Segmentation of the Canine Corpus Callosum Using Diffusion-Tensor Imaging Tractography

TT Pierce et al
Duke Center for In Vivo Microscopy

Graduating Resident Class of 2014

RSNA ANNUAL DUKE LUNCHEON
Tuesday, December 2, 2014
Hyatt McCormick Place: 2nd floor
RSVP Debbie Griffin
deborah.griffin@dm.duke.edu

R1 welcome 7/14 at Chuck and Sharon Maxfield’s house

Department of Radiology
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Dear Alumni and Friends,
Welcome to the Duke Radiology Newsletter!

I was absolutely delighted and proud to recently return to Duke Radiology as the Chairman. One of our many goals was to re-establish a connection with alumni and friends and to begin an alumni network. We remain committed to excellence in providing outstanding patient-centered care, teaching residents and fellows, mentoring future leaders, and supporting innovative laboratory and clinical research. As you and I well know, radiology departments face tremendous change. During my career, there has been explosive growth in advanced imaging technology with concomitant development of new diagnostic approaches and image-guided interventions and therapies. Radiology expertise has become increasingly essential in working with our clinical colleagues to diagnose, treat, and care for our patients. All the while, there is unprecedented pressure to be more efficient while ensuring appropriateness and safety, and demonstrating efficacy, outcomes and value. Duke Radiology is well positioned to continue as leaders in these areas. One of our primary goals is to provide compassionate, state-of-the-art radiologic care and service to our patients and referring physicians. Subspecialty interpretations of imaging studies, development and utilization of cutting-edge imaging technology, application of innovative interventional therapies, and active clinical engagement with patients and referring colleagues are each critical to achieving this goal. Duke Radiology is also committed to continuing the long and successful tradition of training radiologists who are remarkably well-prepared to contribute in academic institutions and/or in private practice environments. The integral role of radiology in health care remains emphasized by the fact that radiology is now a required clerkship for every Duke University medical student! Our residency is among the most competitive in the country. It is distinguished by a curriculum that facilitates a substantial, mentored, and supervised clinical experience and is respected for producing exceptional clinical radiologists. We continue to hold our residents to the highest standards. Furthermore, each division offers a top quality fellowship which encourages in-depth clinical and research training. As an international leader in laboratory and clinical investigation, our faculty advance radiologic knowledge and seek to develop and implement new approaches to imaging and patient care. On a per faculty basis, our department remains among the most prolific in the country in terms of peer-reviewed radiologic publications.

We remain optimistic about the future of Radiology and are remarkably proud of our graduates and former faculty.
What We Have and What We Need

What we have is a legacy of accomplished and remarkable alumni. What we also have is a Radiology program at Duke that is dynamic and fully invested in the missions of delivering top quality healthcare through service to our patients and colleagues, and educating those who continue to promote this mission in their own professional journeys. And what we have are many changes in facilities and equipment, other infrastructure (i.e., Epic), but also changes in more global health care that affect us all.

Now…what we don't have, and it has been far too long in the making, is connection. Simply stated, many of us know that reestablishing this connection should be the natural byproduct of a great place, a great program, and outstanding people. The need is there and we just want to help this along. Lyndon Jordan (Radiology HS ‘94-98, Fellow ‘99) and I (‘seems like forever) had talked over the past year or so and we decided it was time to formalize this and here is the beginning of the Duke Radiology Alumni Network (we’re happy to hear other name suggestions!). First and foremost, we see no downside … and the pluses are all related to establishing a formal connection for exchanging information about what’s going on in the Department and what’s going on in your part of the world. In the Radiology Department, information could include faculty awards and other recognition, resident accomplishments, staffing changes, facility or other infrastructure news, new programs related to both the science and practice of medical imaging, Duke Radiology research efforts and news, upcoming events both formal such as CME courses but also other opportunities to annual Fall pig pickin’ at the Frush home* (more timely notice will come for 2015), and perhaps practice opportunities. Information could also consist of updates on what's new with past faculty, fellows, and residents who are beyond the walls of this medical campus; this is where we will need your help in many respects. At this point, this newsletter will be twice a year, Fall and Spring. We will see how this goes. In this edition, Erik Paulson, the Chair, has written a welcome piece and Chuck Maxfield is contributing an update on the residency program, among other contributors. Please check our the events page as well. Any suggestions on how this alumni program might evolve are welcome: should we have a rep/contact person for each graduating class? For combined years? At all? How could social media be used, if at all? Bottom line, no rules or expectations at this point and we would like to hear suggestions from anyone. Ideas for content, format, any items please send on. Both Lyndon and I have email addresses on page 2. The newsletter will be digital and email only. As such, we are operating off of a quilt of contact information so if you receive this but know of classmates or other individuals for whom we might not have a current address, let us know how we can get this information.

