From the Desk of
Francis Williams

DEPARTMENT OF RADIOLOGY Quarterly Newsletter

December 2020

Index

Dr. Jorge Soto - Department Chair of Radiology

The holiday season is the time when we usually reflect on the events of the year that comes to a close and prepare, with optimism, for the year that lies ahead. In some ways (perhaps just a few), the holidays in 2020 feel like any other year, but in many more ways they do not. In December 2019 we started to hear about a virus that was spreading in a seemingly distant part of the world, but we knew that no distance is too far and that it was only a matter of time before all would be affected. Fast forward one year, and we are now in the midst of the long forecasted second surge. But we are also starting to see the glimpse of some light at the end of the long tunnel, and this hint of optimism is appropriate for the holidays.

Our department closes 2020 with much to be proud of. The resilience of our residents, staff and faculty has been tested all year long and we responded admirably. We are particularly thankful for the courage and commitment of the many members of our department who were, and continue to be, directly involved in the care of patients affected by the deadly virus. At the same time that we battled the pandemic, we made significant progress in many areas such that we are well positioned to face the challenges that lie ahead. Some of these enhancements are highlighted in this Newsletter. In 2021, we will improve and modernize our systems and technology further, we will graduate a remarkable group of senior residents and welcome new faculty and the residency class of 2025. We also hope to bring back many of our traditional department events that we missed this year.

As we gather in some way with our families to close the 2020 chapter, grateful that we are still together, I urge you to take a moment to remember the many lives that we lost this year, including close relatives and friends. Many of them passed without the comfort of being surrounded by their family.

I wish all a healthy, peaceful, and bright 2021. Thank you for all you do for our institution and, more importantly, for our patients.

BOSTON UNIVERSITY

BOSTON MEDICAL CENTER

Kudos

The Radiology Department at Boston University Medical Center has once again significantly contributed to the advancement of radiology both locally, regionally and nationally. Please congratulate the following individuals for their accomplishments:

Dr. Leah Schafer

Dr. Leah Schafer was appointed Co-Director of the Massachusetts Quality and Safety Council. This volunteer organization meets monthly and organizes state-wide efforts to address issues related to quality and safety in a variety of practice settings.

Dr. Asim Mian

Dr. Casey Bishop

Dr. Priscilla Slanetz

Drs. Asim Mian, Casey Bishop and Priscilla J. Slanetz collaborated with radiologists from the University of Massachusetts, Vanderbilt University, Staten Island Hospital/Northwell Health, and Mt. Sinai Medical Center on the development of a standardized health-care disparities curriculum for radiology residents in the United States. This curriculum will be disseminated to programs in early winter 2021.

Dr. Sara Meibom

Dr. Gustavo Mercier

Drs. Sara Meibom and Gustavo Mercier were both recently promoted to Clinical Associate Professor at Boston University School of Medicine.

Dr. Rachel Powsner was recently promoted to Clinical Professor of Radiology at Boston University School of Medicine.

