects. They can all be in the same area or different areas based on what the candidate believes is most relevant to their individual practice. The goal is a more clinically relevant exam that is tailored to the individual.

Although some still debate the merits of the new system, the ABR is moving forward with the first exams scheduled for October 2013.
Welcome New Faculty

A. Andres Capizzano, MD, joined the Department of Radiology as a Clinical Assistant Professor. He completed both head & neck and neuroradiology fellowships at The University of Iowa, Department of Radiology. Dr. Capizzano received his medical training from the University of Buenos Aires School of Medicine, Argentina, and went on to do a radiology residency at the Hospital Italiano at Buenos Aires. He also completed research fellowships in “MR imaging and spectroscopy in dementia and epilepsy” at UCSF, VA Medical Center, and “Quantitative MR imaging in dementia at the Neuroimaging Laboratory ”Raul Carrea”Neurological Research Institute, Buenos Aires. Dr. Capizzano has been appointed Director of Neuroradiology MR Imaging.

Jerry M. E. Kovoor, MBBS, DMRD, Visiting Associate Professor, comes to the Department of Radiology from the Neuroradiology Department at the National Institute of Mental Health and Neuro Sciences (NIMHANS) in Bangalore, India, where he served as Associate Professor. Prior to his appointment in the Department of Radiology, Dr. Kovoor completed an interventional neuroradiology fellowship at University of Iowa Hospitals and Clinics. He received his medical training at the University of Kerala, India, and completed his radiology residency at St. Johns Medical College Hospital in Bangalore. Dr. Kovoor joins the Interventional Neuroradiology section.

Amol S. Katkar, MD, MBBS, DMRD, joined the Body Imaging section as Associate. He received his medical training at the Krishna Institute of Medical Sciences Karad, Maharashtra, India, and training in radio-diagnosis and imaging at B.J. Medical College in Maharashtra, India. Dr. Katkar did a research fellowship at Massachusetts General Hospital, Harvard University, Boston, MA, as well as an onco-radiology fellowship at the Dana Farber Cancer Institute at Harvard. Prior to his appointment at UIHC, Dr. Katkar also completed fellowships in musculoskeletal and body imaging at The University of Iowa, Department of Radiology.

Limin Yang, MD, PhD, Clinical Assistant Professor, joined the section of Breast Imaging. She received her medical training at Beijing Medical University, Beijing, PR China, and completed a PhD and postdoctoral fellowship at The University of Texas Health Science Center at San Antonio, TX. Prior to her appointment at UIHC, Dr. Yang completed her radiology residency and a fellowship in breast imaging at The University of Iowa, Department of Radiology.

In addition to our new faculty, we also welcomed the following 2010-2011 fellows:

**BODY IMAGING**
- Lokesh Khanna, MD
- Mark Papenfuss, MD

**BREAST IMAGING**
- Brianne Seberger, MD

**MUSCULOSKELETAL**
- Anish Bansal, MD
- Wyatt Hadley, MD
- Jared Nelson, MD
- Robert Post, MD

**NUCLEAR MEDICINE**
- Parren McNeely, MD

**NEURORADIOLOGY**
- Wesley Ferley, MD
- Ameera Ismail, MD
- Paul Wheeler, MD
- Achint Singh, MD

**PEDIATRIC**
- Janet Dubois, MD
**Our New Residents**

**Diagnostic Radiology**

*Front row, left to right:* **Jay Starkey, MD**, University of California, San Francisco; **Fabiana Policeni, MD**, Faculdades Integradas, Brazil; **John Kim, MD**, University of Iowa, Carver College of Medicine; **Takashi Shawn Sato, MD**, University of Iowa, Carver College of Medicine

*Back row, left to right:* **Casey Swenson, MD**, Washington University; **James Miller, MD**, University of North Dakota; **Brendan O’Shea, MD**, University of Iowa, Carver College of Medicine; **Christopher Luty, MD**, University of Wisconsin

**Honors & Awards...**

**Monzer M. Abu-Yousef, MD**
- Examiner, American Board of Radiology, Louisville, KY, June 2010

**Eve D. Clark, MD**
- Selected by the Dean to serve on one of four modeling committees charged with developing a new curricular structure for the Carver College of Medicine

**Georges Y. El-Khoury, MD**
- Recipient of a Lifetime Service Award from the American Board of Radiology “in acknowledgement and appreciation of ongoing exceptional service in fulfilling the ABR mission”