Despite what are challenging times in medicine, despite the fact we are all busy, let’s not lose sight of the meaning of those years we spent together, turn this quilt into a splendid tapestry and hopefully share and have some fun along the way.

*(mark the date — Sat 9/20/14; email donald.frush@duke.edu if interested in coming or want more info)
Duke Radiology Resident Entering Class of 2014

Amrita Devalapalli  
Boston University

Austin Dixon  
Penn

Andrew Griffin  
Weill, Cornell

Raymond Groller  
Boston University

Steven Harris  
Emory

Emily Kinsey  
UVA

Zachary Krahn  
OHSU

John Latting  
Columbia

Vishwan Pamarthi  
Harvard

William Perry  
University of Washington

Ryan Short  
Ohio State

Matthew Thorpe  
U. of Illinois
New Duke Medical Center Facilities

Patient-centered amenities abound in the Cancer Center facility

The new Cancer Center facility positions Duke Medicine to accommodate existing and future demand for cancer care services. At the same time, it optimizes the total patient experience and work environment for clinical teams to further enable them to focus on patient care. Thanks to the facility’s ample space, including 73 infusion stations and eight linear accelerators for radiation therapy, staff is able to treat more patients at the same time, on a schedule more convenient for patients.

Duke Medicine Pavilion a major expansion of Duke University Hospital

Duke Medicine Pavilion (DMP), a major expansion of Duke University Hospital is a 608,000-square-foot surgical, imaging and critical care facility not only transformed the look of the campus with its bright windows and spacious public and staff areas, but also provided needed capacity to enhance Duke’s ability to provide excellent care for patients.

Mary Duke Biddle Trent Semans Center for Health Education

After nearly five years of planning, the Mary Duke Biddle Trent Semans Center for Health Education officially opened for classes on January 2, 2012. “The new building offers a wide variety of spaces that brings health professions learners together so that they can realize practical benefits from communicating and learning from each other,” said Edward G. Buckley, M.D., Vice Dean of Medical Education. “The center hopefully will serve as a resource for medical, physician assistant and physical therapy students, as well as alumni and faculty and other life-long learners.” http://medschool.duke.edu/communications/new-facility-named-mary-dbt-semans, Jeffrey Langdon, William Stagg DUMC
The Duke Radiology residency program continues to thrive, attracting the best from a perennially strong field of medical student applicants. Our philosophy of training has not changed: attract the best medical students, expose them to high volumes and great pathology, and maintain the highest standards of clinical practice and professionalism. Erik Paulson has reemphasized this commitment to clinical training. Our “3/2 program” curriculum has allowed us to improve the residents’ academic experience while still maintaining clinical excellence as the main goal of training and practice. The class of 2013 graduated last July with 79 publications as a class! That’s impressive (12 residents, 79 publications ... do the math), but we’re most proud of the fact that the class was extremely strong clinically. A rigorous clinical training experience remains our highest goal. The pool of applicants for radiology residency remains as strong as ever, as measured by AOA and board scores. And Duke continues to get our fair share of the top applicants. This past year, we dropped only to position #19 on our rank order list to match our 12 residents. Eight of the residents in our 1st year class, who started July 1, scored above 260 on their Step 1 boards, which is ridiculous. Our most recently recruited class, which is currently enjoying their prelim year, is equally impressive, and noteworthy for the fact that 7 of 12 in the class are female! (That’s a first at Duke!) Among our current 48 residents, we have 8 Ph.D’s, two martial arts black belts, an Olympic gold medalist, and two natives of Pocatello, Idaho. You can take a look at snapshots of our entire current resident class are female! (That’s a first at Duke!) Among our current 5th year residents (the last year of our “3/2 program”) have not yet secured jobs for next year, and so if you are looking for a Duke-trained interventionalist and a neuroradiologist, please contact us (Charles.maxfield@duke.edu). If your group may be hiring a neuroradiologist or pediatric radiologist, please contact us. Chuck Maxfield M.D. Program Director