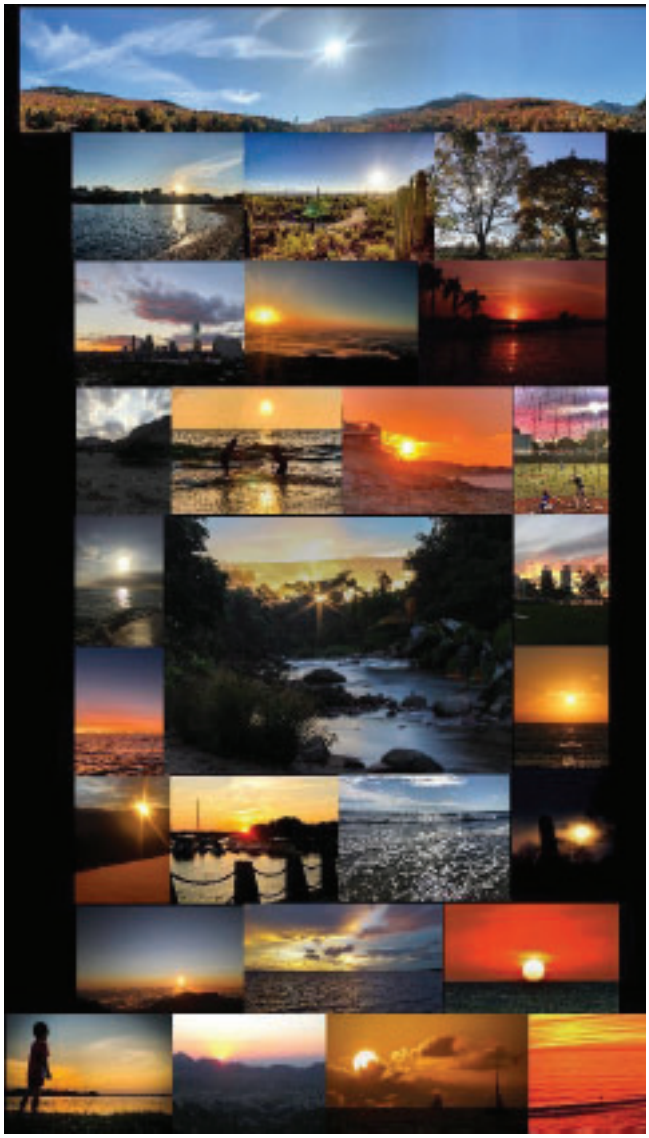
Dr. Anna Rives

Dr. Priscilla Slanetz

Drs. Anna Rives and Priscilla J. Slanetz contributed didactic presentations to the breast imaging section of the AUR Core Curriculum Lecture Series. This curriculum was created by an AUR Strategic Alignment grant awarded to Dr. Nancy Feffernan at New York University who collaborated with several other radiologists across the country to coordinate this feat, including our own Dr. Harprit Bedi. The curriculum can be found at: https://www.aur.org/resources/core-curriculum.

Photo Contest

November 2020 - Sun Photo Contest
Winner: Jude Ierardi



December 2020 - Fall Photo Contest
Winner: LInda Parker

The Rookies of Academic Radiology

Minh-Thuy Nguyen, MS4, and Ashley Davidoff are creating a student-led enrichment opportunity called the RoaR Club.

ISSUE 01 OCTOBER 2020

The RoaR Club Newsletter

The Rookies of Academic Radiology

In This Issue

Club Introductions
Description of goals of the club and its leaderships.

Epiploic Appenditis
Case and CT search pattern

In the Bowels of the Body I Reside and Work

The RoaR Club
Contact Minh-Thuy Nguyen:
mtnguyen@bu.edu
Twitter: @MINHTHUYNGUYEN
with questions and feedback!
Visit us at:
https://bmcradiology.thecommonsvein.net/radiology-rookies/

Interior Design + Health Care

Kevin Dao, Boston University School of Medicine (BUSM) Class of 2022, shared his thoughts and heart behind the interior design of his home. He incorporated unique art pieces on his walls and surrounded himself with colorful furniture mixed with elegant simplicity. Motivated by the themes of nature and the green outdoors, he strategically organized his plants based on sunlight exposure from north vs east vs south-facing windows.

He relates his interest to healthcare interior design and the ways clinics are changing their interiors to make patients feel more comfortable. It sparked a conversation with Dr. Bedi involving a potential project to increase patient comfort during grieving using digitally-controllable designs.

01 ROAR CLUB| ISSUE 01

This club will provide an environment for medical students at all levels, to interact with each other and with radiology residents. The mission is to promote radiology interests, as well as to promote the personal outside interests of the students. Student to student guidance and resident to student guidance will be moderated by the faculty advisor.

Radiology programs will for exam-ple include; case discussions, “must know” topics in radiology, and how to prepare for a career in radiology. It will also provide a think tank to in-novate educational methods to teach radiology to medical students.

The social aspect may take the form of a zoom social gathering with discussion of personal interests, hobbies, poetry readings, musical evening or even a night of philosophical discussion.

We believe this program is a uni-que innovation, and hope it will provide a forum for education, enrichment, and personal well being

If you are interested to join this club, please email mtnguyen@bu.edu or ashley. davidoff@bmc.org.

