## Table of Contents //

**January - December 2023**

### ORGANIZATION
- Message from the Chair 04
- Strategic Plan Launch 06

### CLINICAL
- 2022 Case In Point Winner 08
- Pediatric Epilepsy Patient 10

### EDUCATION
- Graduation 12
- New Residents 14
- New Fellows 15

### RESEARCH
- Radiology Research Symposium 16
- In The News 18
- Publications 20

### CULTURE
- Castillo Scholars 29
- New Faculty 30
- New Staff & Promotions 33
- Engagement Moments 34

### HONORS & GRANTS
- Honors & Highlights 36
- Awards & Grants 40

### DEVELOPMENT
- RSNA Alumni Event 42

---

*Cover image: AI stock image of the lungs.*
As I look back at 2023, I am so proud of the wonderful accomplishments and advancements of our faculty, staff, and trainees. I look at 2023 as a year of significant investment to achieve our vision of being the premier Department of Radiology in the Southeast.

We’ve put tremendous energy and effort into completing our Strategic Plan and mapping out the next five years. The plan aims to renew and advance the Department’s mission to deliver compassionate clinical care, advance healthcare through innovative research, and train future radiologists and scientists. Throughout this newsletter, you will see the outstanding accomplishments of honors, awards, publications, and grants received over the last year by our clinical and radiological sciences faculty, staff, and trainees.

To support our three pillars of patient care, education, and research, we have invested in building and expanding our phenomenal staff team, clinical faculty, radiological sciences faculty, and trainees. Our team is the backbone of the Department and is critical to accomplishing our goals in each of our pillars.

We’ve experienced significant improvements to our education programming that have impacted the satisfaction of our trainees. The latest ACGME survey reflected our residency as one of the most highly ranked programs. Our education team has also added a research track to the residency program and allotted specific slots for potential trainees.

We are proud to rank 19 in the NIH ranking for research and #8 for public Departments of Radiology. We’ve received over $8.3 million in research dollars in fiscal year 2023 and over $47 million since 2019. We hosted yet another successful Radiology Departmental Research Symposium. It was a fantastic showcase of the breadth of the groundbreaking research from our faculty and trainees.

Our work with patients and the impact on their care throughout the health system is well recognized. Our patients and colleagues routinely reach out to share personal notes and words of thanks to our faculty, staff, and trainees. You can see some of those notes on page 7. We are also excited to announce that we have rebranded our VIR office-based lab as UNC Health Endovascular Center. We also shared fun moments among our team throughout the year, from happy hours and Fridays on the porch to the resident retreat and Halloween hijinks.

I would be remiss if I didn’t mention the tragic shooting on campus in August. Like so many, I will never forget where I was and who I was with as events unfolded, sending and receiving texts of love from family and friends as we sheltered in place. I am proud of how quickly we mobilized as a Department during the lockdown and followed protocols to ensure our team’s safety. We have a fantastic community of faculty, staff, and trainees who care deeply about each other and check in with one another, offering personal support.

I am so proud of our team, their hard work, and their continued dedication to our vision of making UNC Radiology the Best in the Southeast!

Maureen P. Kohi, MD, FSIR, FCIRSE, FAHA
Ernest H. Wood Distinguished Professor and Chair
Dear Dr. Geneviève Woodard,
I can’t thank you enough for your kindness and compassion during my stereotactic guided needle biopsy this week. Despite my anxiety and fear from past experiences, the procedure was painless, and I am so grateful. You are an incredible doctor, and I thank you for your excellent care (and for dispensing the excellent local anesthesia).
When my husband and I received your benign report, we were so thankful and relieved!
Now to stay healthy! See you in six months.

Dear John Monge,
I am writing to thank you for the care, diligence and empathy that you gave to my wife Ruth during the recent exploratory procedures you performed during the diagnosis of her breast cancer. I am also pleased to let you know that the cancer had not spread to her liver and the biopsy we discussed was clear. The advice you gave to me prior to her test results gave some comfort at a time of high stress, and I cannot thank you enough for the way in which you have cared for my wife.

Dear Dr. Kohi and Procedure staff,
Thank you all for your professionalism and helpful demeanors before, during, and after my embolization on February 20th. While it is scary to undergo such a procedure, you all explained everything well and acted compassionately. I am so happy to say that the relief was nearly instantaneous. It was really quite incredible. The pain and fatigue disappeared. I had no idea how much my appetite had been affected. And work outs are becoming much less frustrating, as I teach myself form again. May God continue to bless your healing work.

“Where 2 lines intersect is finite and unarguable. That a biopsy decisively confirming breast cancer through the esteemed care of Dr. Rachel Hott was Divine. Science/Medicine based but our paths like 2 lines that intersect was ordered by the Divine. My consultation prior to the biopsy was more critical than the pathology report as reported. I received a gift if you will and despite darkened moments of sorrow and fear… what brought me back to encouragement with knowledge and understanding was Dr. Hott. Her soft spoken, straight shooting words telling me on the continuum of breast cancer… this is as favorable as one sees through imaging.”
2023 Strategic Plan Launch

The Radiology Department’s strategic plan encompasses visionary initiatives designed to revolutionize patient-centered care throughout North Carolina.

After overcoming the challenges of the COVID-19 pandemic, Departmental leadership felt the timing was ideal to look ahead and create the Department’s 5-year strategic plan. New leadership, faculty, and promise set the stage for a new future. Following a discussion with a few consulting organizations, Ascendient, a top healthcare strategy, planning, and feasibility consulting firm, was selected as the Department’s partner to facilitate the strategic planning process.

The strategic planning process aimed to elevate the already excellent clinical enterprise, research infrastructure, educational programs, and culture of UNC Radiology further to new heights. Shifting industry and system trends towards further integration required reevaluating the Department’s role in the broader UNC Health community. Increased local and statewide competition demanded new approaches to best serve our patients while remaining financially solvent in the modern era of healthcare.

Looking forward, as the UNC Health system continues to grow, the Department of Radiology must expand and grow with it, understanding the needs of patients and referring providers as those needs continue to evolve in the 21st century.

The goal of this plan is to renew and advance the Department’s mission. To that end, we aspire to encourage multidisciplinary and strategic thinking, align leadership towards a shared vision, set strategic focus areas for the next five years, and implement priority initiatives to become a leading institution.

The UNC Radiology Department has built a solid foundation in our four main pillars that are the core of our mission, vision, and values. Our pillars are clinical excellence, collaborative culture, educational brilliance, and innovative research.

For clinical excellence, we focus on advanced imaging techniques and streamlined processes, enhancing diagnostic accuracy and patient outcomes. The plan fosters a culture of collaboration, diversity, and respect, ensuring a supportive and innovative environment for patients, trainees, staff, and patients. Through ongoing education and training, we empower our team to stay current with evolving medical practices and technologies.

Research is prominent, with dedicated initiatives driving innovation and contributing to medical advancements. These strategic initiatives harmonize seamlessly with our pillars, propelling us toward superior patient care, a positive workplace culture, continuous learning, and groundbreaking contributions to radiology and healthcare.
Why did you select this case for submission?
I selected this case because we were going to biopsy a lesion but it had disappeared. At that time, Joshua Wallace was our MSK fellow and Fangbai Wu was our MSK attending. When we saw nothing to biopsy, we were stumped. Our MSK team was able to arrange same-day MRI thoracic spine with and without contrast to confirm our suspicion. No evidence of osseous metastasis was found on the MRI and our final diagnosis came to be collateral vertebral body enhancement mimicking metastases in a patient with superior vena cava obstruction - “vanishing bone mets.”

