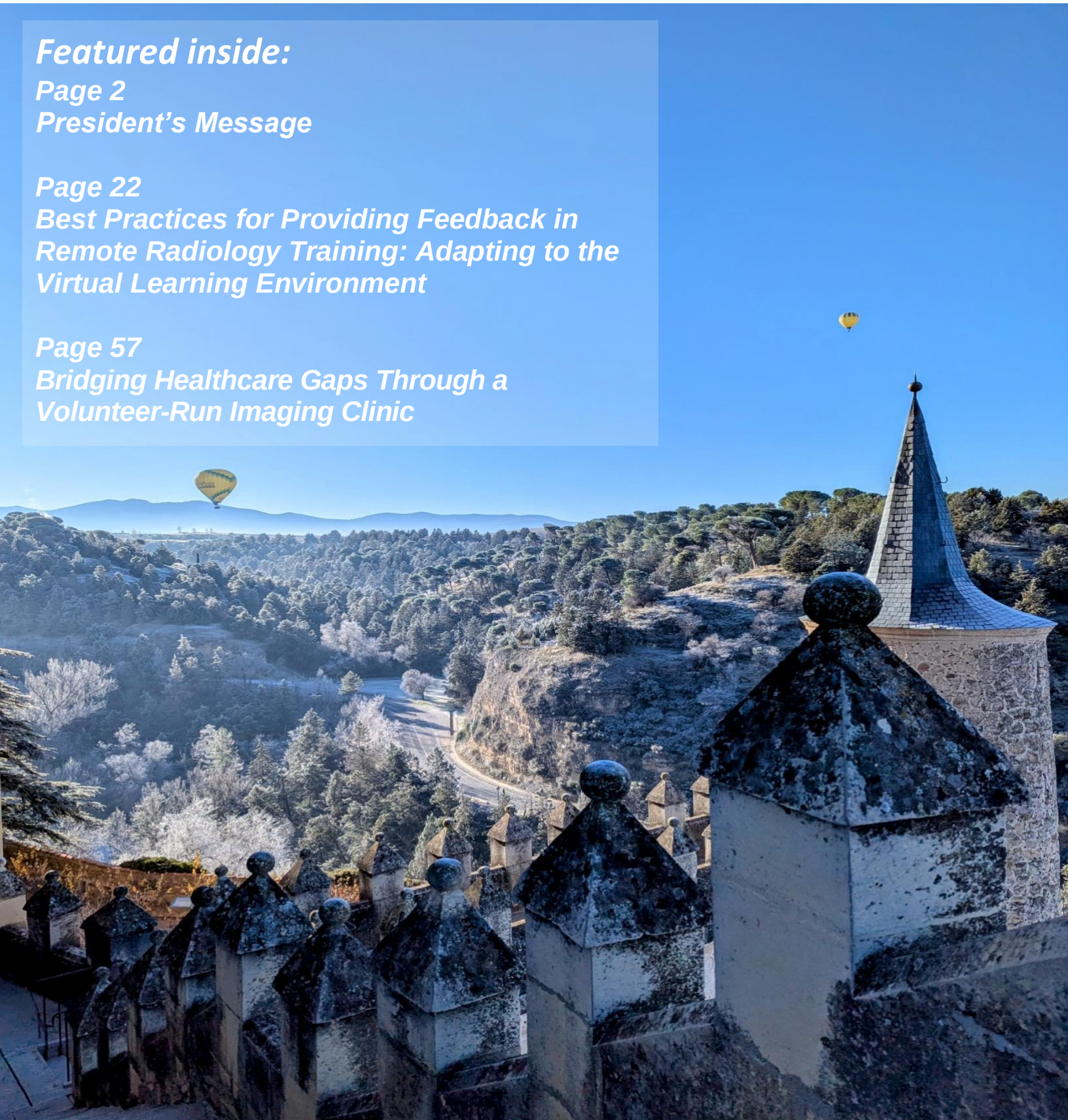
The ACER Connection

THE OFFICIAL E-NEWSLETTER OF THE ALLIANCE OF CLINICIAN EDUCATORS IN RADIOLOGY
Vol. 3, Issue 1 Spring 2025

Featured inside:



President's Message

Tara M. Catanzano, MD, CPE, FSABI, FAAR, FACR
ACER President

Gratitude. That single word sums up my message to the ACER community in a year where natural disasters, economic and political turmoil have abounded.

From my perspective, ACER is not simply an academic organization where like-minded educators can come to present innovative educational approaches to teach our trainees and assist in the professional development of our faculty. It is so much more than that. It's a community – I might even go so far as to say it's been a safety network for so many of our members as they battle burnout, feelings of disengagement and disconnection and personal and professional struggles at their own institutions.