Ashley Davidoff

Clinical Operations

Epic Radiant

Background –

Radiant is Epic's Radiology specific module (similar to Cupid for Cardiology, Beaker for Lab, OpTime for Surgery) that will be replacing GE Centricity across our department. This is a massive IT lift, that will provide many great operational and clinical workflow enhancements to all areas of our department. Also, it means that we will finally be "on Epic" as the rest of the hospital is and we will no longer be burdened by RIS's dated workflows and reporting.

Workgroups: Clinical, Operational, IT and Senior Leadership stakeholders have been parti-cipating in Workgroups, based on a segment of related topics or work areas. Examples include Diagnostic Imaging, Breast Imaging, Incidental Findings and Interventional Radiology. These workgroups meet to provide all of the BMC specific components that need to be reflected in our version of Radiant, or incorporated "into the build" as the IT lingo goes. Technologist workflows, Ordering Provider interaction, how we charge and bill for our services, and how our Radiologists interact with Radiant while protocoling and reading are all examples of topics tackled in a workgroup.

(Shameless plug: If you would like to get involved in a workgroup, please let me know!)

Training: With over 250 end users, we recognize that training is going to be a major component of this implementation. Between now and May an extensive training program, featuring virtual learning and hands on Radiant use will be developed by the eMerge team with our department's input. Currently we are working on Clinical Review Board meetings, which are used to make sure training curriculum matches our own day to day workflows and future clinical use of Radiant.

IT Hardware Review:
This new system comes with different required hardware. In progress is a department wide review of all existing printers, computers, workstations, network coverage hubs etc. to make sure they will all seamlessly connect at Go-Live. We are also reviewing new or enhanced workflows, and making sure we have the necessary hardware to make them successful. Examples of this include patient facing tablets for patient consents and additional WOWs for patient and provider use.

Go Live Readiness Assessment Planning: As May draws nearer, large Go Live Readiness Assess-ment (GLRA) sessions will be held at 120, 90, 60 and 30 days out. We are currently planning these large group meetings to make sure each session has the correct agendas, checklists, representation from external departments, internal stakeholders, and Epic leadership. These meetings give everyone involved, from each portion of the project to a time to pause, level set, and make sure everyone is on the same page and meeting project plan milestones in order to ensure success on the big day.

In summary, this is a big deal for our department - an event of the decade! It has been and will con-tinue to be a lot of work for all involved but the end result will be more than worth the effort. Ever-yone should be 10/10 excited to soon be on a new, modern, best of breed, integrated platform that will seamlessly connect with the health system's EHR. May is just around the corner!

Clinical Services

Breast Imaging

BMC's Belkin Breast Imaging Center offers state-of-the-art breast imaging services, designated as a Breast Imaging Center of Excellence by the American College of Radiology. Our center is open for patients six days a week, 12 hours a day, performing more than 700 exams/week ranging from screening mammography to diagnostic exams (mammography, digital breast to-mosynthesis, and ultrasound), and interventions (US and stereotactic core biopsy, US cyst aspiration/ FNA, pre-operative loca-lization). Since October 2019, we partnered with surgical oncology and transitioned from needle localization to SaviScout reflector localization for pre-operative planning, a major shift in clinical practice. Our breast MR imaging is performed on a 3.0 T magnet and includes screening and diagnostic MRI as well as breast MRI interventions (biopsy, needle localization). Our breast imaging program partners with multiple community health centers (Codman Square, South Bos-ton, Dorchester House, Mattapan, Uphams Corner, East Boston) for screening mammography interpretation. Since July 2020, we also now manage breast imaging at Lemuel Shattuck Hospital, providing screening and diagnostic mammography and diagnostic breast ultrasound services.

Our growing team includes 12 te-chnologists, 6 breast imaging radiologists, 2 tech aides, 3 schedulers, 1 primary film librarian, 4 registration staff, and operations manager. The team continues to expand as we are adding two new breast imaging radiolo-gists in 2021 (Dr. Donna-Lee Selland and Dr. Laura Semine Misbach) due to continued access de-mands and growth of clinical services.