**Michael M. Graham, MD, PhD**
- Elected Past President, Society of Nuclear Medicine, 2010-present

**Malik Juweid, MD**
- Member of the College of CSR (Center of Scientific Review) Reviewers
- Served on the Assay Validation Committee for the AACR-FDA-NCI Cancer Biomarkers Collaborative

**Sandeep T. Laroia, MD**
- Nominated and accepted for a 3-year appointment to the Medical Admissions Committee at the Carver College of Medicine

**Toshio Moritani, MD**
- Reviewer, *American Journal of Neuroradiology and the Journal of Magnetic Resonance Imaging, Postgraduate Medicine, Neuroradiology India,* and *Cancer Research*
- American Society of Neuroradiology, Electronic Education and Internet Committee
**2009-2010 DEPARTMENTAL TEACHING AWARDS**

**Medical Student Teaching Awards**

**Gillies Award for Outstanding Senior Medical Student**
Brian Hopper, MD (photo not available)

**Outstanding Senior Faculty Teacher of the Year**
Simon Kao, MD

**Resident Teacher of the Year**
Christine Jacobsen, MD

**Outstanding Junior Faculty Teacher of the Year**
Maheen Rajput, MD

**Resident Educator of the Year**
Paul Wheeler, MD

**Resident Awards**

**Resident Research Award**
Paul Wheeler, MD: “Evaluating the Utility of MRI for Detection of Temporal Artery Inflammation in Patients with Giant Cell Arteritis”

**Resident Teacher of the Year**
Robert Post, MD

**Resident Award for Outstanding Clinical Service**
Robert Post, MD

**Faculty awards**

**Krabbendoft Award for Excellence in Teaching**
Yutaka Sato, MD

**Faculty Teachers of the Year**
Yutaka Sato, MD (2010)

*Editors Note: The previous issue of Radiology Update included an incorrect photo of Dr. Jung Hoon Kim. The correct photo is listed on this page. We regret any confusion this may have caused.
If anyone has had the pleasure of speaking with Russell Johnson, radiologic technician, you know that he is the genuine article. He is “good people” and truly cares for those around him. Whether he’s just run into someone in the hallway or is performing an exam on a patient, Russell ALWAYS gives 100% of himself. He doesn’t consider this to be anything but the norm. It’s just what you do. Well, Russell’s caring ways did not go unnoticed, and his name kept showing up on hospital surveys. This caught the attention of CEO Ken Kates. Mr. Kates wanted to meet Russell and thank him for his excellent patient care. Russell didn’t see the need for all the fuss, but humbly accepted the gratitude and appreciation. Thank you, Russell, for all that you do and for being a great example of superior patient care!

Wendy R. K. Smoker, MS, MD, FACR
Recipient of the 2010 ASHNR Gold Medal Award

Dr. Wendy Smoker, Professor of Neuroradiology, was named recipient the 2010 Gold Medal Award by the American Society of Head and Neck Radiology (ASHNR). The award is given to individuals who have made an outstanding contribution to the field of head and neck radiology. The Gold Medal was presented to Dr. Smoker at a luncheon on October 7, 2010, during the 44th Annual Meeting of the American Society of Head and Neck Radiology in Houston, Texas. Dr. Smoker is the 14th person to receive this distinguished recognition. Congratulations, Dr. Smoker!

Dr. Lindell R. Gentry, University of Wisconsin Hospitals, Madison, WI; Dr. Wendy R.K. Smoker, University of Iowa Hospitals & Clinics, Iowa City, IA; and Dr. Deborah L. Reede, The Long Island College Hospital, Brooklyn, NY

2009 Employees of the Year

Brian Balkenende
Troy Frei

Brian Balkenende, Information Technology Support Services Technician, and Troy Frei, Radiological Equipment Specialist, were the recipients of the Department of Radiology’s 2009 Employee of the Year award for their exceptional work and service to others in the department. They make all of our jobs a little easier. Congratulations Brian and Troy!
Radiology Update Fall 2010

Alumni Update
Kenneth A. Bell, MD

Department of Radiology alumnus Kenneth A. Bell, MD, was born and raised in Iowa on a farm in La Porte City. As a young man he aspired to become a veterinarian, so he applied to the College of Veterinary Medicine at Iowa State University in Ames, where he went on to receive his doctorate. He graduated from the Honors Program and was a member of Phi Zeta, the Honor Society of Veterinary Medicine. But it was during that training that Dr. Bell decided that he really wanted to pursue human medicine. So after graduating from veterinary school in 1964, he entered the medical college at The University of Iowa.