I am personally grateful for the friendship and unwavering support of my ACER friends. I found many of my personal support and mentorship cabinet in this organization at a time of personal challenge during a family illness and have continued to count on them to this day as I navigate major career shifts. I believe that many of our members have done the same. The ACER community is unparalleled in welcoming and genuinely caring about educators from every career stage, institution and experience. It's more than having a common goal – to elevate radiology education and the careers of educators – it's a calling to support, engage, protect and promote members of our community.

I am so proud of the work that has been done by the ACER community this year. We have submitted grants, including the successfully funded Venture grant by Ryan Peterson, are working towards restructuring the onboarding process for new Executive Committee members and leaders to make term transitions smoother and are in the process of developing a platform that will allow sharing of ongoing education/educational research projects where our members can go to find collaborators, sites for multicenter educational research trials, or to sign up to work on another member's ongoing project or manuscript.

Thank you to all members of this outstanding community. I am grateful to each one of you for your commitment to our organization and our people. I am grateful to have had the opportunity to serve as President. And most important of all, I am grateful for the lifelong friends and colleagues I have met through ACER.

Best wishes,

Tara M. Catanzano

Tara M. Catanzano, MD, CPE, FSABI, FAAR, FACR
ACER President

THE ACER CONNECTION

The official e-newsletter of the Alliance of Clinician-Educators in Radiology

On the Cover: *"In winter air above Segovia". Photo submitted by Lauren Hui, 3rd year medical student at TCU Anne Burnett School of Medicine*

The ACER Connection is published for members and friends of the Alliance of Clinician-Educators in Radiology (ACER).

ACER Mission and Goals:

- Providing a formal organization and forum for clinician-educators to meet, exchange ideas, and learn new skills that promote and advance the careers of clinician-educators.
- Providing programming at the annual AAR meeting targeted toward the needs of clinician-educators.
- Developing and maintaining an information and networking database for the benefit, awareness, and nurturing clinician-educators.
- Promoting and developing educational research activities relevant to clinician educators

Questions and Comments

Please direct questions or comments to ACER
info@aarad.org

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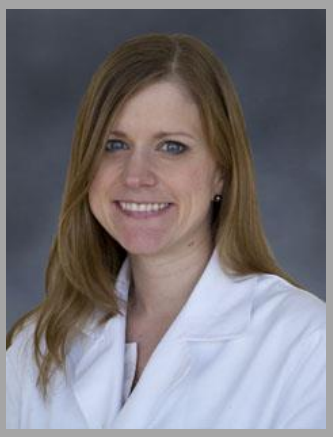


I am excited to serve as chair of the ACER membership committee. In this first year, I look forward to leading our efforts to review current membership status, analyze trends and identify growth opportunities. The goal is to develop targeted strategies to maintain and expand membership and engagement.

Publications Committee – Biren A. Shah, MD

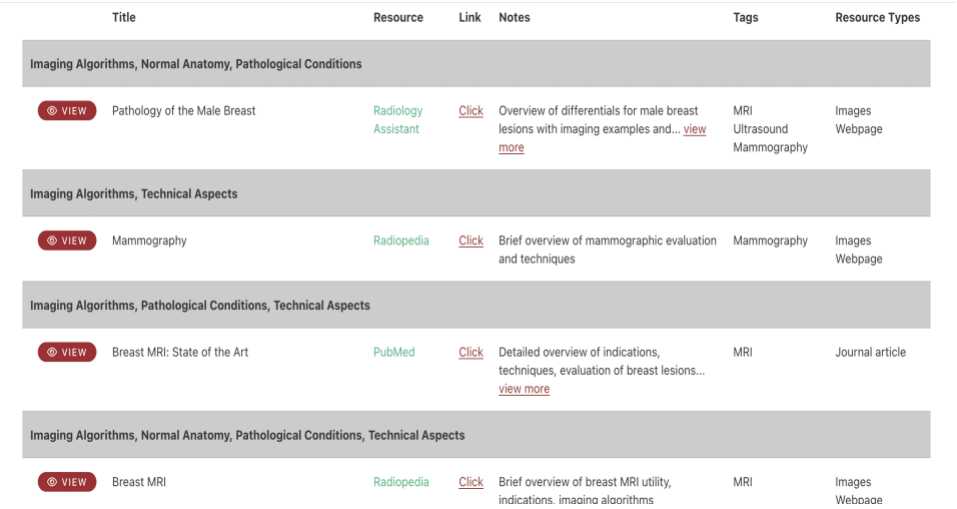
The Publications Committee collaborated on the 2025 spring issue of *The ACER Connection*, which reflects the essence of the 2025 meeting, *Radiology at the Nexus: Bridging Expertise and Cultivating Change.* I extend my heartfelt gratitude to all the members of the ACER Publications Committee for their dedication and contributions to this issue. It has been an honor to chair this committee for the past three years, and I look forward to supporting the incoming new chair as they take the helm.