In addition, since late 2019, we are proud to offer Breast Imaging Nurse Navigator and Pa-tient Navigator services to guide patients on their journey by providing them with support and by answering questions, particularly for our biopsy patients. A navigator's primary role and focus is on the patient, as well as family and support mem-bers. In addition to meeting with patients during the initial phases of screening and possible cancer diagnosis, our Breast Imaging Navigators:

- Provide information, helping to reduce stress and anxiety involved during care
- Educate patients about additional breast imaging studies they may need
- Improve patients' understanding of diagnostic plans
- Communicate with providers should patients need further diagnostic evaluation and/or breast biopsy
- Empower patients to participate in their own personal care
- Ensure patients complete all exams as prescribed
- Ensure patients receive timely access to a diagnostic evaluation and biopsy, if needed
- Connect patients and their family with helpful resources in and beyond the BMC network when necessary
- Connect patients with a Breast Clinic Nurse Navigator and coordinate care in the Breast clinic, as needed

Clinical Services
Breast Imaging

As of October 2020, Breast Imaging is in the process of a major system upgrade, including a new Hologic server and impro-ved software for our Mammography units and reading room workstations, allowing for faster speed, enhanced functionality, and stability. The next stage includes installation of the most cutting-edge breast imaging software, including synthetic mam-mography, high-definition digital breast tomosynthesis, and advanced technology that utilizes AI powered analytics to expe-dite reading time by reducing number of images to review. Additionally, we installed lateral arm attachment for stereotactic core biopsies that optimizes our approach and helps targeting challenging lesions, especially standard approach is limited by breast compression thickness or superficial lesions. Lastly, we are excited to start plan-ning expansion of our services to include contrast mammography and tomosynthesis in the near future.

In terms of research, we have participated in the multicenter ECOG-ACRIN sponsored Tomosynthesis Mammographic Imaging Screening Trial (TMIST), the first randomized controlled trial that seeks to identify women in which digital breast tomosynthesis (DBT) may outperform (2D) digital mammography in reducing ad-vanced breast cancer development. The study will create the world's largest curated dataset of breast cancer screening clinical data, images and bio-specimens to help researchers tailor future screening to a woman's individual risk. TMIST is enrolling 165,000 healthy women ages 45 to 74 at 130 sites throughout North America and Argentina. Currently nearly 35,000 patients are enrolled worldwide. At BMC, we partnered with the Cancer Clinical Trials Office for implementation and onsite the study is championed by Samhita Joshi, our amazing clinical research coordinator, and Dr Fishman, the site Primary Investigator. Over the past 18 months, Samhita successfully enrolled 883 patients, making TMIST the highest enrolling cancer clinical trial at BMC and the 8th highest enrolling for TMIST worldwide!

Future research on breast imaging artificial intelligence tools from Zebra Medical Vision (mammography) and KOIOS (ultrasound) is sla-ted to begin by the end of 2020. In addition, on-going research continues on social determinants of health and their impact on breast imaging patients, strengthening intradepartmental partnerships as well as inter-departmental partnerships with colleagues in Computer Engineering on Charles River Campus.

Despite the challenges and uncertainty this year, 2020 has been a year of growth and promise for breast imaging. We are fortunate for the resiliency and positive attitude of our team, allowing us to stand strong through this pandemic, keep our doors open, and provide care for our patients. We are very grateful and proud to be a part of such a wonderful team!