Sometimes you have to stop, think, and reflect about what is presented to you at the time of interpreting images and assess during a procedure. If what you thought beforehand does not fit with what is right in front of you, revisit the drawing board and rethink your differential. Working on this skillset is what makes us better radiologists. If our team did not stop and shift our thinking, this patient would have gotten an unnecessary bone biopsy. “First, do no harm” - Hippocrates.

What did you learn from working on the case?
Collaboration is key. Putting our minds together, searching the literature, and having an open discussion about the case

In medicine, a diagnosis is not always straightforward. Many diseases or conditions can present in various ways, depending on the circumstances. So how do you train for the uncommon presentations?

Case in Point allows radiologists to evaluate common findings as well as diseases and conditions that can present in interesting ways. The 2022 Case in Point Case of the Year, “Collateral vertebral enhancement mimicking metastases in a patient with a superior vena cava obstruction,” is an example of the latter.

Read on to learn more about the Case of the Year with questions answered by Israel Saramago, MD, former UNC Radiology Resident and Neuroradiology Fellow.
with several different attendings ultimately led us down the right path to the correct diagnosis.

**How did guidance from senior staff at your institution impact your learning and case development?**
Senior staff served as role models, helped think through the differential, and provided guidance on how to arrive at the final diagnosis.

Josh and I were the ones who thought something was not right. Fangbai Wu showed us how to think in this situation, ask for a second opinion, and cancel the biopsy. Daniel Nissman has always been a pragmatist and considered other differentials. Carlos Zamora helped bring clarity to the diagnosis once it was confirmed on MRI. Together we worked well as a team.

Special shoutout to Carlos Zamora: I found a lifelong friend and mentor who has helped cultivate a thirst for knowledge and instilled a fire in me to be better every day as a radiologist. He even had to deal with me for another year during neuroradiology fellowship - he must have been thinking why is Izzy torturing me, haha! Hopefully it was not too bad.

**Why did you choose Case in Point for submission of your case?**
Case in Point has been a gold mine of fantastic cases from all over the country. I just thought that many in the ACR community would appreciate this case from the resident to the attending level - I like learning from the new daily cases that arrive in my inbox.

**Are you a regular reader of Case in Point? What are your favorite types of cases?**
Yes. My favorite type of cases are the ones that make you think of a certain diagnosis but as you are doing the questions you are learning something new along the way.

**What else should we know about the case that you'd like to share?**
Take each clue given to you and put the pieces of the puzzle together. Vascular lesions are something to include within the differential of an enhancing bone lesion. Not everything is mets, look for reasons that support your final diagnosis, and be humble.

Note: At the time of the case presented at UNC Israel Saramago, MD was a resident at UNC and then neuroradiology fellow; Joshua Wallace, MD was a UNC resident and then MSK fellow; Fangbai Wu, MD was a UNC MSK attending; and Daniel Nissman was MSK division chief. An amazing team of collaborators.
Coryzma experienced seizures for years before receiving a diagnosis. She described her seizures as feeling like déjà vu and at one point, Coryzma was having about five seizures a day, many times blacking out completely. Finally in seventh grade, Coryzma was diagnosed with epilepsy.

Coryzma's mother, Christina, chose to go to the UNC Epilepsy Center for treatment. The most common treatment method for epilepsy is medication, which can effectively control seizures for many patients. Unfortunately, the medications did little to control the frequency of Coryzma's seizures. “I had to switch medications a lot,” recalled Coryzma. After Coryzma tried several medications, which caused frustrating side effects without success, her doctors at the UNC Epilepsy Center began evaluating her for epilepsy surgery.

With stereotactic encephalography (sEEG) and specialized brain imaging, the team identified that the seizures were coming from the left temporal lobe, an area of the brain where language and memory lives. “For epilepsy surgery, it’s weighing the benefits and risks – of seizure freedom versus the risk of creating a new functional deficit due to surgery,” said UNC pediatric neurosurgeon Dr. Scott Elton. “All of this is discussed with the family.”

“She had no energy or drive to do anything else. Appointments were exhausting for her. She didn’t want to participate with the family, go out, or partake in activities.”

Since the seizures were coming from a sensitive area of the brain, the team recommended implanting a neuro-modulation device to try and control Coryzma's seizures. During her first consultation with Dr. Elton, Coryzma felt at ease about the surgery. “He is really easy to talk to,” said Coryzma. “He is very reassuring.”

Coryzma's first surgery took place in January 2019. However, after surgery, Coryzma's seizures came back and the device had to be removed due to infection. At this point, Coryzma was still taking seizure medications and experiencing many side effects. This made it impossible for Coryzma to drive or get a job. Day to day life was becoming difficult as she struggled with anxiety and depression caused by her frequent seizures and medications. “She slept literally all day,” said Coryzma’s mother, Christina. “She had no energy or drive to do anything else. Appointments were exhausting for her. She didn’t want to participate with the family, go out, or partake in activities.”

It was back to the drawing board for the UNC Epilepsy Center team. “Epilepsy treatment is really a team sport,” said Dr. Elton. In 2021, Coryzma consulted with pediatric epileptologist Dr. Qian-Zhou (JoJo) Yang. “Coryzma had a thorough evaluation with intracranial EEG in 2018 to locate the seizures,” said Dr. Yang, Director of the UNC Pediatric Epilepsy Monitoring Unit. “We were able to look back at these EEGs and see that the seizures were in fact coming from a very small part at the bottom of the left temporal lobe. This area was not close to language or memory functions.”

In cases with drug-resistant epilepsy, a multidisciplinary epilepsy surgery team, comprising neurosurgeons, neurologists, neuroradiologists, and other specialists, meets regularly to review these cases. The goal is to assess the suitability of surgical intervention and to plan the surgical approaches when deemed appropriate. The roles of neuroradiologists in the context of epilepsy management include:

1. Reviewing all of the patient’s imaging studies, such as PET and MRI, to identify potential causes of epilepsy.
2. Utilizing imaging data to assist in the planning and guidance of invasive stereotactic intracranial EEG monitoring.
3. Employing images and intraoperative navigation systems to guide surgical resection procedures.

4. Reviewing postoperative images to assess the outcomes of surgical interventions and ensure the successful achievement of treatment goals.

After reviewing all of Coryzma’s MRI and PET exams from the past three years, pediatric neuroradiologist Dr. Sheng-Che (Alex) Hung identified the abnormal brain region that matched the EEG abnormality. “I identified a subtle brain lesion, which was compatible with EEG findings,” says Dr. Hung. “This finding was utilized to guide the surgeon’s resection during a subsequent surgery using the navigation system.”

After thorough consideration, the multidisciplinary team recommended a surgical removal of this small area of the left inferior temporal lobe, which would minimize the risk of any deficit to language or memory.