Education Committee – Pauline Germaine, DO

2024-2025 has been an exciting year for the Education Committee. Earlier this year, AAR/AMSER-Aquifer awarded a grant to support an initiative titled, “Bringing the AMSER Curriculum to Life (Bac to Life)”. The goal of the project is to enhance the AMSER Curriculum by integrating and highlighting existing resources *(continues next page)*

In the radiology community, such as Building Blocks, Radiology TEACHES, STARS, DartRad, AMSER Case of the Month, AMSER-Rad Path Case of the Month. RSNA Case Collection, Aquifer, RadiologyInfo, and others.

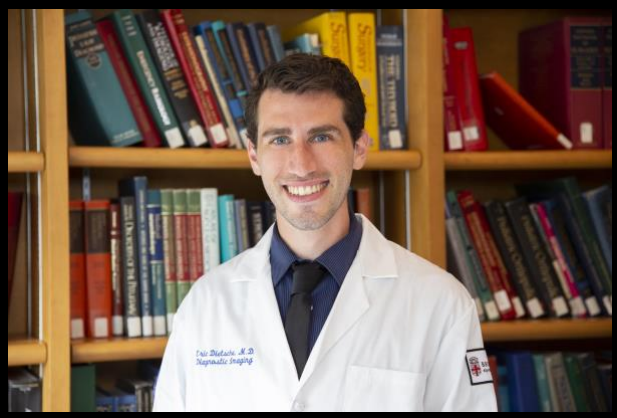
This project is designed to be a collaborative, crowdsourcing effort. A platform has been developed to host and maintain this project, and medical students began the initial work of populating the platform. Members of the ACER Education Committee have been busy reviewing students' work and we are hoping to unveil this project at AAR. Sneak preview below:



Title	Resource	Link	Notes	Tags	Resource Types
Imaging Algorithms, Normal Anatomy, Pathological Conditions					
VIEW Pathology of the Male Breast	Radiology Assistant	Click	Overview of differentials for male breast lesions with imaging examples and... view more	MRI Ultrasound Mammography	Images Webpage
Imaging Algorithms, Technical Aspects					
VIEW Mammography	Radiopedia	Click	Brief overview of mammographic evaluation and techniques	Mammography	Images Webpage
Imaging Algorithms, Pathological Conditions, Technical Aspects					
VIEW Breast MRI: State of the Art	PubMed	Click	Detailed overview of indications, techniques, evaluation of breast lesions... view more	MRI	Journal article
Imaging Algorithms, Normal Anatomy, Pathological Conditions, Technical Aspects					
VIEW Breast MRI	Radiopedia	Click	Brief overview of breast MRI utility, indications, imaging algorithms	MRI	Images Webpage

Utility of Peer-to-Peer Radiology Resident Teaching in Night Float Preparation

By
Eric Dietsche, MD



Radiology residents are often tasked with interpreting a large volume of varied imaging studies during challenging night float shifts. These shifts expose residents to high-stakes scenarios requiring rapid, accurate decision-making which is irreplaceable as a formative experience in the overall development of a resident radiologist into a competent attending radiologist. In order to help prepare our residents for this stressful environment, we developed a unique peer-to-peer lecture series in which senior residents teach the second-year class high yield topics. Overall, this model, in which residents collaborate and learn from each other, offers a promising solution to enhance learning, improve inter-class relationships, and improve diagnostic accuracy during these demanding shifts.

Enhancing Camaraderie Between Resident Classes

Radiology can often be perceived as a potentially isolating specialty in which a radiologist works alone all day without significant interpersonal interactions. While we know that this is often not reality, some residents may feel pressure to be able to fully operate independently and therefore be hesitant to reach out to others for assistance on difficult cases. Though residents in different class years often work together during the day in the reading room, having senior residents more frequently interface with junior residents in this educational capacity as lecturers increases the level of comfort between these groups and makes it more likely that juniors will reach out to their peers when necessary.

Our night float schedule is structured so that there are at least 4 hours of in person overlap between residents working in the ER. Even when one resident goes home after their shift partway

through the evening, leaving the remaining resident alone, there is still another resident moonlighting remotely. Effectively, this means that a resident always has at least one other non-attending (though an attending on call can also always be contacted) to reach out to in the event that they would like to discuss a case. By increasing the amount of time that residency classes interact with each other, we can increase their level of comfort and therefore the likelihood that they will reach out for assistance to one of those available peers when needed. This type of team mentality and collaboration not only benefits individual residents but the cohesion and morale of the residency program overall.