Anya Patrusheva, MHA, PMP, ICGB
Operations Manager, Breast Imaging

Michael Fishman, MD
Section Chief, Breast Imaging

Residency Update

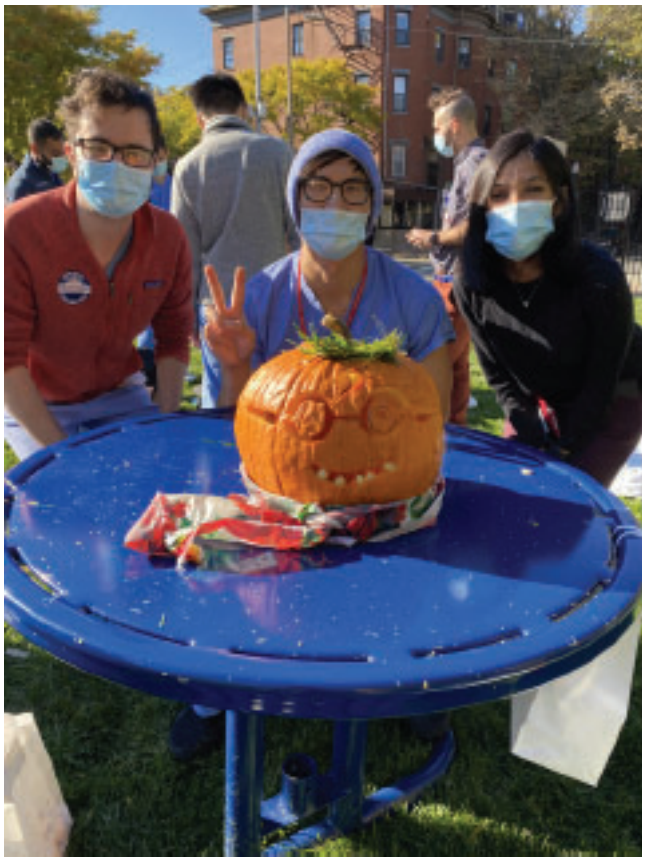
Hello all!

Happy December. 2020 has been a difficult year on many fronts and I for one am looking forward to 2021 with a return back to a semblance of "normal". Our residents, faculty and all the staff and techs have been inspiring with their hard work in the face of the COVID pandemic. We all move, however, move forward.

We are deep in the interview season albeit virtual. While we miss meeting the applicants in person, it has still been wonder-ful to meet so many exceptional and qualified candidates from all over the country and the world. A major THANK YOU to Dionne and Albert for their incredible work making the interview days go seamlessly in these zoom days. They have also been hard at work putting together some creative care packages to be mailed to our applicants. They, along with our great chiefs, Ashwin and Prashanth, organized some fun activities including a pumpkin carving contest and small holiday gift packages for our residents. I didn't realize there were some incredible pumpkin carving artists in our program!

Alex and Patrick have been our first residents to rotate through Boston Childrens Hospital and as expected, they have had a fantastic experience. Patrick enjoyed it so much that he will be doing his pediatric radiology fellowship there after graduation! Many of our 3rd years are in the midst of fellowship applications and have received interview invites from some outstanding programs around the country.

Finally, I wanted to say how proud I am to be part of the radiology family and grateful to work with all of you. Merry Christmas, Happy Hannukah and happy new year to all and please stay safe and healthy!



William Biche, Curtis HonShideler, Neha Khemani

2nd Year Residents pose infront of their pumpkin creation, "Scary Potter", during a beautiful fall day

Dr. Asim Mian

Faculty Development

In the Department of Radiology at Boston Medical Center, much attention is paid to developing the academic careers of its faculty given the strong research and educational missions. The faculty development program consists of several components: 1) One-on-one mentoring with the Vice Chair of Academic Affairs and other academically accomplished faculty who hold national and international leadership roles; 2) Annual CV Review by the Vice Chair of Academic Affairs and CV review by the department Promotions Committee every other year; and 3) Ongoing didactic programming to develop research and educational skills through a variety of mechanisms, including didactic presentations, interactive workshops, formal BUSM-sponsored career development programs, and contributions to the quarterly departmental newsletter.

Given all of the challenges in 2020, it is clear that for many of us, advancing our academic careers took a backseat to providing timely and high-quality care to our patients, especially those afflicted by COVID-19. However, the commitment of the department, Boston Medical Center and the Boston University School of Medicine to support career development has not wavered.