After years of seizures and dealing with debilitating anxiety and depression caused by medications, Coryzma was ready to try the surgery. “They told us the possible outcomes, possible therapies that may be needed after surgery,” recalled Christina. “We had to take time to process the information. It was very overwhelming. Coryzma was mostly on board just for the hope of being seizure-free.”

Coryzma’s resection surgery took place in December 2021.

Dr. Elton also performed a cranioplasty to replace the part of the skull that was lost due to infection. The surgery went extremely well without any complications. Coryzma stayed in the hospital for less than a week before being discharged. Following the procedure, the patient experienced an immediate and complete cessation of seizures, achieving seizure freedom.

“Things could not have been more perfect,” said Christina. “Her recovery was smooth and relatively quick considering what she had been through. No therapies were needed. We came off one of her meds, which was when we saw the big change.”

During Coryzma’s last appointment with Dr. Yang, she was cleared to drive. Now that she is over one year seizure free, she has her first job. “We’ve got our girl back,” said Christina. “She has drive, energy, sassiness. She wants to go back to school, work, and start being part of the family again. She’s back to being an active teenager. Of all the possible outcomes, we couldn’t have asked for a better one.”

Due to the hard work of the UNC Epilepsy team and the expertise of Dr. Hung, Coryzma has a bright seizure free future ahead.

“Things could not have been more perfect,” said Christina. “Her recovery was smooth and relatively quick considering what she had been through. No therapies were needed. We came off one of her meds, which was when we saw the big change.”

During Coryzma’s last appointment with Dr. Yang, she was cleared to drive. Now that she is over one year seizure free, she has her first job. “We’ve got our girl back,” said Christina. “She has drive, energy, sassiness. She wants to go back to school, work, and start being part of the family again. She’s back to being an active teenager. Of all the possible outcomes, we couldn’t have asked for a better one.”

Due to the hard work of the UNC Epilepsy team and the expertise of Dr. Hung, Coryzma has a bright seizure free future ahead.
The event brought together graduates, their families, and faculty for an evening that encompassed a cocktail hour, awards, and dinner. It was a heartfelt gathering to celebrate and pay tribute to the remarkable accomplishments of our graduating residents and fellows.

Here are the distinguished individuals who have successfully completed their respective programs:

**Graduating Diagnostic Residents: **
Dr. Caleb Epps
Dr. Jordan Fenner
Dr. Taylor Gunnell
Dr. Joshua Harford
Dr. Dean Homen
Dr. Elise Maggioncalda
Dr. Akansha Mohan
Dr. Jacob Nelson

**Graduating Vascular and Interventional Resident – Integrated: **
Dr. Rachel Brader

**Graduating Vascular and Interventional Resident – Independent:**
Dr. Jacob Beltz
Dr. Mark Mikhitaian

**Neuroradiology Fellows: **
Dr. Kalind Parashar
Dr. Jonathan Rindner

Dr. Parth D. Patel
Dr. William Jacob Thomas

**Abdominal Imaging Fellows: **
Dr. Elizabeth Deans
Dr. Berry Keane
Dr. Dustin Rea
Dr. Sean Wagner

**Breast Imaging Fellow: **
Dr. Alex Calvert

**Musculoskeletal Imaging Fellow: **
Dr. Matthew Morgan

The highlight of the evening was the award ceremony, where several outstanding individuals were recognized for their exceptional contributions:

Dr. Jacob Nelson received the Teaching Award, a well-deserved honor for his dedication to education, including engaging and teaching junior residents and medical students, as recognized by the faculty.

Dr. Jordan Fenner was presented with the Service Award in acknowledgment of her consistent commitment to going above and beyond her expected responsibilities, serving as a role model and department ambassador to advance the department’s missions, as noted by the faculty.

Dr. Elise Maggioncalda was the recipient of the Clinical Excellence Award, commended by the faculty for her outstanding clinical knowledge, diagnostic and interventional skills, and mastery across the field of Radiology.

The evening also featured the recognition of two exceptional faculty members:

Kristin Olinger was the proud winner of the Charles Bream Award, a distinction nominated and selected by residents in recognition of her teaching excellence, having received the most nominations.

J. Keith Smith was honored with the inaugural Faculty Mentoring and Development Award, recognizing his outstanding commitment to mentoring and developing the next generation of medical professionals.

Residents also honored the education staff with a special surprise. The chief residents shared a few words and gifts for the program coordinators Allison Speagle and Arlin Will.

Congratulations to all our graduates! Your hard work and dedication have led you to this moment, and we are immensely proud of your accomplishments. As you embark on the next phase of your career, we wish you the very best.
New Residents

RACHEL BRIGHT, MD
Medical School: Stony Brook University School of Medicine

TIMOTHY BROWN, MD
Medical School: Texas Tech University Health Sciences Center School of Medicine

CHRIS CHILDERS, MD
Medical School: Virginia Tech Carilion School of Medicine

FRANCO GODOY, MD
Medical School: Medical University of SC College of Medicine

ATIMA HURIA, MD
Medical School: The Brody School of Medicine at East Carolina University

BIANCA MARTINEZ, MD
Medical School: The University of Miami Leonard M. Miller School of Medicine

HUNTER MCLELLAN, MD
Medical School: University of South Carolina School of Medicine Columbia

JAMES MORGAN, MD
Medical School: University of Tennessee Health Science Center College of Medicine

NISHA PRADHAN, MD
Medical School: University of Colorado School of Medicine

MATT PATETTA, MD
Medical School & Intern: University of North Carolina School of Medicine

JOSH HARFORD, MD
Diagnostic Residency: University of North Carolina Chapel Hill
New Fellows

**ABDOMINAL IMAGING**

TAYLOR GUNNELL, MD  
DR Residency: University of North Carolina

ELISE MAGGIONCALDA, MD  
DR Residency: University of North Carolina

JACOB NELSON, MD  
DR Residency: University of North Carolina

MARCELO TAKAHASHI, MD  
DR Residency: Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo

**BREAST IMAGING**

CHRS BURNS, MD  
DR Residency: Memorial Health Radiology Residency in Savannah GA

HIEU DIEP, MD  
DR Residency: Advent-Health Radiology Residency in Orlando

**MUSCULOSKELETAL IMAGING**

ANDREW ISBELL, MD  
DR Residency: University of Louisville

SHWETA KATERIA, MD  
DR Residency: Yashoda Hospitals Malakpet, Hyderabad, India

**NEURORADIOLOGY**

DEAN HOMAN, MD  
DR Residency: University of North Carolina

NOMAN KHAN, MD  
DR Residency: Aga Khan University

FERNANDO RINCON, MD  
DR Residency: Nassau University Medical Center

**CARDIOTHORACIC**

ZAFIR SYED, MD  
DR Residency: Schulich School of Medicine & Dentistry

SELIMA SIALA, MD  
DR Residency: Public Hospital of Tunisia

*DR = Diagnostic Radiology*
2023 Radiology Departmental Research Symposium

On Thursday, October 12th UNC Radiology hosted its annual Research Symposium.

The highly successful event would not have been possible without the organizational efforts of Desma Jones, CCRC, Interim Administrative Director, Clinical Research; co-chairs Sarah J. Nyante, PhD, Assistant Professor; Nima Kokabi, MD, Associate Professor and Vice Chair of Basic Science Research; and Yueh Lee, MD, PhD, Professor and Vice Chair of Translational Research.