In July, the radiologists of Duke Raleigh Hospital merged with the Duke Department of Radiology. The integration marked the culmination of a year’s careful planning and a historic change for the small Raleigh radiology practice. Originally Capital Radiology Associates, the practice was formed with a single physician at the founding of Raleigh Community Hospital in 1978. Capital Radiology grew with the hospital over the years to eventually include seven radiologists. In 1998, Duke University Health System purchased Raleigh Community Hospital. However, Capital Radiology remained an independent practice until 2008, when the group accepted an invitation to join the Private Diagnostic Clinic (the multi-specialty Duke physician practice). Despite their incorporation into the PDC, the group remained essentially autonomous with full responsibility for all imaging at Duke Raleigh Hospital. In 2013, the Duke Department of Radiology’s Chairman, Erik Paulson M.D., approached the Duke Raleigh practice about integrating more fully into the department. By sharing cases between the Raleigh and Durham campuses, Dr. Paulson’s goal was to leverage subspecialty expertise from main campus to better serve Duke Medicine patients in Wake County, standardize the level of care for imaging patients across the health system, and to improve efficiency by eliminating unnecessary redundancy. The merger of two physician practices always has challenges. This integration, however, was simplified in that the departments already shared the same PACS system, the Raleigh group was small, and there were no independent imaging centers. The thorniest challenges to the integration were adapting the simple Raleigh workflows to the more complex systems of the main campus department. Chest CTS now needed to be routed to the cardiothoracic radiologists while brain CTS needed to be sent to the neuroradiologists. Telephone calls between radiologists in Durham, technologists in Raleigh, and referring clinicians everywhere needed to be routed quickly and accurately. Everyone on both campuses needed to understand their role and responsibilities in the new system. These challenges were eventually overcome through teamwork, patience, and a commitment to the process both in Durham and in Raleigh. Duke patients in Raleigh now receive the same imaging care as in Durham. The Duke Raleigh radiologists are finding increased job satisfaction as they can concentrate on their individual areas of expertise. And, the main campus radiologists are pleased with the progress towards a larger, health-system oriented department.

Ted Boyse M.D.
Chief, Community Division
Duke Radiology CME Activities

Use $100 Duke Alumni Discount!!!!

FUTURE DATES:

2014

Imaging in the Blue Ridge Mountains
October 25-28, 2014
Grove Park Inn, Asheville, NC

Duke Radiology at Walt Disney World
November 2-5, 2014
Disney’s Yacht & Beach Club
Walt Disney World, Florida

2015

Duke Radiology in the Islands
January 19-22, 2015
The Ritz Carlton
Grand Cayman Island

Advanced Imaging in the Islands
February 15-18, 2015
The Atlantis Resort
Paradise Island, Bahamas

Comprehensive Review of Musculoskeletal MRI
February 14-17, 2015
Disney’s Grand Floridian

2015 Duke Review Course
March 7-12, 2015
Research Triangle Park, NC

Advances in Imaging
June 14-17, 2015
Kiawah Island Resort, SC

25th Duke Review Beach Course
July 20-24, 2015
Kingston Plantation, Myrtle Beach, SC

Imaging in the Blue Ridge Mountains
October 24-27, 2015 Grove Park Inn, Asheville, NC

2016

Duke Radiology in the Islands
January 18-21, 2016
The Ritz Carlton Aruba

Comprehensive Review of Musculoskeletal MRI
February 13-16, 2016
Disney’s Grand Floridian

Advanced Imaging in the Islands
February 15-18, 2016
The Ritz Carlton
Grand Cayman Island

2016 Duke Review Course
March 5-10, 2016
Research Triangle Park, NC

Mammograms to MRI 2016
June 27-30, 2016
Kiawah Island Resort, SC

Imaging in the Blue Ridge Mountains
October 15-18, 2016
Grove Park Inn, Asheville, NC

Duke Radiology at Walt Disney World
November 8-11, 2015
Disney’s BoardWalk Inn
Walt Disney World, Florida

Registration & information available on our website at:
www.radiology.duke.edu
AWARDS

Daniel Barboriak and Michael Zalutsky: 2014 AACR Team Science Award, Catalyzes growing importance of interdisciplinary teams to the understanding of cancer