Collaborative Learning for a High-Pressure Environment

Night float shifts at our (and most other) institution(s) involve interpreting a wide variety of cases, many of which are time-sensitive. Our residents are responsible for providing reads on cases from a level 1 trauma center emergency room, inpatient cases including for a 700+ bed hospital, a pediatric emergency room, and an obstetric/gynecologic specialty hospital emergency room. At any stage of training, residents may have limited exposure to certain types of studies or pathologies, making it more difficult to interpret findings accurately under pressure. Peer-to-peer training allows senior residents to emphasize certain cases as high-yield topics based on their own experience while on night float so that more junior residents can focus on those while preparing.

When residents work through cases together both in a lecture-type environment and in actual practice, they can share insights, discuss differential diagnoses, and help each other navigate complex cases. The ability to ask questions and receive immediate feedback from a peer can reinforce learning and

increase diagnostic confidence, which is particularly important during night float shifts when faculty supervision may be limited. Additionally, peer-to-peer learning encourages residents to explain their thought processes, which can improve critical thinking and solidify their understanding of key concepts.

Promoting Active Learning and Reinforcing Knowledge

The benefits of peer-to-peer training extend beyond emotional and intellectual support. Working alongside fellow residents can promote active learning, a process in which individuals engage with the material in a more dynamic and interactive way. Instead of passively receiving information from a faculty member, residents participating in peer-to-peer training take a more proactive role in their education. They are encouraged to explain concepts to one another, ask insightful questions, and critically assess cases together.

This active engagement helps reinforce knowledge and strengthens diagnostic skills. By discussing cases and teaching each other, residents not only solidify their understanding of radiology but also hone their communication skills, which are vital in a clinical setting. Teaching peers can also improve retention, as studies have shown that explaining concepts to others is one of the most effective ways to deepen one’s own understanding.

As an example, at our institution, an MRI on a pregnant woman may be performed to look for acute appendicitis at the obstetric/gynecologic hospital. Only a handful of these cases occur per year, however, the resident still needs to be able to provide an accurate interpretation overnight to ensure appropriate clinical management. In order to teach the junior residents, seniors will often prepare numerous cases that are positive, negative, and

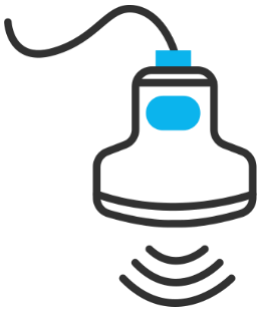
that have common pitfalls. In doing this, the senior resident hones their own skills while also helping to build a solid foundation for their more junior colleagues.

Conclusion

Peer-to-peer training in preparation for radiology resident night float shifts offers significant advantages for residents. By improving camaraderie between classes which in turn fosters collaboration and promotes active learning, this approach enhances both the educational experience and overall cohesion of residencies. As radiology programs continue to evolve, incorporating peer-to-peer teaching into night float preparation could become an invaluable tool for improving diagnostic accuracy, resident morale, and long-term professional development. By investing in collaborative learning, programs can help cultivate a supportive, effective environment that prepares residents for the challenges of their careers in radiology.

For further information on this topic, as well as survey data from our residents on the night float preparation curriculum, please see a project that was co-prepared by our former Chief Resident of Education, Dr. Brandon Koo, and our current Education Chief, Dr. Catherine Boutros. Dr. Boutros will be presenting this project at the 2025 meeting.

Keeping Both Hands on the Wheel: How an Ultrasound Scanning Curriculum Can Set Up Your Residents for Success



by
George (Chip) J. Watts V, MD.

Not many years ago, one of the most anxiety-provoking moments in the life of a radiology resident would be the overnight page from OB-Triage, asking for a STAT ultrasound to rule out ectopic pregnancy. Or the order for bilateral lower extremity venous ultrasound on an ICU patient, while the list was exploding at 2am. That is because a whole generation of radiology residents were alone in the hospital overnight, performing their *own* ultrasounds and hoping they got it all done quickly and correctly, before the next trauma patient came barreling through the emergency department. Those of us old enough to bear these scars are in many ways fortunate for the experience – it honed our skills, bolstered our confidence, and prepared us well for a career after training. With the widespread adoption of 24-hr radiology attending coverage and an army of well-trained sonographers deployed at any hour of the day or night, the current radiology resident is spared much anxiety, but at the cost of invaluable educational opportunity.

