Trans-NIH partnership explores use of imaging for localized cancer treatments

Precision is the goal of a new collaboration between the Clinical Center, the National Cancer Institute, and the National Heart, Lung, and Blood Institute. The Center for Interventional Oncology will pull on the strengths of each to investigate how imaging technology can diagnose and treat localized cancers in ways that are precisely targeted and minimally or non-invasive.

“The Center for Interventional Oncology will help bridge the gap between emerging technology and the everyday practice of medicine,” said chief of the new center, CC Radiology and Imaging Science’s Dr. Bradford Wood. “Advanced imaging methods have ushered in an era of early detection of cancers that are frequently localized to a single organ. Today, oncology treatments typically use systemic therapies such as chemotherapy, surgery, and radiation, which are well-suited for wide-spread disease, but may also cause widespread side effects.”

The new center will use the CC’s advanced imaging technologies, including cutting-edge magnetic resonance imaging (MRI), positron emission tomography (PET), and computed tomography (CT)—as well as the capability to use all three technologies simultaneously—to navigate a therapeutic device through the body.

The localized therapies use a thin needle or sound waves to ablate (or cook) tumors and to enhance drug delivery. Energy sources include high-intensity focused ultrasound, freezing, microwaves, and radiofrequency, Wood said. Researchers will also expand investigations into electroporation—the use of electricity to make cells more ‘open’ to targeted drug delivery.

The new center will provide a forum for and encourage collaborations among research and patient-care experts in medical, surgical, and radiation oncology and interventional radiology, noted CC Director Dr. John I. Gallin.

The education and training of experts across contributing specialties is a major center component. “Many oncologists are not currently familiar with, nor trained in, image-based, localized treatment

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Volunteers make personal gains by giving of themselves

Clinical Center volunteers selflessly give their time and efforts to serve the CC mission of quality patient care and clinical research, and National Volunteer Week April 19 to 25 recognized their commitment. There are many opportunities for the interested to help as their schedules and talents allow, as the following profiles show. To learn more about becoming a volunteer, contact Courtney Duncan at 301-496-1807.

Afrooz Nikoobakht

For many volunteering is a symbiotic arrangement. Afrooz Nikoobakht helps out in the Pharmacy Department—organizing unit dose trays, setting up new order medications, and filling prescriptions—while gaining valuable experience toward her pre-pharmacy studies.

A full-time student at Montgomery College, Nikoobakht of Potomac started volunteering at the CC in September. She wanted hands-on training in a non-retail pharmacy setting, and called Robert DeChristoforo, chief of the CC Pharmacy Department.

Nikoobakht said she has learned lots at the CC and has appreciated how helpful her fellow team members have been. “They are very friendly and answer all the questions a new person could ask,” she said. “They really make you feel part of the team.”

Meeting patients who have come to the CC as a last hope for treatment has profoundly affected Nikoobakht. “It really makes me appreciate how precious life is, and how one should not take a moment for granted,” she said. “I feel very lucky that I am able to be part of an organization.”

Tara Mahan

With work or school, family and friends, it can be hard to fit in a regular volunteer activity. The CC makes an effort to accommodate those interested in helping serve the mission of patient care and clinical research, those like Tara Mahan.

Mahan learned about the patient ambassador volunteer program through a friend, an NIH fellow. The program aligned with her volunteer goals, but her schedule did not allow participation. Volunteer services coordinator Courtney Duncan found an inpatient unit with high weekend traffic for Mahan, a biomedical engineer from Upper Marlboro.

Since July 2008, she has helped on the medical/surgical unit of 5NW a couple Sundays a month with administrative duties, such as creating patient files and answering telephones. The work she most enjoys, though, is orienting new patients to their surroundings. Mahan walks them through their unit admission packet and shows them how to order meals and use their computer and television.

“Volunteering at the NIH is a unique opportunity because of the types of patients that are seen in the facility,” Mahan said. “I am able to give back to the community while walking with patients on their journey of hope.”

Lindsey Buckingham

One of the greatest repositories for CC volunteers is the brigade of eager, young post-baccalaureates spending a year or two at NIH before starting medical or graduate school.

Lindsey Buckingham is one such trainee, using her time in the CC for more than research. Buckingham, who worked in the Kidney and Electrolyte Metabolism Branch of the National Heart, Lung, and Blood Institute from May 2007 until this month, will return to her alma mater, the University of North Carolina, Chapel Hill, to begin medical school in the fall.