Below is a list of the local options that are available to faculty:

- Career Consultations & CV Reviews with Dr. Angelique Harris, and Dr. Emelia Benjamin.
- CTSI programs to accelerate research careers at https://www.bu.edu/ctsi/
- Early career K grant writing program and PRIME K to R transition program.
- Narrative Writing program and Women's leadership program for all career levels
- Early Career and Mid-Career Faculty Leadership Program (accepting applications in February 2021)

In addition, several of the national radiology organizations offer faculty development programs as well. The Association of University Radiologists offers three programs for its members: the AUR Radiology Resident Academic Leadership Development (ARRALD) Program and RRA/RAHSR Research Scholar Program for residents and fellows; the AUR Faculty development one-day program for early-career faculty; and the AUR Radiology Management program for early and mid-career faculty who aspire to or may be assuming leadership roles in their departments. In addition, starting January 2021, AUR will be sponsoring an invited lectureship program for early and mid-career faculty. This program aims to increase the national visibility of selected AUR members and to help them expand their academic network. For more information about these programs, please visit: https://www.aur.org/annual-meeting.

The American Roentgen Ray Society also offers the Clinician Educator Development Program for early-career faculty. This one-day program aims to develop teaching skills and expose participants to new teaching methods. More information about this program can be found at: https://www.arrs.org/ARRSLIVE/CEDP.

Finally, the Radiological Society of North America sponsors an education track at the annual meeting where those interested in developing their teaching skills can learn about innovative techniques and educational theory, and participate in interactive workshops. RSNA also offers numerous career development workshops which cover clinical trial methodology, grant writing and research (https://www.rsna.org/en/education/workshops/introduction-to-academic-radiology).

Dr. Priscilla Slanetz

Teaching Tips

Dr. Priscilla Slanetz

Teaching radiology poses some unique challenges. Depending on how the section is staffed, it can be challenging to teach trainees while keeping up with the clinical workload. In addition, rarely do you as an attending work with the same trainee over an extended period of time. In reality, most faculty work with trainees for either a half-day or at most one day at a time. Given this somewhat sporadic interaction and the inherent lack of continuity due to scheduling, it can be difficult to create an effective learning environment. However, as teaching is one of our primary missions, we need to be cognizant of this challenge and implement some simple strategies to enhance the teaching of our trainees. Below you will find some ideas from several people in our department:

1. Share your thought process during readouts. Due to increasing clinical demands, often teaching does not happen as the focus is on "getting through the list". Although trainees do help substantially with getting the clinical work done, faculty must remember that we are training the next generation of radiologists. Find something interesting to point out in nearly every case; share your thought process on how you came to the conclusion that you did – it only takes a few extra seconds and it will be greatly appreciated.

2. Ask the trainee if there is something specific that they would like you to give them feedback. Given that faculty often work with a trainee for only a half-day or day at a time, it can be difficult to know what specific areas the trainee might need to improve upon. Therefore, by asking the trainee at the beginning of the day, it becomes much easier to provide useful feedback on specific areas. It also encourages the trainee to reflect on their strengths and areas for growth.

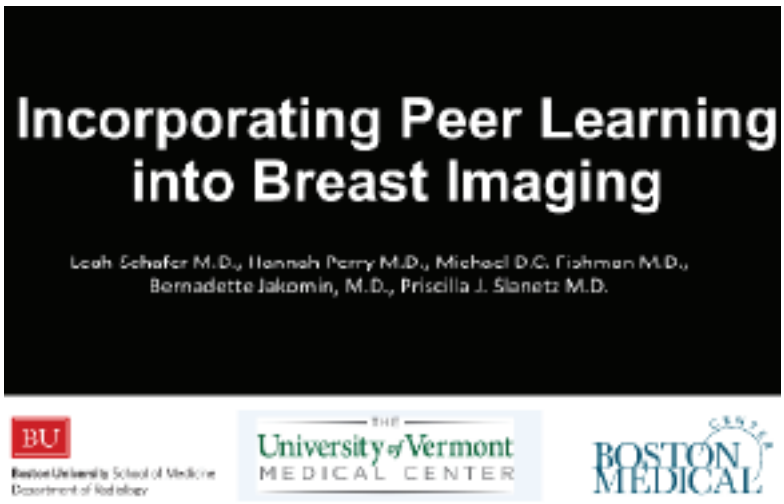
3. Assign trainee interesting and instructive cases on PACS. Especially for those who interpret radiographs, many of the cases we encounter have special teaching value for trainees. If the attending simply reads the case, the trainee cannot learn from this educational opportunity. Therefore, consider assigning the case to the trainee by putting their number on it. This permits the trainee to have a much higher percentage of positive and instructive cases than randomly picking up cases from the worklist. It also makes the readout sessions more stimulating and valuable for both trainee and attending alike.