I was confronted with the stark reality of the knowledge gap that exists for many residents during a conference I gave last year. I thought it would be fun to bring one of our fancy new diagnostic ultrasound units with me to the lecture, so I could demonstrate some of the features available on the new equipment and showcase some interesting anatomy in a more interactive way. As I parked the machine and dimmed the lights, I began with a question: “Who knows how to turn on this machine?” The ensuing silence was deafening. With some coaching, we were able to get the machine turned on and wound up spending the rest of the hour taking turns pushing buttons and turning knobs, scanning

each other and having a great time learning practical skills. My prepared slides remained tucked away in the flash drive. It was clear that we needed a more robust method for teaching residents some basic scanning skills.

Despite the paradigm shift in many imaging departments, it remains our responsibility as educators to ensure that radiology residents learn the critical skill of performing high quality ultrasound examinations. Creating opportunities for our trainees to learn proper scanning technique can be difficult, but it is far from impossible. In fact, the Accreditation Council for Graduate Medical Education (ACGME) mandates that all radiology residents demonstrate competency in this area, with the guideline that residents should perform 75 hands-on scans and interpret 150 examinations of various types prior to graduation.[1]

To achieve this, we began by hosting several ‘after hours’ sessions in the evenings to allow residents to practice scanning one another with the oversight of radiology faculty. These sessions were widely popular and well-attended, prompting us to bring together faculty, residents and sonographers to develop a formal curriculum for hands-on scanning during the first year of training. We now dedicate two weeks for each resident to work directly with experienced sonographers and faculty who are motivated to teach, create structured review sessions for bi-directional feedback, host focused case discussions, and most importantly – put the probe in the residents’ hands as much as possible.

We begin each block by providing each resident with the departmental scanning protocols for basic exams (Abdomen, Thyroid, Renal, Pelvis, First Trimester Pregnancy, etc.). Then each resident is assigned to a 1:1 session with an advanced sonographer (Lead Tech or Supervisor) to review basic knobology and learn safety/cleanliness/professionalism standards. Each subsequent day is comprised of focused exams in one anatomic area, allowing ample opportunity to learn and practice skills, followed by review/discussion and interpretation of the cases with an attending. Each resident keeps an electronic entry log of the scans they have performed and reviewed, and each is signed off by an attending at the end of the workday.

An example of a typical day on service:

Monday- **8:00-9:00 Meet with Ultrasound Supervisor**

Basics of Ultrasound Machine/Knobology

- On/Off, Begin and End
- Depth, Focus, Gain
- Color and Spectral Doppler
- Transducer Types and care
- Patient etiquette

9:00-11:00 Scan with assigned Sonographer

THYROID EXAMS (per ACR/Dept protocol)

- Review protocol prior to scan
- Supervisor will attempt to put as many thyroids as possible in room for the Resident

- Resident is expected to scan with assistance/instruction of Sonographer
- **RESIDENT IS TO ASSIGN ALL CASES PERFORMED TO THEMSELVES IN PACS FOR FUTURE READING**

12:00-1:00 CASE CONFERENCE

1:15-2:45 Scan with assigned Sonographer

THYROID EXAMS (per ACR/Dept protocol)

- Review protocols prior to scan
- Supervisor will attempt to put as many thyroids as possible in room for the Resident
- Resident is expected to scan with assistance/instruction of Sonographer
- Resident is to assign all cases performed to themselves upon completion of exam for future reading

2:45-4:30 Resident and Attending review, discuss and read out cases performed. Attending signs off resident case entry log for cases performed.

By the end of the two-week block, residents are well on their way toward the 75-scan goal for graduation, but more importantly, have laid the foundation for good practice habits that boosts

confidence and alleviates hesitancy/anxiety. The reviews from residents have been outstanding. Many even request ‘elective’ time on the rotation in later years of training so they can further develop their skills and deepen their understanding. Although low-cost and easy to implement for most programs, the success of any curriculum like this depends on the dedication and collaboration of residents, sonographers, and faculty. Bringing together each of these groups early in training allows a heightened level of interaction and respect within the care team and instills trust that builds on itself in subsequent years throughout residency. We will likely never return to the dark days of a bedraggled resident pushing an ultrasound cart through the midnight hallways of the hospital, but perhaps it is not strictly necessary. The experience at our institution is that Ultrasound scanning skills can be learned in many ways, but inevitably, the residents must take the wheel.