During a medical school rotation at the Veterans Administration Hospital in Iowa City, he encountered Kenneth Dolan, MD, who was then Chief of Radiology, as well as an assistant professor at University of Iowa Hospitals. It was Dr. Dolan who inspired him to go into radiology. “He was an outstanding teacher and a great mentor. He inspired many of us to pursue radiology.” After completing an internship at the U.S. Public Health Service Hospital in New Orleans, LA, he spent two years at the Centers for Disease Control in Atlanta, GA. He then returned to The University of Iowa and completed his radiology residency in 1974.

After graduating, however, jobs for radiologists were scarce, and although he would have liked to have remained in Iowa, he and his wife, Anne, whom he had met during his internship in New Orleans, moved to Louisiana to take a job at the prestigious multispecialty Ochsner Medical Institution, where he has been for 35 years. At Ochsner, Dr. Bell has specialized in angio-interventional, neuroradiology and head and neck radiology, and has served as Section Head of Head and Neck Imaging. He is also Clinical Associate Professor of Radiology at Tulane University and has engaged in many years of research, particularly in the area of TMJ.

In his free time, Dr. Bell is an avid and accomplished landscape photographer. He has served as the president of the Greater New Orleans Photographic Society for three years running, and his photographs have been shown and sold in galleries around the city. He and his wife also love to travel and have visited Europe, Hawaii and Canada, to name a few destinations, and he hopes to do more of it after he retires. “My goal is to see every major art museum in world,” he said, adding that he really would like to visit the Hermitage Museum in St. Petersburg, Russia.

Dr. Bell makes trips back to Iowa a couple of times a year. He still owns a family farm and says he has deep roots in Iowa. He and Anne have two children, two grandchildren, and a passel of pets.

Years of Service Awards...

Five Years
Jacqueline Bienlien
Amber Davis
Pamela Dorale
Nate Franken
Michael Hamarstrom
Kristi Held
Jinsuh Kim, PhD
Ashley Long
Elisha Morgan
Shanah Menke
Sara Smith
Fadi Youness, MD

Ten Years
Jerry McAtee
Adam Kruse
Annetee Henderson
Junfeng Guo
Dean Clermont
Malik Juweid, MD
Tim Tewson, PhD

Fifteen Years
Michael D’Alessandro, MD
Patrica Grady
Janice Cook-Granroth
Beth Wombacher

Twenty Years
Stephanie Ellingson
Ann Hilgendorf
Greg Kelly
Blair Klinefelter
Jeffrey Murguia
Blaze Rosene
Brad Thompson, MD
Tamara Wilson

Twenty-Five Years
Scott Heery
John Richmond

Thirty Years
Mary Nelson
Patricia Zander-Hubing

Thirty-Five Years
Georges El-Khoury, MD
Helping the UI Lead: A Message from Our Director of Development

As someone who follows the UI Department of Radiology, you know that the department strives to provide more than excellence in patient care, research, and education—it is ongoing goal is to lead the discipline with innovation and new ideas.

Thanks to generous gifts from alumni, patients, the department’s faculty and staff, and other friends who recognize the important work being done here, that goal is being realized. UI faculty are producing groundbreaking research that drives state-of-the-art clinical care and outstanding education.

As the director of development for the the UI Department of Radiology, I am pleased to work with committed donors to ensure that Dr. Fajardo and her staff have the financial resources necessary to develop and meet their ambitious goals. My role is something of a matchmaker—I help the department’s alumni and friends align their philanthropic passions and interests with the department’s needs. The result is a stronger department, better able to improve lives, make vital discoveries, and train first-rate radiologists.

Gift support comes in all forms. Many of you regularly make gifts to the Radiology Development Fund, which provides discretionary resources to be used where the need is greatest. There are also many opportunities to make larger gifts specified for particular uses such as research funds, faculty support, and educational funds.

All gifts—no matter the size—make it possible for the department to seize opportunities and explore ideas that might otherwise be left behind. They help leverage crucial grant funding, and ensure that the UI can recruit and retain the finest professionals at all career levels.

If you are already among the community of givers to the UI Department of Radiology, thank you for your generosity. If you have not yet given, I invite you to see how you can make a difference. You may make a gift online at www.givetoiowa.org/medicine2, or contact me or Dr. Fajardo to discuss your ideas for support. Together, we can help the UI continue to lead.