4. Share best case(s) throughout the day. Everyone needs to get the work done by the end of the shift, and all of us want to be able to leave on time. However, it is important to encourage all team members – attending, fellow, resident, medical student – to identify interesting cases so as to create daily "teaching moments." Imagine if everyone shared something each session -- there would be at least 4-8 "teaching moments" every day. These meaningful conversations might even spark trainee interest in learning more about a topic or possibly be the start of a new research project. It definitely would make for a more interesting day!

5. Create a weekly interesting case conference in your section. Although we are all busy, who doesn't like to see the best cases of the week? Identify a half hour each week for the conference and ask each faculty and trainee to bring at least one case to share with the group.

6. For trainees: Think of 1-2 specific questions to ask the attending during readout. Before readout begins, think of at least one specific question related to the studies that you have read. When your service is very busy, the time for workstation teaching can become scarce. In coming up with targeted questions for your attending related to studies that you have read that day, you will ensure that you learn about some key teaching points even on the busiest of days.

RSNA 2020



Boston University once again had a strong presence at RSNA 2020. The highlights of the meeting included a session on "Exposing our blindside and overcoming unconscious bias" moderated by Dr. Jorge Soto, a session on "Artificial Intelligence and Radiomics" with the Interamerican College of Radiology moderated by Dr. Jorge Soto, a Fast 5 talk by Dr. Michael Fishman on "Why Radiology Practice Culture Matters More than Ever", a Case based review of the abdomen by Dr. Christina LeBedis, a case review of adult trauma CT by Dr. Jorge Soto, an oral presentation on the "ACR membership workplace culture survey 2019" by Dr. Michael Fishman, and a refresher course presentation on "Normal sinus and maxillofacial anatomy" by Dr Harprit Bedi.

In addition, three educational exhibits received the Certificate of Merit Award:

- Leah Schafer, Hannah Perry, Michael DC Fishman, Bernadette Jakomin, Priscilla J Slanetz. "Incorporating peer learning into breast imaging practice".
- Neha Khemani, Priscilla J Slanetz, Michael Cassidy, Naomi Ko, Anna F Rives. "Breast health in the elderly".
- Kotaro Ito, Naohisa Hirahara, Hirotaka Muraoka, Okada Shunya, Takumi Kondo, Vanessa Carlota Andreu Arasa, Osamu Sakai, Takashi Kaneda. "Normal variants of the maxillofacial region: mimics to confuse radiologists."

RSNA 2020

In addition, scientific abstracts focused on health care disparities were presented:

- Donghoon Shin, Christina LeBedis, Michael DC Fishman, Michael Ngo, Jeffrey Wang. The impact of social determinants of health on lung cancer screening utilization

- Neha Khemani, Anuradha Rebello, Hristina Natcheva, Katrina Steiling, Kei Suzuki. Review of lung-RADS 4A and 4B nodules on lung cancer screening CTs at an urban safety-net hospital: is there a role for further risk stratification?

Finally, two oral presentations on social determinants of health received attention in the media and in the RSNA Daily Bulletin. Student doctor Aaron Afran gave an oral scientific presentation at RSNA on his project, "The impact of social determinants of health on breast imaging utilization". Collaborating with Drs. Christina LeBedis, Michael DC Fishman and Donghoon Shin, the study identified that food and housing insecurity were found to be associated with longer lapses between both diagnostic imaging and biopsy and screening mammography and diagnostic imaging. Dr. Donghoon Shin, a current third-year radiology resident, also gave an oral presentation on "The impact of social determinants of health on lung cancer screening utilization". This work showed that transportation insecurity and Medicaid insurance type were associated with missed lung cancer screening CT appointments. Both studies highlight the need to address these specific factors as one way to reduce disparities in cancer care.

Publications

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