Manisha Bahl (Neuro Fellow): ACR E Stephen Amis, Jr., MD Fellowship in Quality and Safety

Charles Kim: Duke Radiology Charles E. Putman Vision Award

2014 Resident Graduation Banquet and Awards

- Fellow Teaching Award: Dr. Jorge Oldan, Fellow in Nuclear Medicine
- Reed P. Rice Memorial Award to Junior Faculty dedicated to excellence in resident education: Danielle Seaman, M.D., Assistant Professor of Radiology and a member of the Cardiotoracic Imaging Division.
- William F. Barry, Jr, MD Memorial Award to Senior Faculty For Excellence in Teaching: Rendon Nelson, M.D., Reed & Martha Rice Distinguished Professor of Radiology and a member of the Abdominal Imaging Division.
- Carey E. Floyd, JR, Memorial Award for excellence in teaching Imaging Physics: Joseph Lu, PhD
- Charles E. Putnam Memorial Award to Division mast dedicated to excellence in resident education: Cardiothoracic Imaging
- Resident Service Award: Carly Gardner, M.D.
- Resident Teaching Award: EJ Lee Langman, M.D.
- Roentgen Resident Research Award: Lars Grimm, M.D., M.H.S.
- Chief Residents Honored: Andrew Barina, Bradley Davis, Lars Grimm, and Toma Omonuwa

Jeffrey Petrella: Co-chair of fMRI subcommittee of RSNA Quantitative Imaging Biomarkers Alliance

Laura Pierce, RT (R): Chief Technologist for the Multi-Dimensional Imaging Laboratory, 2013 Aunt Minnie Award Recipient for the Most Effective Radiologic Technologist Educator.

James Provenzale: Chair Research Committee ACR Head Injury Institute

Robert Reiman: NCRP committee involvement NCRP SC 4-7: Evaluating and communicating radiation risks and studies involving human subjects

Ehsan Samei and Jeff Nelson: Imaging Physics Residency Program, second 4-year certification from RSNA/AAPM

Chuck Spritzer: Division Chief, Musculoskeletal Imaging

Daniel Sullivan: Appointed by Secretary, DHHS, to Council of National Institute of Biomedical Imaging and Bioengineering (NIBIB/NIH), September 2014 to May 2018

GRANTS


Satish K. Chitneni: Imaging IDH1 Mutations in Glioma and Other Malignancies. NIH: $375,623

Charles Kim: Liver Tumors with Electrically Conductive Particles for Modulation of Percutaneous Radiofrequency Ablation Zone Size and Configuration. RSNA R and E Foundation: $152,000

James Provenzale: 2-year $1,000,000 grant “Diffusion Tensor Imaging Standardization using Novel MR Diffusion Phantoms” Department of Veterans’ Affairs, and


Edward (Ned) Patz: Duke Translational Research Institute Pilot Funding $100,000 for “Cues from the Native Immune Response: Targeting Cancer with Complement Factor H Antibodies.” and

Antibodies Expressed by Intratumoral B Cells as the Basis for a Diagnostic Test for Lung Cancer. DoD $152,975

Ehsan Samei: Reconstruction Software Evaluation Siemens Medical Solutions, $238,640, and

Advancement and Effective Implementation of Dose and Risk Monitoring Systems. GE Healthcare. $297,907

LEADERSHIP

Salvador Borges-Neto: Division Chief, Nuclear Medicine

James Dobbins: Vice-chair, Education Council, American Association of Physicians in Medicine, and

Board of Directors, American Association of Physicians in Medicine

Donald Frush: co-chair of Image Gently Alliance July 2014; chair July 2015

Peter Kranz: Director Duke Radiology Spine Intervention Service

Charles Maxfield: Division Chief, Pediatric Radiology

Michael Miller: At large member, vice chair of the PDC Clinical Chairs Executive Committee

Neil Petry: President, Radiopharmaceutical Science Council (RPSC)
Space available....

Send us your news!

And if you know of individuals who might not have received this newsletter, please pass it on and send contact info to help us update our email address list.
Daily rounds with pediatric surgical team

Charles Kim, MD RSNA Research Grant Recipient


Axial fractional anisotropy color map at 150 micron isotropic resolution from a diffusion tensor MRI brain atlas of 20 rhesus macaques, currently under development at the CIVM.

Courtesy, Evan Calabrese, Ph.D., CIVM.