Guest Speakers
The event showcased multiple speakers, all of whom spoke in Kirkland Auditorium. The first speaker was Dr. Andrea Carnegie, PhD, from UNC School of Medicine NCTraCS. The event continued with an update on the state of Radiology Research by BRIC Director and Vice Chair of Basic Science Research Dr. Weili Lin, with additional speakers including Dr. Louise Henderson, focusing on epidemiology research, and Dr. Craig Fletcher, discussing animal research.

Keynote Speaker Dr. Rahmi Oklu took the stage next. He provided an engaging presentation entitled “Novel Tumor Interventions: Bench to Bedside.”

Oral and Poster Presentations
The event also consisted of two oral presentation sessions which included a total of thirteen oral abstract presenters, including Eric Assid, MD, PGY1; Matthew Patetta, MD, PGY1; Lindsay Lane, MPH; Katherine Li, MS2; Emery Price, Graduate Student; Khoi Huynh, PhD; Xinrui Ma, MPH, Graduate student; Alex Billingsley, PhD; Nathan Shaul, Graduate Student; Weiyan Yin, PhD; Kangfu Han, Visiting Scholar; Hao Guan, PhD; and Xiaomei Yue, Graduate Student.

The poster presentations were attended as students, residents, and faculty reviewed the displays. Forty posters lined the lobby ranging in a variety of topics from “Utilization of Uterine Artery Embolization for Adenomyosis” to “Improve Imaging Reconstruction in Novel Stationary CT Scanner.”

Award Winners
Poster Presentation Winners
Fibroblast Activation Protein Based Theranostic Probe for Managing Triple Negative Breast Cancer by Spencer V. Thompson, Undergraduate Student.

Evaluating the Effectiveness of the ACR TI-RADS Criteria at UNC by Tony L. Dyer, MD, PGY5.

Oral Presentation Winners
Microstructural Atlases of the Developing Brain by Khoi Huynh, PhD.

Utilizing Near-Infrared Light to Shield Normal Organs from Radiation in Psma-Targeted Radiotherapy by Xinrui Ma, MPH, Graduate Student.

Congratulations to all presenters and winners. Thank you to all the students, faculty and staff of the UNC Department of Radiology and UNC-CH campus for participating and contributing to the 2023 Radiology Departmental Research Symposium.

Thank You
Thanks to the planning committee members: Sheerah Coe; Nicole Keefe, MD; Zibo Li, PhD; Weili Lin, PhD; Katrina McGinty, MD; Jacob Nelson, MD; Jorge Oldan, MD; Venkateswaran Ramakrishnan, MD; Cody Schwartz, MD; Karla Spears; and Pew-Thian Yap, PhD. We would also like to thank judges Eric Muir, PhD; Steven Rowe, MD, PhD; and Eran Dayan, PhD; and abstract reviewers Sahar Ahmad, PhD; Taylor Gunnell, MD; Nicole Keefe, MD; John Monge, MD; John Tobben, MD; Jordan Taylor, MD. A very special thanks to Nicole Clayton and Anna Byars for their tremendous administrative support.
Tiny robot capable of navigating live tissue could boost fight against lung cancer, UNC researchers report

Original article appeared on WRAL TechWire on September 25, 2023

CHAPEL HILL - Lung cancer is the leading cause of cancer-related deaths in the United States. Some tumors are extremely small and hide deep within lung tissue, making it difficult for surgeons to reach them. To address this challenge, UNC –Chapel Hill and Vanderbilt University researchers have been working on an extremely bendy but sturdy robot capable of traversing lung tissue.

Their research has reached a new milestone. In a new paper, published in Science Robotics, Ron Alterovitz, PhD, in the UNC Department of Computer Science, and Jason Akulian, MD MPH, in the UNC Department of Medicine, have proven that their robot can autonomously go from “Point A” to “Point B” while avoiding important structures, such as tiny airways and blood vessels, in a living laboratory model.

“This technology allows us to reach targets we can’t otherwise reach with a standard or even robotic bronchoscope,” said Dr. Akulian, co-author on the paper and Section Chief of Interventional Pulmonology and Pulmonary Oncology in the UNC Division of Pulmonary Disease and Critical Care Medicine. “It gives you that extra few centimeters or few millimeters even, which would help immensely with pursuing small targets in the lungs.”

The development of the autonomous steerable needle robot leveraged UNC’s highly collaborative culture by blending medicine, computer science, and engineering expertise. In addition to Alterovitz and Akulian, the development effort included Robert J. Webster III at Vanderbilt University, Alan Kuntz at the University of Utah and Yueh Z. Lee, MD, PhD, at the UNC Department of Radiology. Dr. Lee and the BRIC hardware provided image guidance for the robot system. The team provided both the high resolution preprocedural imaging and image guidance during the procedure. Dr. Lee’s role was also to provide the expertise on large animal imaging and procedures, as well as the imaging physics.

The robot is made of several separate components. A mechanical control provides controlled thrust of the needle to go forward and backward and the needle design allows for steering along curved paths. The needle is made from a nickel-titanium alloy and has been laser etched to increase its flexibility, allowing it to move effortlessly through tissue.

As it moves forward, the etching on the needle allows it to steer around obstacles with ease. Other attachments, such as catheters, could be used together with the needle to perform procedures such as lung biopsies.

To drive through tissue, the needle needs to know where it
is going. The research team used CT scans of the subject's thoracic cavity and artificial intelligence to create three-dimensional models of the lung, including the airways, blood vessels, and the chosen target. Using this 3-D model and once the needle has been positioned for launch, their AI-driven software instructs it to automatically travel from “Point A” to “Point B” while avoiding important structures.

“The autonomous steerable needle we’ve developed is highly compact, but the system is packed with a suite of technologies that allow the needle to navigate autonomously in real-time,” said Alterovitz, the principal investigator on the project and senior author on the paper. “It’s akin to a self-driving car, but it navigates through lung tissue, avoiding obstacles like significant blood vessels as it travels to its destination.”

The needle can also account for respiratory motion. Unlike other organs, the lungs are constantly expanding and contracting in the chest cavity. This can make targeting especially difficult in a living, breathing subject. According to Akulian, it’s like shooting at a moving target.

The researchers tested their robot while the laboratory model performed intermittent breath holding. Every time the subject’s breath is held, the robot is programmed to move forward.

“There remain some nuances in terms of the robot’s ability to acquire targets and then actually get to them effectively,” said Akulian, who is also a member of the UNC Lineberger Comprehensive Cancer Center, “and while there’s still a lot of work to be done, I’m very excited about continuing to push the boundaries of what we can do for patients with the world-class experts that are here.”

“We plan to continue creating new autonomous medical robots that combine the strengths of robotics and AI to improve medical outcomes for patients facing a variety of health challenges while providing guarantees on patient safety,” added Alterovitz.

Congratulations to Dr. Lee and the entire team on reaching such an important and exciting milestone.
Publications | January - December 2023

ABDOMINAL IMAGING

Society of Abdominal Radiology Survey of Practice Patterns in using LI-RADS Treatment Response Criteria in the Evaluation of Post-treatment HCC.
Kamapath R, Mendiratta-Lala M, Jacoub J, Burke LMB, Abdominal Radiology. 2023 Sep 2;1-7

Use of cine images in standard ultrasound imaging: a survey of sonologists.
Thomas K, Burke LMB, McGettigan M. Abdominal Radiology. 2023 Aug. PMID 37552240

Applications of artificial intelligence in magnetic resonance imaging of primary pediatric cancers: a scoping review and CLAIM score assessment.