George (Chip) J. Watts V, MD

Vice Chair of Education

Program Director, Diagnostic Radiology Residency

UMass Chan Medical School

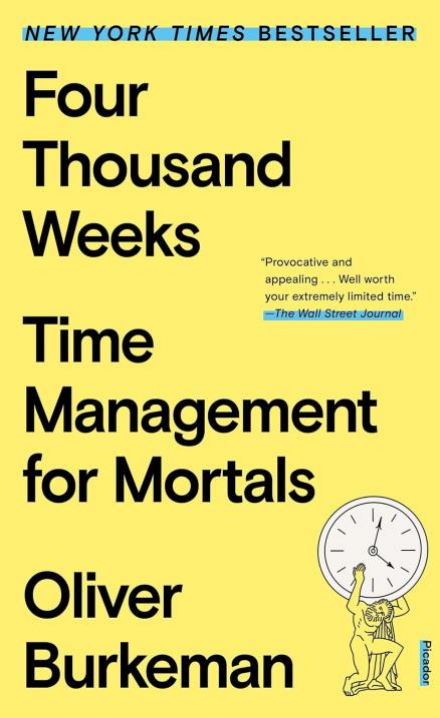
george.watts@umassmemorial.org

Reference:

https://www.acgme.org/globalassets/pdfs/faq/420_diagnosticradiology_faqs.pdf. ACGME Frequently Asked Questions: Diagnostic Radiology; Review Committee for Diagnostic Radiology: ACGME; Effective January 1, 2025

In the Spotlight

"In the Spotlight" is a summary of a book recommended by an ACER member



Four Thousand Weeks: Time Management for Mortals written by Oliver Burkeman is a deeply philosophical and counterintuitive take on time management, challenging conventional wisdom about productivity. The title reflects the sobering reality that the average human lifespan consists of about 4,000 weeks, emphasizing the finite nature of our existence. Instead of presenting yet another set of life hacks to optimize efficiency, Burkeman argues that our obsession with productivity and control over time is ultimately futile. He suggests that true fulfillment comes from accepting our limitations and focusing on what truly matters.

The Problem with Productivity Culture

Burkeman critiques modern society's fixation on productivity and efficiency, showing how the endless pursuit of "getting everything done" only leads to stress and dissatisfaction. He explains that no matter how efficient we become, there will always be more tasks, more goals, and more distractions competing for our attention. The promise that better planning or optimization will finally create the perfect work-life balance is, in his view, an illusion. Instead of making us feel in control, these efforts often leave us overwhelmed and disconnected from what we actually value.

Embracing Finitude

A key argument in the book is that we must come to terms with our finitude—the fact that we will never have enough time to do everything. Burkeman urges readers to accept the inevitability of missing out on many things in life and to shift their mindset from trying to maximize productivity to prioritizing what is most meaningful. Rather than constantly delaying happiness for a future in which all our tasks will be completed, he encourages us to live fully in the present and engage deeply with our chosen commitments.

Choosing What to Prioritize

Burkeman acknowledges that we have far more demands on our time than we can ever fulfill. However, instead of treating this as a problem to be solved, he reframes it as an opportunity to make deliberate choices about what matters most. He advises people to:

- **Decide what to neglect** – Since we can't do everything, we should consciously choose what we will *not* focus on, rather than feeling guilty about unfinished tasks.
- **Adopt a "fixed volume" approach to work** – Instead of endlessly adding more to our to-do lists, we should set clear boundaries and recognize that we can only handle a limited amount at a time.
- **Embrace discomfort** – Many of us procrastinate or avoid certain meaningful activities because they involve uncertainty or discomfort. Burkeman suggests embracing these challenges rather than seeking constant ease and efficiency.
- **Commit to what truly matters** – Whether it's relationships, creative work, or personal passions, investing deeply in a few important things is more rewarding than spreading ourselves too thin.

The Joy of Missing Out

One of the book's most liberating ideas is that we don't have to fear missing out (FOMO) because missing out is inevitable. By accepting this, we can let go of the pressure to always make the "perfect" choice and instead find joy in the commitments we do make. Burkeman encourages readers to reject the illusion of total freedom (trying to keep all options open) and instead embrace the meaningful constraints of real life.

A More Meaningful Approach to Time

Ultimately, *Four Thousand Weeks* is not about managing time better but about rethinking our relationship with it. Burkeman invites readers to stop striving for total control and instead cultivate presence, patience, and a willingness to engage deeply with life's inevitable uncertainties. He urges us to recognize that time is not something to be conquered or optimized but something to be lived and appreciated.