Heather Ropp
Assistant Director of Development
The University of Iowa Foundation
P.O. Box 4550
Iowa City IA 52244-4550
(800) 648-6973
heather-ropp@uiowa.edu

The print version of this section contains a listing of contributors to the Department of Radiology for the period of July 1, 2009 through June 30, 2010. If you wish to receive a printed list, please contact Nichole Jenkins at (319) 353-8690.
**Publications**

**Book Chapters**


**Electronic Publications**


**Articles**

- Juweid ME, Smith B, Itti E, Meignan M. Can the interim fluorodeoxyglucose-positron emission tomography standardized uptake value be used to determine the need for residual mass biopsy after dose-dense immunochemotherapy for advanced diffuse large B-Cell Lymphoma? J Clin Oncol. 2010 Aug 23. [Epub ahead of print]

(continued on next page)


Scientific Presentations


• Juweid M, Thomas D, Bushnell D, Graham M. Do patients with Hodgkin's lymphoma (HL) and diffuse large B-cell lymphoma (DLBCL) with a PET-negative residual mass (RM) have a “slightly” worse prognosis than those without RM? Society of Nuclear Medicine Annual Meeting, Salt Lake City, UT, June 5-9, 2010.


**Invited Speakers**

- Abu-Yousef MM. Mock Boards in GYN ultrasound. Bryn Mawr Medical Center. Bryn Mawr, PA, April 26, 2010. [Visiting Professor]
- Abu-Yousef MM. Mock Boards in OB ultrasound. Bryn Mawr Medical Center. Bryn Mawr, PA, April 26, 2010. [Visiting Professor]
- Moritani T. Interesting Cases Conference. Department of Radiology, Showa University, School of Medicine. Jul 21, 2010, Tokyo, Japan.
- Smoker WRK. Penn State Hershey Medical Center, Hershey, PA, March 2010. [Visiting Professor]
- Smoker WRK. Wake Forest/Bowman Gray, Winston-Salem, NC, April 2010. [Visiting Professor]
- Smoker WRK. Long Island College Hospital, Brooklyn, NY, April 2010. [Visiting Professor]
- Ni J. Multi-scale modeling and petascale simulation of biotransport phenomena during nanothermotherapy. 1) Weill Cornell Medical College, Cornell University, New York, NY, March 9, 2010; 2) School of Mechanical Engineering, Shanghai Jiaotong University, April 12, 2010.

**Invited / Refresher Course Faculty**

Exhibits / Posters

- Akhter A, Abu-Yousef MM. Mamillated Caudate Lobe and Hepatic Vein Compression can be used as Ultrasound Markers to Diagnose Liver Cirrhosis. 11th Annual Student Interdisciplinary Health Research Poster Session, March 2010.


New & Renewed Grants

PI: Kevin S. Berbaum, PhD; Title: Improved DBM ROC Methods for Diagnostic Radiology; Sponsor: NIH R01 Grant; Amount: $592,509; Duration: 4/01/10 - 3/31/11

PI: Kevin S. Berbaum, PhD; Title: Eyestrain in Radiologists; Sponsor: University of Arizona; Amount: $175,000; Duration: 02/01/10 - 01/31/11

PI: Kevin S. Berbaum, PhD; Title: Satisfaction of Search; Sponsor: NIH R01 Grant; Amount: $126,812; Duration: 07/01/10 - 06/30/11

PI: Laurie L. Fajardo, MD, MBA, FACP; Title: ACRIN Committee Chair Agreement: Publications; Sponsor: American College of Radiology; Amount: $29,505; Duration: 07/01/10 - 06/30/11

PI: Laurie L. Fajardo, MD, MBA, FACP; Title: Multi-center Clinical Study to Acquire Xpress Digital Mammography System Images for CAD Development; Sponsor: Konica Minolta Medical Imaging, Inc.; Amount: $230,000; Duration: 06/09/10 - 01/31/11

PI: Michael M. Graham, MD, PhD; Title: Quantitative Imaging to Assess Response in Cancer Therapy Trials; Sponsor: NIH U01 grant; Amount: $93,741; Duration: 04/01/10-03/31/11

PI: Eric A. Hoffman, PhD; Title: Image and Model Based Analysis of Lung Diseases; Sponsor: NIH U01 grant; Amount: $93,741; Duration: 04/01/10-03/31/11

PI: Eric A. Hoffman, PhD; Title: Endothelial Dysfunction, BioPI: Markers, & Lung Function (MESA); Sponsor: Columbia University; Amount: $41,541; Duration: 05/01/10-04/30/11

PI: Eric A. Hoffman, PhD; Title: Quantitative CT-Based Lung Atlas of the Mouse; Sponsor: NIH R01 Grant; Amount: $470,478; Duration: 08/01/09-07/31/10

PI: Eric A. Hoffman, PhD; Title: Severe Asthma from Respiratory Infections; Sponsor: University of Wisconsin; Amount: $16,105; Duration: 07/01/09-06/30/10