Thermal Ablation Compared to Stereotactic Body Radiation Therapy for Hepatocellular Carcinoma: A Multi-Center Retrospective Comparative Study.

Updates on LI-RADS Treatment Response Criteria for Hepatocellular Carcinoma: Focusing on MRI.

Comparing Survival Outcomes of Patients with LI-RADS-M Hepatocellular Carcinomas and Intrahepatic Cholangiocarcinomas.

Mimics of cancer in pregnancy.


BREAST IMAGING

Analysis of Specimen Mammography with Artificial Intelligence to Predict Margin Status.

Breast Cancer Screening Recommendations for Transgender and Gender Diverse Patients: A Knowledge and Familiarity Assessment of Primary Care Practitioners.

Breast exam use during the protracted COVID-19 pandemic, by age, race, and geography,

The Role of Implementation Science in Harnessing the Potential of Automated Outcomes Feedback for Radiologists.

Pure Mucinous Carcinoma of the Breast: Radiologic-Pathologic Correlation
CARDIOThorACIC IMAGING

Clinical Characteristics of SARS-CoV-2 Acute Pulmonary Embolism and Adjusted D-dimer for Emergency Department Patients
Husain, Iltifat; O’Neill, James C.; Schoeneck, Jacob H.; Soltany, K. Alexander; Clark, Hollins; Rice, Erika Weidman; Gross, Alex; Redding, Jonathan; Cline, David M. Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health. Epub October 25, 2023. PMID: 38165185

MOLECULAR IMAGING AND THERAPEUTICS

One Hundred Years of the Tracer Principle.

AI for Humanity: Perspectives from Outside of Medicine.


A Practical Guide to the Pearls and Pitfalls of PSMA PET Imaging.

Cinematic rendering in the evaluation of complex vascular injury of the lower extremities: how we do it.

How Tech Can Help Us Improve Health Care While Still Putting Patients First.

Zember WF, Fishman EK, Chu LC, Rowe SP. J Am Coll Radiol.


The Current State of Artificial Intelligence and Its Intersection with Radiology.

Three-dimensional CT cinematic rendering of adrenal masses: Role in tumor analysis and management.


Molecular Imaging of Infections: Emerging Techniques for Pathogen-Specific Diagnosis and Guided Therapy.

Imaging Brain Injury in Former National Football League Players.

The AI “Grid”: A French national initiative as a product of radiology and industry collaboration.

A Review of the Psychology That Underpins the Creation of a Diversity, Equity, and Inclusion Committee.

Authors’ Reply.

Building Bridges: Future-Proofing Established Industries and Building Relationships with the Black Community.

Addressing Mental Health in Professional Management.

Uterine uptake of estrogen and progestogen-based radiotracers in rhesus macaques with endometriosis.

Finding Common Ground: The Intersection of Science, Creativity, and the Human Connection.

Evaluation of extensive inflammatory conditions of the bowel using three-dimensional CT cinematic rendering: focus on inflammatory bowel disease.

Prostate-Specific Membrane Antigen-Ligand Therapy: What the Radiologist Needs to Know.

Detection of Biochemically Recurrent Prostate Cancer with [18F]DCFPyL PET/CT: An Updated Systematic Review and Meta-Analysis with a Focus on Correlations with Serum Prostate-Specific Antigen Parameters.

Standardized PSMA-PET Imaging of Advanced Prostate Cancer.

Vascular Expression of Prostate-specific Membrane Antigen (PSMA) in MiTF Family Translocation Renal Cell Carcinoma and Related Neoplasms.

Preclinical Development in Radiopharmaceutical Therapy for Prostate Cancer.

[18F]FNDP PET neuroimaging test-retest repeatability and whole-body dosimetry in humans.

Prostate-specific Membrane Antigen Reporting and Data System Version 2.0.

An Approach to Leadership in Academic Medicine: Lessons Learned From the Experience of Dr. John L. Cameron.

Response Evaluation Criteria in PSMA PET/CT (RECIP 1.0) in Metastatic Castration-resistant Prostate Cancer.

**MUSCULOSKELETAL IMAGING**


**NEURORADIOLOGY**


NEURORADIOLOGY CONTINUED

Troublemaking Lesions: Spinal Tumor Mimics.

Editorial Comment: Estimation of venous sinus pressure drop in patients with idiopathic intracranial hypertension using 4D-flow MRI.

Cardiac Dysfunction in Neonatal HIE Is Associated with Increased Mortality and Brain Injury by MRI.


Standardization of radiograph readings during bowel management week.

Half of US Radiologists Use and Recommend Peer Learning, An ACR Member Survey.

VASCULAR AND INTERVENTIONAL RADIOLOGY

Safety and Efficacy of Concurrent Atezolizumab/Bevacizumab or Nivolumab Combination Therapy with Yttrium-90 Radioembolization of Advanced Unresectable Hepatocellular Carcinoma.

ACR Appropriateness Criteria® Dialysis Fistula Malfunction.

2023 Jan 24. PMID: 36692599.

Oncologic Emergencies in the Head and Neck.

A RAPID Checklist: Understanding Pitfalls and Artifacts in Stroke.


ANCA vasculitis expands the spectrum of autoimmune manifestations of activated PI3 kinase syndrome.

Septum Pellucidum: Spectrum of Normal and Abnormal Imaging Findings

RADIOLOGICAL SCIENCES RESEARCH

Racial and ethnic variation in diagnostic mammography performance among women reporting a breast lump.

Using Deep Learning to Predict Treatment Response in Patients with Hepatocellular Carcinoma Treated with Y90 Radiation Segmentectomy.


Thickness and Surface Area in Rhesus Macaques during the First Three Years

Fine-grained Functional Parcellation Maps of the Infant Cerebral Cortex

Mapping Genetic Topography of Cortical Thickness and Surface Area in Neonatal Brains.

Improving motion robustness of 3D MR fingerprinting with a fat navigator.

Four-dimensional mapping of dynamic longitudinal brain subcortical development and early learning functions in infants.

Digital Breast Tomosynthesis versus Digital Mammography Screening Performance on Successive Screening Rounds from the Breast Cancer Surveillance Consortium.


Development of [18F]F-5-OMe-Tryptophans through Photoredox Radiofluorination: A New Method to Access..
Tryptophan-Based PET Agents.


Accurate module induced brain network construction for mild cognitive impairment identification with functional MRI.


Real-time prediction of organ failures in patients with acute pancreatitis using longitudinal ir-regular data.


An attention-based context-informed deep framework for infant brain subcortical segmentation.


Deep learning in cortical surface-based neuroimage analysis: a systematic review.


Fusing Multiview Functional Brain Networks by Joint Embedding for Brain Disease Identification.


Genetic Influences on the Developing Young Brain and Risk for Neuropsychiatric Disorders.


Performance of statistical and machine learning risk prediction models for surveillance bene-fits and failures in breast cancer survivors.