While earning her undergraduate degree, Buckingham spent a semester abroad in Argentina and became fluent in the native language. Without the daily continued on the next page
National week honors volunteers

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immersion, though, she fears losing her conversational proficiency.

Her assistance as a Spanish interpreter for Radiology and Imaging Sciences keeps her bilingual, a tool she values in her medical career. “Language is an issue in our country. The dynamic of our country is changing, and we need to be able to serve the people,” Buckingham said.

The CC employs translators, but when under-staffed or over-booked, volunteers like Buckingham, with a flexible bench-work schedule, are there to help. She works with patients to fill out paperwork, explain the procedure, and make sure they are comfortable and aware of what is happening.

Many patients come to the NIH with a serious illness, some visiting the United States for the first time. “It’s scary and disorienting,” Buckingham said. “It’s a really gratifying experience to connect with people and see their comfort when I can understand them.”

Atrium Steinway donors recognized

The Steinway grand piano in the Hatfield Building’s atrium was formally dedicated April 17 at a concert by Dr. Tracy Rouault of the National Institute for Child Health and Human Development (fourth from left) and her instuctor Grace McFarlane (second from left). Also present at the event were (from left): donors Michael Batza and Earl Linehan, Dr. W. Marston Linehan of the National Cancer Institute, CC Director Dr. John I. Gallin, and donors Pattie Batza and Darielle Linehan.

News briefs

Certificate can add to researcher resume

Intramural clinician-scientists engaging in, or who intend to engage in, clinical or translational research may benefit from obtaining a Clinical Research Curriculum Certificate. Program components teach clinical trial design, ethical concerns and human subject protection requirements, regulatory aspects of clinical research and the investigational new drug application process, and responsibilities of the clinical investigator. To earn the certificate, scientists must successfully complete the Introduction to Principles and Practices of Clinical Research, Ethical and Regulatory Aspects of Clinical Research, online Clinical Research Training, and computer-based NIH Institutional Review Board members training courses. Completion of one or more elective, supplemental components will earn a certificate with commendation. For more information, including application details, visit http://intranet.cc.nih.gov/clinicalresearchtraining/curriculumcert/index.html or call the Clinical Center Office of Clinical Research Training and Medical Education at 301-496-9425.

Read about your accomplishments

CC News wants to celebrate our staff. If you or a coworker have something interesting to share, either from on campus or off—an unusual hobby, an award, or an exciting trip—contact editor Maggie McGuire at 301-594-5789 or mcguirema@cc.nih.gov.

Clinic realignment

The National Institute of Neurological Disorders and Stroke clinics previously in Outpatient Clinic 7 moved to Outpatient Clinic 5 on April 30. The fifth-floor space is shared with the National Institute on Deafness and Other Communications Disorders. The Clinical Center thanks the many CC and NINDS staff involved in planning the move and the clinic’s transition.
the critical care fellows to request their expertise at the patient’s bedside. To celebrate this work the group has been awarded the 2009 Clinical Center Patient Safety Champion Award.

This annual award goes to an individual or team who demonstrate a sustained commitment to a safe patient environment. The Critical Care Medicine Consult Service serves that mission by bringing critical care to the bedside when a patient’s condition suddenly worsens.

The winners were honored with a luncheon on April 22. “What you’ve done in creating this new service clearly has made a difference in keeping patients safe and alive,” Clinical Center Director Dr. John I. Gallin said at the event.

The seed for the service was planted in 2006 when a patient commented to nurse Patricia Smatlak that the CC could benefit from a rapid response team. With input from all units on what they deemed helpful, Smatlak spearheaded the consult service’s development. It was officially launched Nov. 3, 2008.

Since its inception, the Critical Care Medicine Consult Service has responded to 24 calls—21 from bedside nurses and three from the patient’s doctor or nurse practitioner. The nature of the incidents included respiratory distress, GI bleed, syncope/atrial fibrillation, and bleeding at a wound site. Of the 24 critical care responses, 10 remained on the patient care unit and 14 patients were transferred to the intensive care unit.

“The idea is to respond to a spark before it becomes a fire,” said Smatlak.