PI: Eric A. Hoffman, PhD; Title: Genotype-Phenotype Interactions in SAHS; Sponsor: Wake Forest University; Amount: $9,702; Duration: 07/01/09-06/31/10

PI: Eric A. Hoffman, PhD; Title: Genetic Epidemiology of COPD; Sponsor: National Jewish Medical & Research Center; Amount: $77,310; Duration: 08/01/09-07/31/10

PI: Eric A. Hoffman, PhD; Title: SARP II; Sponsor: University of Pittsburgh; Amount: $22,137; Duration: 07/01/09-06/30/10

PI: Eric A. Hoffman, PhD; Title: Longitudinal, Computer-Assisted Analysis in IPF; Sponsor: University of Michigan; Amount: $74,994; Duration: 07/01/09-07/31/10

PI: Eric A. Hoffman, PhD; Title: SPIROMICS; Sponsor: NIH contract; Amount: $116,845; Duration: 04/01/10-09/30/10

PI: Eric A. Hoffman, PhD; Title: Pulmonary Vascular Changes in Early COPD; Sponsor: Columbia University; Amount: $54,277; Duration: 08/01/09-07/31/10

PI: Eric A. Hoffman, PhD; Title: Inflammation, Myofibroblasts and Distal Lung Disease in Severe Asthma; Sponsor: Washington University in St. Louis; Amount: $55,908; Duration: 03/01/10-02/28/11

(continued on next page)
Grants, continued from previous page

PI: Eric A. Hoffman, PhD; Title: NCTX, A Novel Liposomal CT Contrast Agent for Blood Pool Imaging; Sponsor: Marval Biosciences, Inc.; Amount: $35,790; Duration: 03/01/10-01/31/11

PI: Eric A. Hoffman, PhD; Title: MESA-ASAP; Sponsor: Columbia University; Amount: $100,908; Duration: 09/01/09-08/31/10

PI: Simon S.C. Kao, MD; Title: Clinical Study Riders; Sponsor: NCCF; Amount: $9,000; Duration: 03/01/10-02/28/11

PI: Mark T. Madsen, PhD; Title: Abnormality Manipulation for Tomographic Imaging Perception Research; Sponsor: NIH R01 Grant; Amount: $149,616; Duration: 06/01/10-05/31/2011

PI: Vincent A. Magnotta, PhD; Title: BRAINS Morphology and Image Analysis; Sponsor: NIH R01 Grant; Amount: $107,394; Duration: 04/01/10-03/31/11

PI: Vincent A. Magnotta, PhD; Title: IPA; Sponsor: VA; Amount: $11,000; Duration: 06/11/10-05/31/11

PI: Vincent A. Magnotta, PhD; Title: Whole Body 7T MRI Scanner; Sponsor: S10; Amount: $7,969,325; Duration: 07/01/10-06/30/11

PI: Yusuf Menda, MD; Title: ACRIN 6682; Sponsor: ACRIN; Amount: $18,564; Duration: 09/01/09-08/31/14

PI: M. Milhelm, MD (Monzer Abu-Yousef, MD); Title: Clinical Trial of Biovex Injection in Melanoma Cells; Sponsor: NIH; Amount: $16,000; Duration: 2 years

PI: Jun Ni, PhD; Title: NSF Workshop on Emerging Models Technologies for Computations in Nanoelectronics; Sponsor: NSF Grant; Amount: $50,000; Duration: 09/01/09-08/31/11

PI: Jun Ni, PhD; Title: NSF Workshop on Merging Multi-scale Models of Nanostructured Materials; Sponsor: NSF Grant; Amount: $82,940; Duration: 09/01/09-08/31/11

PI: Jun Ni, PhD; Title: Windows HPC 2008 Computing Infrastructure; Sponsor: Microsoft Corp.; Amount: $25,000; Duration: 04/01/10-03/31/11

PI: Punam Saha, PhD; Title: Tensor Scale-Based Methods for Assessment of Trabecular Bone Quality; Sponsor: NIH R01 Grant; Amount: $375,699; Duration: 06/01/10-05/31/11

PI: Punam Saha, PhD; Title: Micro-Mechanical Modeling of Trabecular Bone; Sponsor: Columbia University; Amount: $86,467; Duration: 07/01/09-06/30/10

PI: Jinhu Xiong, PhD; Title: Direct MRI Mapping of Neuronal Magnetic Fields in the Human Brain; Sponsor: NIH R21 Grant; Amount: $187,500; Duration: 05/01/10-04/30/11