AgeAnno: a knowledgebase of single-cell annotation of aging in human.


SPASCER: spatial transcriptomics annotation at single-cell resolution.


DomainATM: Domain adaptation toolbox for medical data analysis.


An End-To-End Infant Brain Parcellation pipeline.


Automated CT Pancreas Segmentation for Acute Pancreatitis Patients by combining a Novel Object Detection Approach and U-Net.


3D-MASNet: 3D mixed-scale asymmetric convolutional segmentation network for 6-month-old infant brain MR images.


Evaluation of sulfone-labeled amino acid derivatives as potential PET agents for cancer imaging.


Multifaceted atlases of the human brain in its infancy.


Harmonization of Multi-site Cortical Data Across the Human Lifespan.


Unsupervised cross-domain functional MRI adaptation for automated major depressive disorder identification.


The Art, Science, and Secrets of Scanning Young Children.

On Thursday, July 27th, we concluded the 2023 Mauricio Castillo, MD, Scholars Program with an Evening of Scholarship. UNC Medical Alumni Association sponsored the event at the Carolina Club, a celebration of the conclusion of the 8-week summer experiences of the 11 Castillo Scholars. At the event the scholars successfully showcased their summer research projects.

The Department of Radiology would like to highlight our Radiology Castillo Scholars, Katherine Li, Diagnostic Radiology, and Estefania Gonzales, Interventional Radiology.

Katherine presented her project, “Developing an Automated Pipeline for CT-Derived Body Composition Analysis as a Predictor for Toxicity and Survival in Cancer Patients.” Dr. Yueh Lee was Katherine’s research mentor on this project.

Estefania presented her project “Pelvic Venous Disorders (PeVD): A Preliminary Look into Imaging Findings and Allostatic Load in Patients with and without Symptoms.” Dr. Gloria Salazar was Estefania’s research mentor on this project.

Best of Luck to Katherine, Estefania, and the rest of the 2023 Castillo Scholars in their 2nd year of Medical School.

If you are interested in donating to our Castillo Scholars Fund, scan the qr code.
Welcome New Faculty

JENNIFER SCHROEDER, MD
ASSISTANT PROFESSOR, MOLECULAR IMAGING & THERAPEUTICS

Dr. Schroeder received her bachelor’s from Appalachian State University in 2010 before earning her Medical Degree from the Medical University of South Carolina in 2014. She completed her intern year at the Medical University of South Carolina in Surgery before moving on to a Radiology Residency at Wake Forest School of Medicine. She continued her education with a Nuclear Radiology fellowship at the University of Pennsylvania which boasts one of the largest nuclear medicine departments in the country and is one of the research powerhouses in the field. Dr. Schroeder is excited about the future of nuclear medicine. She believes this is the age of molecular imaging as demonstrated by the identification of molecular markers for disease states with several new molecular directed radiotherapies approved by the FDA in the last 5 years alone.

NIMA KOKABI, MD, FRCPC
ASSOCIATE PROFESSOR, VASCULAR AND INTERVENTIONAL RADIOLOGY AND VICE CHAIR OF CLINICAL RESEARCH

Dr. Kokabi was born in Iran and grew up in Canada. He graduated with honors from the University of Sydney Medical School in 2011. From there, he completed his internship at Metro West Medical Center, Harvard Medical School before moving on to his Diagnostic Residency at Emory University School of Medicine. He completed his Vascular Interventional Radiology Fellowship at Yale University School of Medicine in 2017. His main area of research is Interventional Oncology, delivering minimally invasive cancer treatments for patients with many different cancers, including GI, genitourinary, and bone cancer. He has conducted several clinical trials. Many of which are supported by industry partners.

JOHN NAZARIAN, MD
ASSOCIATE PROFESSOR, EMERGENCY RADIOLOGY

Dr. John Nazarian earned undergraduate and medical degrees from Northwestern University. He completed his diagnostic radiology residency at University Hospitals Case Medical Center in Cleveland, Ohio. He then completed his neuroradiology fellowship at the Mallinckrodt Institute of Radiology at Washington University in St. Louis, Missouri. Before coming to UNC he worked in private practice in Raleigh. He also worked part-time for the Department of Veterans Affairs and serves as an expert reviewer for the North Carolina Medical Board. Dr. Nazarian is interested in the care of trauma patients, healthcare economics, and quality and safety.

DUSTIN REA, MD
ASSISTANT PROFESSOR, ABDOMINAL IMAGING

Dr. Dustin Rea earned his undergraduate degree from The University of Virginia, Charlottesville. He then completed his medical degree at The University of North Carolina and internship year at New Hanover Regional Medical Center, Wilmington, NC. He returned to UNC for his diagnostic residency and Abdominal Imaging Fellowship training. Dr. Rea chose the path of a physician because he was blessed with wonderful mentors. He always loved science and found the way the body works interesting. Being a physician is the ultimate way to use that knowledge and education to help others. His expertise lies in Abdominal Imaging – interpreting CT, MR, US, fluoroscopy of the abdomen and pelvis.
Dr. Fenner completed his Bachelor of Science and Master of Science in Mechanical Engineering from North Carolina State University. He received his medical degree at Brody School of Medicine at East Carolina University. He completed his diagnostic radiology residency at George Washington University and his Cardiothoracic Imaging Fellowship at Duke University. His research focuses on integrating AI with coronary CTA and interpretation, helping to increase the speed of the interpreter to increase access to exams. He has also researched lymphoproliferative disorders and their manifestation in the lungs, specifically associated with connective tissue disease and autoimmune diseases.

Dr. Rowe received his medical degree and Ph.D. in chemistry from the University of Michigan. He completed residencies in radiology and nuclear medicine at Johns Hopkins University School of Medicine. Most recently, he was an Associate Professor of Radiology and Radiological Science at Johns Hopkins University Maryland. He clinically focuses on nuclear medicine, and his research work has been centered around applications of novel molecular imaging agents for positron emission tomography and single-photon emission computed tomography. He is interested in the use of prostate-specific membrane antigen-targeted PET agents in prostate cancer and renal cell carcinoma, and the clinical utilization of 99mTc-sestamibi SPECT for non-invasive characterization of renal masses.

Dr. DeFreitas was born in Brazil and moved to Italy when she was three. When she was eleven, her father, a mechanical engineer, moved the family to a Detroit, Michigan suburb to work for the automotive industry. Dr. DeFreitas completed her Bachelor of Science in Biomedical Engineering and her medical degree from the University of Michigan. She concluded her training at Duke University through her diagnostic radiology residency, a six-month abdominal mini-fellowship, and a neuroradiology fellowship. Dr. DeFreitas is passionate about serving the people of North Carolina, a state she calls home. And focusing on educating the next generation of physicians is essential to her.
Welcome New Faculty

ALEX VILLALOBOS, MD
ASSISTANT PROFESSOR, INTERVENTIONAL RADIOLOGY

Dr. Alex Villalobos has recently joined the UNC Department of Radiology from Emory University, where he completed his Diagnostic and Interventional Radiology training. A native of South America, Dr. Villalobos started his journey in the USA at a rural Texas town. From there, he went on to pursue studies and research in physics and biomedical engineering at the University of Texas at Arlington – where he developed the belief that the future of medicine will be heavily influenced by imaging technologies. He also came to understand the importance of having a connection between those who develop technologies/treatments and those who practice medicine. He received his medical degree from the University of Texas at Arlington prior to completing his internship at the Medical College of Wisconsin Affiliated Hospitals.