Critical care consult service noted for patient safety continued from page 1

Fifty or so KL2 scholars, supported through the National Center for Research Resources via an institutional career development award program, stopped at the NIH Clinical Center April 15 while in Washington to attend the 2009 National Clinical & Translational Research Education Annual Meeting. CC Director Dr. John I. Gallin welcomed the trainees, including the above representing the Mayo Clinic; Harvard University; the Albert Einstein College of Medicine of Yeshiva University; and the Universities of Minnesota, Pittsburgh, and Colorado.

“I wish you phenomenal luck, though it won’t be luck if you take advantage of all the opportunity in front of you,” Dr. Gallin told the scholars, as part of a presentation including an overview of the CC. The scholars, selected to receive support to pursue multidisciplinary clinical research with training and mentoring built in, also enjoyed a tour of the CC before returning to their meeting in downtown DC.
Interventional Oncology

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approaches from which many patients may benefit. Conversely, interventional radiologists lack formal training in oncology,” said Wood. “This new program is ideally and uniquely positioned to provide an interdisciplinary environment combining training, patient treatment, and translational research and development in interventional oncology.”

Moore, long-time nurse manager, retires

A Clinical Center nurse for nearly 31 years, Dr. Marsha Moore retired March 31.

Moore was a nurse manager for more than 22 years between three years as a clinical nurse and five years as a senior nurse consultant in Nursing and Patient Care Services’ Research & Practice Development Service.

She earned her bachelor’s degree in nursing from Hunter College in 1969 and spent the beginning of her career at Mount Sinai Hospital. Moving south in 1970, Moore worked at Arlington and Fairfax Hospitals before joining NIH in 1978.

In 1991, she earned a master’s degree in nursing administration from George Mason University. Her doctorate of education came from The George Washington University in 2004. Moore served in the US Public Health Service Commissioned Corps for 21 years, attaining the rank of captain.

During her tenure as nurse manager, Moore was team leader on two major projects. The Thallium Improvement Project reduced the length of thallium profusion tests, allowing twice as many patients to be tested on any given day. The EKG Project centralized electrocardiogram services, developed a training program, and enhanced electronic transmission capabilities of the monitoring machines.

Moore has been published in the Journal of Nursing Administration and the Journal for Nurses in Staff Development. She received Clinical Center Director’s Awards in 1996 and 2005 for patient care and strategic initiative, respectively.

Moore plans to spend time with her children and granddaughter and stay active with volunteer work.

Pharmacy department ushers in new medication dispensing cabinets

Through the month of April, the Clinical Center converted its automated medication dispensing cabinets from Pyxis to a new vendor named Omnicell. The 40 new cabinets installed on inpatient, outpatient and procedure units are interfaced with the Clinical Research Information System and the Pharmacy Department’s information system, Sunrise Pharmacy. When used together, this integrated system increases the safety and efficiency of medication administration.

The cabinets feature a small light indicating which bin the desired medication is in—helping the nurse find the drug more quickly and ensuring that he or she picks the correct medication. Another safety measure requires a nurse to scan any unused medication and its intended bin before returning it to the cabinet to avoid placing the medication in the wrong location.

The new automated dispensing cabinets also employ a feature that expedites the administration of routine medications. Additional drugs may now be placed in the cabinets, but not released until a pharmacist reviews the medication order and completes an online medication order verification. In case of an emergency, a nurse can override this requirement to immediately obtain designated urgently needed medications in the cabinet. Previously, these drugs were either sent via a pneumatic tube system (think bank drive-through) or delivered by the messenger and escort service.
NEW CLINICAL RESEARCH PROTOCOLS

The following new clinical research protocols were approved in March:

- Prospective Analysis of Genotypes in Adults Undergoing Therapy for Lung Cancer, 09-C-0103, Giuseppe Giaccone, MD, NCI
- Pilot and Feasibility Study of Reduced-Intensity Hematopoietic Stem Cell Transplant for MonoMAC, 09-C-0096, Dennis D. Hickstein, MD, NCI
- A Pilot Study to Explore Serum and Imaging Biomarkers in Patients with Spinal Cord Compression, 09-C-0113, Kevin A. Camphausen, MD, NCI
- Early Molecular Detection for the Improved Diagnosis of Invasive Pulmonary Aspergillosis and Invasive Pulmonary Zygomycosis, 09-C-0109, Thomas J. Walsh, MD, NCI
- Open Label Phase I Study to Evaluate the Safety and Tolerability of Vaccine (GI-6207) Consisting of Whole, Heat-Killed Recombinant Saccharomyces Cerevisiae Genetically Modified to Express CEA Protein in Adults with Metastatic CEA-Expressing Carcinoma, 09-C-0101, James L. Gulley, MD, NCI
- Phase 1/2 Study of Metastatic Renal Cancer using T-Cells Transduced with a T-Cell Receptor which Recognizes TRAIL Bound to the DR4 Receptor, 09-C-0092, James C. Yang, MD, NCI
- Phase II Study of Neoadjuvant Gemcitabine, Cisplatin and Bevacizumab in Stage IIa (N2), Non-Squamous Cell Non-Small Cell Lung Cancer, 09-C-0107, Giuseppe Giaccone, MD, NCI
- A Randomized, Double-Blinded, Placebo-Controlled, Multi-Institutional, Phase II.5 Study of AZD0530, a Selective Src Kinase Inhibitor, in Patients with Recurrent Osteosarcoma Localized to the Lung, 09-C-0104, Lee J. Helman, MD, NCI
- A Natural History Study of Patients Receiving High Dose Rate Brachytherapy, 09-C-0100, Aradhana Kaushal, MD, NCI
- A Phase 1, Dose Escalation Study of the Safety, Tolerability and Pharmacokinetics of Intravenous Dimethane Sulfonate (DMS612, NSC 281612 in Advanced Malignancies, 09-C-0111, Susan E. Bates, MD, NCI
- A Phase I Study of MK-0752 in Pediatric Patients with Recurrent or Refractory CNS Malignancies, 09-C-0112, Katherine E. Warren, MD, NCI
- A Pilot Study of the Safety and Activity of Escalating Doses of ON 01910.Na in Patients with Relapsed Mantle Cell Lymphoma, Multiple Myeloma, Chronic Lymphocytic Leukemia, and Related Lymphoid Malignancies, 09-H-0094, Mark J. Roschewski, MD, NHLBI
- A D/B, Randomized Ph I Study of Safety/Immunogenicity of Prime-Boost Schedule of Investigational DNA Trivalent Influenza Vaccine, Followed by 2008/09 Flulaval® Seasonal Influenza Vaccine Compared to Flulaval® Alone in Healthy Adults 18-50/51-70 Years, 09-I-0090, Julie E. Martin, DO, NIAID
- Etiology, Pathogenesis, and Natural History of Idiopathic CD4+ lymphocytopenia, 09-I-0102, Jennifer R. Heimall, MD, NIAID
- Strategic Timing of AntiRetroviral Treatment (START), 09-I-0108, Richard T. Davey Jr., MD, NIAID
- Vitamin E Pharmacokinetics and Biomarkers in Normal and Obese Women, 09-DK-0097, Mark A. Levine, MD, NIDDK
- Exploring a Motor Learning Technique Based on the Mirror Motor Neuron System, 09-N-0098, Aviva Ellenstein, MD, NINDS
Department heads share leadership tips at managerial seminar
As part of a new, two-day course, Management Essentials: Vital Skills to Broaden Your Leadership Capacity, a panel of department leaders offered advice on leading change to 20 Clinical Center managers in attendance April 3.

“What are the roadblocks to change—inadequate financial or personnel resources, attitude, lack of leadership? After an honest assessment of why change is not desired, look for ways to eliminate the roadblocks.”

– Dr. Patrick Murray, chief, Microbiology Service, Department of Laboratory Medicine

“Successful leaders embrace change since change is inevitable and necessary for organizations and individuals to grow. Change requires you to be flexible, organized, optimistic, communicate appropriately, and do as much planning as possible.”

– Dave Folio, chief, Nutrition Department

Race for a cure with Team NIH
Lace up, staffers! Team NIH is registered for the Susan G. Komen Global Race for a Cure on Saturday, June 6, on the National Mall in Washington, DC. There is a 5-kilometer (approximately 3.1 miles) and a 1-mile race; runners and walkers welcome. Team NIH has generated much interest in recent years, and organizers expect a good turn-out again in 2009. Fundraising is encouraged by Susan G. Komen for the Cure, but not required to participate.