LI-MING HSU, PhD
ASSOCIATE RESEARCH PROFESSOR

Li-Ming Hsu completed his bachelor’s degree in Medical Imaging and Radiology Science from Chang Gung University. He received his Master’s and PhD from the National Yang Ming University (now known as National Yang Ming Chiao Tung University). He was most recently a post-doctoral fellow at UNC. Li-Ming’s expertise lies in neuroimaging, specifically functional MRI, and understanding the complex networks of the brain. He has also invested a significant amount of time in studying addiction models. The brain’s interconnecting networks and their role in behavior, disease, and addiction remain somewhat uncharted. The challenge of demystifying these complex structures and pathways using cutting-edge imaging technology was an irresistible pursuit.

“OUR FACULTY SERVE AS VITAL PHYSICIANS AND EDUCATORS, MERGING CLINICAL EXPERTISE WITH TEACHING PROWESS TO SHAPE FUTURE RADIOLOGISTS, ADVANCE MEDICAL KNOWLEDGE, AND IMPROVE PATIENT CARE. WE ARE EXCITED TO WELCOME OUR NEW FACULTY TO OUR TEAM AND LOOK FORWARD TO SEEING THE POSITIVE IMPACT THEY WILL HAVE ON OUR PROGRAM.”

Maureen P. Kohi, MD, FSIR, FCIRSE, FAHA
Ernest H. Wood Distinguished Professor and Chair
Welcome New Staff

ANNA BYERS
Administrative Support Associate

email: anna_byars@med.unc.edu
(919) 966-4292
role: administrative support for CT and Neuroradiology divisions.

ALEXIS MILLER
HR Consultant

email: Alexis_Miller@med.unc.edu
(919) 962-6556
role: human resource support for the Department.

ASHLEY PAUL
Administrative Support Associate

email: ashley_paul@med.unc.edu
(919) 445-6146
role: administrative support for Abdominal and Emergency divisions and Global Health.

ALEXANDRA ROMFOE
Research Specialist

email: alex_romfoe@med.unc.edu
(919) 445-0218
role: research support for the Epidemiology Research team.

KENDALL SATCOWITZ
Research Technician

email: kensat@email.unc.edu
(984) 974-9362
role: research support for Dr. Steve Rowe.

Promotions

JOANNA NEWMAN
Program Coordinator

DESMA JONES
Interim Administrative Director for Clinical Research

ADRIANA DELGADO
Associate Clinical Research Coordinator

HANNAH MIGNOSA-MARTIN
Clinical Research Coordinator

LOUIS MURPHY
Associate Clinical Research Coordinator
Community Engagement
Highlights and Honors

ERSAN ALTUN, MD
Associate Professor, Abdominal Imaging
Appointed to Director of MRI.

LAUREN BURKE, MD
Professor, Abdominal Imaging
Promoted to Clinical Professor of Radiology. Accepted into the Leading Transformation in Academic Medicine (LTAM) program.

MAURICIO CASTILLO, MD
Matthew A. Mauro, M.D.
Distinguished Professor, Neuroradiology
Awarded Academy of Educators Lifetime Achievement Award in Medical Education.

NICOLE CLAYTON
Administrative Specialist
Vicki Holland Award Winner.

ERAN DAYAN, PhD
Associate Professor, Radiological Sciences
Received the Academy for Radiology & Biomedical Imaging Research 2023 Distinguished Investigator Award.

LANE DONNELLY, MD
Professor, Pediatric Imaging
Received the Presidential Award for the Society of Pediatric Radiology - 2023 Annual meeting and Caffey Award for Best Non-Clinical Paper at the 2023 SPR.

LOURENS DU PISANIE, JR., MD
PGY 5 Integrated Vascular and Interventional Radiology Resident
Awarded the Doximity Travel Scholarship for his upcoming global health elective in Lilongwe, Malawi.

ANTHONY DYER, MD
PGY4 Diagnostic Radiology Resident
Won the Society of Radiologists in Ultrasound Members in Training award for research.
JOSEPHINE FINAZZO, MD
Associate Professor, Abdominal Imaging
Accepted position as the Abdominal Imaging Fellowship Director in 2023.

GIRISH GANDIKO, MD
Associate Professor, Musculoskeletal Imaging
Interim Chief of the Musculoskeletal Division.

CAROLINA GUIMARES, MD
Chief, Pediatric Imaging
Selected for the LEAD (Leading Empowering And Disrupting) program for women in leadership sponsored by GE and SCARD. Selected as the Anne Osborne ASNR International Outreached Professorship in Tanzania.

NICOLE KEEFE, MD
Assistant Professor, Vascular and Interventional Radiology
Accepted into the Leadership in Academic Medicine Program (LAMP).

CHERIE KUZMIAK, MD
Professor, Breast Imaging
Invited to hold the position of Breast Imaging Associate Section Chief for ACR Institute for Radiologic Pathology.

MAUREEN KOHI, MD
Ernest H. Wood Distinguished Professor and Chair
Elected as the Chair of the SIR Foundation. Awarded the Tom Dorsey Gold Medal by the Western Angiographic and Interventional Society (WAIS).

LYNN FORDHAM, MD
Professor, Pediatric Imaging
Elected to serve on the Committee on Appointments, Promotions and Tenure for the UNC School of Medicine.

JAMES GRUDEN, MD
Professor, Cardiothoracic Imaging
Promoted to Vice Chair of Quality and Safety.

AMIR KHANDANI, MD
Professor, Molecular Imaging & Therapeutics
Completed a 2-year term as the President of the American Board of Science in Nuclear Medicine (ABSNM).
JOSEPH J.T. LEE, MD  
Professor & Chair Emeritus
Awarded the Gold Medal from RSNA at its annual meeting on Nov 27, 2023 in Chicago.

MATT MAURO, MD  
Professor & Chair Emeritus
President of RSNA.

PRIYA MODY, MD  
Assistant Professor, Vascular and Interventional Radiology
Accepted into the Leadership in Academic Medicine Program (LAMP).

DANIEL NISSMAN, MD  
Professor, Musculoskeletal Imaging
Promoted to Clinical Professor. Awarded 2022 Radiology: Artificial Intelligence Editor’s Recognition Award with Special Distinction.

JOHN MONGE, MD  
Assistant Professor, Breast Imaging
Selected for the 2023-2024 Passing the Torch: Fostering Medical Humanism through Faculty Role Models program.

KRISTEN OLINGER, MD  
Assistant Professor, Abdominal Imaging
Received the Charles A. Bream Teaching Award from UNC Department of Radiology.

YUEH LEE, MD, PhD  
Professor, Neuroradiology
Promoted to Professor with tenure. Inducted as a Fellow of the American College of Radiology. Received the Academy for Radiology & Biomedical Imaging Research 2023 Distinguished Investigator Award.

DANIEL NISSMAN, MD  
Professor, Neuroradiology
Promoted to Professor with tenure. Inducted as a Fellow of the American College of Radiology. Received the Academy for Radiology & Biomedical Imaging Research 2023 Distinguished Investigator Award.

KRISTEN OLINGER, MD  
Assistant Professor, Abdominal Imaging
Received the Charles A. Bream Teaching Award from UNC Department of Radiology.

DAVID SAILER, MD  
PGY2 Diagnostic Radiology Resident
Academy of Educators Induction & Teaching As a Resident: Highlighting the Evidence and Enthusiasm of Learning (TAR HEEL).
BENJAMIN SMITH, MD
Assistant Professor, Radiological Sciences
Academy of Educators New Member Induction.

KERRY THOMAS, MD
Associate Professor, Abdominal Imaging
Selected to serve as the Chief GME Officer | ACGME Designated Institutional Official UNC Hospitals & Senior Associate Dean for Graduate Medical Education UNC SOM.

ZHANHONG WU, PhD
Associate Professor, Radiological Sciences
Promoted to Associate Professor.

DOROTHY SIPPO, MD
Associate Professor, Breast Imaging and Vice Chair of Informatics
Inducted as a Fellow of the Society of Breast Imaging (FSBI).

HENRY STIEPEL, MD
PGY3 Diagnostic Radiology Resident
Chosen as UNC’s Radiology Resident Scholar by the North Carolina Radiological Society to attended the 100th annual ACR meeting.

LI WANG, PhD
Associate Professor, Radiological Sciences
Promoted to Associate Professor with Tenure.

CODY SCHWARTZ, MD
Associate Professor, Musculoskeletal Imaging
Promoted to Associate Clinical Professor.

CARLOS ZAMORA, MD
Chief and Associate Professor, Neuroradiology
Selected for the 2023 AUR Radiology Management Program at the Association of University Radiologists, Austin, TX.
Awards & Recognition

LOUISE HENDERSON, PhD
Professor, Radiological Sciences

Awarded a two-year grant for “Targeted Motor Learning to Improve Gait for Individuals with Parkinson’s Disease” in the amount of $404,276.

HONG YUAN, PhD
Professor, Radiological Sciences

Awarded a five-year, $1.76 million NIH/NIC grant, “Applying causal inference methods to improve estimation of the real-world benefits and harms of lung cancer screening” (MPI). Also received a five-year, NIH/NIC grant, “Evaluating Lung Cancer Screening Patterns and Outcomes in Diverse Populations and Settings” (PI).

GUOSHI LI, PhD
Research Instructor, Radiological Sciences

Awarded a two-year grant from the National Institute of Aging (NIH/NIA) “Accurate and Individualized Prediction of Excitation-Inhibition Imbalance in Alzheimer’s Disease using Data-driven Neural Model” in the amount of $427,625.

ERAN DAYAN, PhD
Associate Professor, Radiological Sciences

Awarded the NIH S10 one-year grant, “Preclinical Vevo-F2 ultrasound imaging system for Small Animal Imaging core facility in the amount of $490,700. Also received the UNC LCCC Developmental Award for one-year, “Developing FAP targeted theranostic agents for brain metastases.”

JAMES GRUDEN, MD
Associate Professor, Cardiothoracic Imaging

Co-investigator with Louise Henderson on a five-year, NIH/NIC grant, “Evaluating Lung Cancer Screening Patterns and Outcomes in Diverse Populations and Settings.”

CHERIE KUZMIAK, MD
Professor, Breast Imaging

Co-investigator on an NIH four-year $2.5 million grant, “VisR Ultrasound for Noninvasively Interrogating Stromal Collagen Organization in Women as a Breast Cancer Biomarker.” To evaluate stromal collagen organization as a diagnostic breast cancer biomarker using Viscoelastic Response (VisR) ultrasound.
Top to bottom, left to right: Matthew A. Mauro, MD, President of Radiological Society of North America giving the Presidential Speech. Dr. Mauro posing with Joseph K.T. Lee, former Chair of UNC Radiology and the RSNA Gold Medalist. Dr. Lee giving his award speech. Alan H. Matsumoto, former UNC Resident introducing Dr. Mauro. Dr. Lee before he enters the RSNA Award and Honorees Luncheon.
It was a an incredible year for UNC Radiology at RSNA 2023. During the annual scientific meeting which took place from November 26th to the 30th in McCormick Place, Chicago, the Department had major triumphs.

RSNA 2023

The Radiological Society of North America (RSNA) is a non-profit organization representing professionals spanning the full breadth of radiologic subspecialties in more than 150 countries worldwide. The Annual Meeting is an opportunity to explore and embrace the new perspectives and technologies that are strengthening the future of the field.

On Sunday, November 26, 2023, Matthew A. Mauro, MD, FACR, FSIR, FAHA, gave the President’s Address and commenced the 109th Scientific Assembly and Annual Meeting. Dr. Mauro is the past Chair of UNC Radiology and the 2022-2023 President of the Radiological Society of North America (RSNA) Board of Directors.

“The healthcare landscape is rapidly changing as we enter our post-pandemic environment,” Dr. Mauro said. “In addition to technical and scientific advances, we can anticipate changes to our healthcare delivery systems, labor management, and patient expectations. The RSNA will maintain our position as the great convener for all those who interact with our members to advance the fields of diagnostic radiology, interventional radiology, radiation oncology, and medical physics. I am honored to have the privilege of serving as president of the RSNA.”

Alan H. Matsumoto, MD, former UNC Resident and current Chair of Radiology at UVA, introduced Dr. Mauro.

Joseph K.T. Lee, former Professor and Chair of Radiology from 1991 to 2006, received the RSNA Gold Medal. On Monday, November 27th, the medalists were presented their awards during a luncheon ceremony that included a lovely speech by Dr. Lee. Hailed throughout the world as a pioneer in MR imaging and computed body tomography, Joseph K. T. Lee, MD, has steered historic advances in the evolution of quantitative abdominal imaging.

“Joe is a remarkable individual, and his contributions to the field of abdominal imaging are legendary,” said Matthew A. Mauro, MD. “He has served as a mentor, boss, colleague, and friend for over four decades as he pioneered the development of abdominal CT and MRI and transformed the Department of Radiology at UNC.”

What a tremendous honor for our Department! We are so proud of Drs. Mauro and Lee and their contributions to Radiology and the RSNA.

Numerous UNC Radiology faculty were showcased, delivering invited talks and moderating various sessions. In addition, we are so proud of our trainees who presented at multiple venues throughout the meeting.

RECEPTION

On Monday, November 27, 2023, UNC Radiology hosted its second annual RSNA Alumni Reception in Chicago! Alums from all over the country joined current faculty and trainees for celebration and reconnection.

At the event, UNC Radiology hosted over 40 alumni, faculty, and trainees at Swift & Son’s. It was a meaningful time seeing familiar faces, building new relationships, and celebrating UNC Radiology’s strong presence at RSNA 2023.

The Department of Radiology would like to thank everyone who joined the UNC Radiology RSNA Alumni Reception. Our alumni are a cornerstone of UNC Radiology, representing our past, present, and future. In 2024, we will continue to fortify this network and hope for more to join our RSNA Alumni Reception.
Vision
To be the premier Department of Radiology in the Southeast.

Mission
Our mission is to deliver compassionate clinical care, advance healthcare through innovative research, and train the future generation of radiologists and scientists.

Wishing you a RAD holiday season.