Register online at http://globalrace.info-komen.org/site/TR/GlobalRaceForTheCure/GlobalRace?fr_id=1140&pg=entry. Click “Join a Team,” enter “Team NIH,” and choose “US Government Agency” from the Team Division drop-down. Closer to the race date, Team NIH will determine a meeting place downtown to organize on the morning of the race. Call Maggie McGuire at 301-594-5789 with any questions.

Participants sought for trials
More information on the following studies can be found at http://clinicalstudies.info.nih.gov or by calling 1-866-444-2214 (TTY: 1-866-411-1010).

Study looks at liver disease
If you or a family member has a liver disease, consider participating in a clinical research study (91-DK-0214) sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases. Participants must be 18 years old or older.

Recently diagnosed with Type 1 diabetes?
Individuals age 16 to 30 diagnosed with Type 1 diabetes within the last four months are needed for a clinical research study (09-DK-0056) sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases. There is no cost for study-related tests or medications. Compensation is provided.
Lectures & Events
All lectures will be videocast at http://videocast.nih.gov.

May 6, 2009
CC Grand Rounds
Lipsett Amphitheater, 12 noon
A Community-Based Health Behavior Study Exploring Complementary and Alternative Medicine Use Among Minorities with Rheumatic Diseases
Gwenyth R. Wallen, PhD
Chief, Research and Practice Development, Nursing and Patient Care Service, CC
Migdalia V. Rivera-Goba
Senior Nurse Specialist, Research and Practice Development, Nursing and Patient Care Services, CC

May 13, 2009
CC Grand Rounds
Lipsett Amphitheater, 12 noon
Contemporary Clinical Medicine: Great Teachers Mysterious Cases
Jeffrey G. Wiese, MD
Associate Professor
Associate Dean for Graduate Medical Education
Director, Tulane Internal Medicine Program
Vice-Chairman of Medicine
Chief, Charity Medical Service
Tulane University Health Sciences Center

Wednesday Afternoon Lecture Series
Masur Auditorium, 3 pm
Engineering Gene Networks: Integrating Synthetic Biology & Systems Biology
James Collins, PhD
Co-Director and Co-Founder, Center for Biodynamics
Professor, Department of Biomedical Engineering and University Professor, Boston University
HHMI Investigator

May 14, 2009
Special Lecture
Masur Auditorium, 2 pm
Molecular Physiology of Neurotransmitter Release
Thomas Südhof, MD
Professor, Molecular Genetics
Director, Center for Basic Neuroscience
HHMI Investigator

Suicide Screening in Medically Ill Children
Maryland Pao, MD
Clinical Director, NIMH

Suicidality Emerging During Antidepressant Treatment
Francis McMahon, MD
Investigator, NIMH

Wednesday Afternoon Lecture Series
Masur Auditorium, 3 pm
Mechanisms of Protein Translocation Across Membranes
Tom Rapoport, PhD
Professor, Cell Biology, Harvard Medical School
HHMI Investigator

May 20, 2009
CC Grand Rounds
Lipsett Amphitheater, 12 noon
Use of Genomic and Proteomic Tools for the Diagnosis of Infectious Diseases
Patrick R. Murray, PhD
Chief, Microbiology Service, Department of Laboratory Medicine, CC

Genomic Analysis of the Human Skin Microbiome
Heidi Kong, MD
Assistant Clinical Investigator, Dermatology Branch, Center for Cancer Research, NCI

Wednesday Afternoon Lecture Series
Masur Auditorium, 3 pm
A Fresh Look at Host-Pathogen Interactions: New Tools
Hidde Ploegh, PhD
Professor, Department of Biology, Massachusetts Institute of Technology
Member, MIT Whitehead Institute for Biomedical Research

May 27, 2009
CC Grand Rounds
Lipsett Amphitheater, 12 noon

Monitors showcase CC research and events
Newly installed monitors around the Clinical Center are the latest way to learn what is happening in the CC. Two screens in the atrium display upcoming lectures and meetings, briefs on CC programs such as Recycled Reads for magazine donation, and abstracts of research findings. Left, Timothy Jancel (far left) of the CC Pharmacy Department, Janine Daub of the National Institute of Allergy and Infectious Diseases, and Dr. Phillip Arlen of the National Cancer Institute pause before an abstract from one of their peers.