By blending philosophy, psychology, and practical wisdom, Burkeman's book offers a refreshing and liberating perspective on time management—one that prioritizes meaning over mere efficiency. It is a must-read for anyone feeling overwhelmed by the demands of modern life and seeking a more fulfilling way to engage with the time they have.

by Biren A. Shah, MD

THE ACER CONNECTION

Have a great book recommendation?
Send your recommendation to:
bshah@dmc.org

Fun Facts about Los Angeles

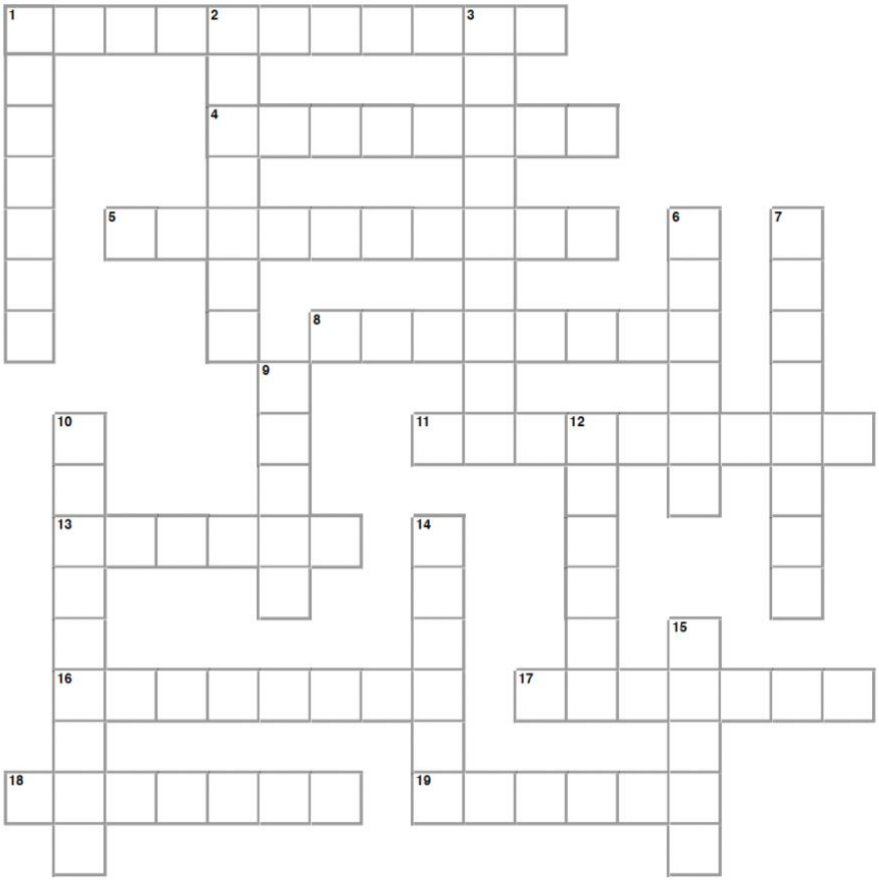
Fun Facts About Los Angeles

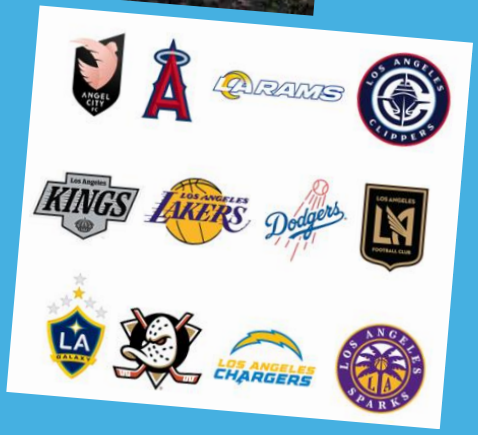
ACROSS

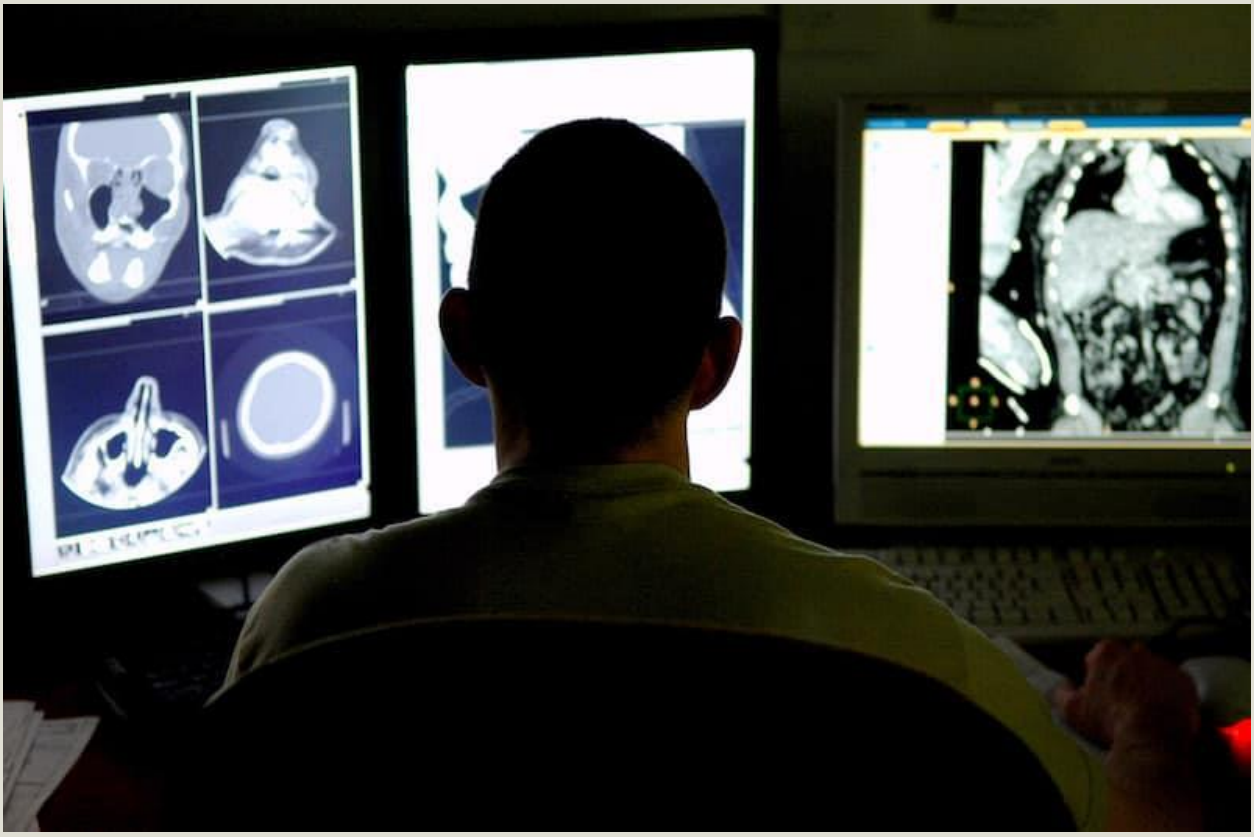
1 Pier with a Ferris wheel
4 Iconic observatory in LA
5 Scenic drive in LA
8 Neighborhood with a namesake lake
11 Studios with a theme park
13 Famous tar pits in LA
16 Major thoroughfare in LA
17 Hills, affluent LA suburb
18 LA's Major League Baseball team
19 Famous boulevard in LA

DOWN

1 Center for sports and concerts
2 City of ___
3 Historic neighborhood in LA
6 NBA team based in LA
7 Historic theater on Hollywood Blvd
9 Beverly Hills shopping street
10 Famous film industry hub
12 Beach known for its canals
14 Baseball team in Anaheim
15 Renowned art museum in LA







Best Practices for Providing Feedback in Remote Radiology Training: Adapting to the Virtual Learning Environment

By Joseph Fotos, MD

It is undeniable that the COVID-19 pandemic changed our lives forever. Though life is closer to "normal" than it ever has been, reverberations remain. Few of these residual ripples are as pervasive as the tendency for remote work. The pandemic introduced many industries to the concept that remote work could be done without detrimental effects, and academic radiology is no exception. While initially viewed as something that was more of a temporary work environment, many academic centers now leverage this new remote freedom as a permanent part of the workflow.(1)

Although this may be a boon for efficient workflow and allow for less distraction, it has unintended impacts on the quality of resident education. The physical presence of faculty in the room with the ability to provide real time feedback in person has been an essential part of resident education since radiology training began, and its importance to resident education is undeniable. In the face of this hybrid/remote education environment that is unlikely to change, how can we maintain high quality feedback for our residents in this brave new world?

Effective Feedback

First, we must not forget the strategies that make feedback work well in general. We don't need to reinvent the wheel; we just need to put on new tires better suited for this new terrain. Much work has been done over the years on what makes certain feedback strategies more effective than others, and an exhaustive review of that space is beyond the scope of this article. Instead, the reader is referred to an excellent article entitled "Affecting Change: Enhancing Feedback Interactions with Radiology Trainees" by Burns, et. al. This article from Academic Radiology describes clear strategies and guidance. In particular, the reader is directed

to the elements of effective feedback. Please keep these elements at the forefront of your mind as we discuss strategies for improving remote feedback (1):

1. "Specific: Feedback should not be vague or given as generalizations. Feedback should be related to the individuals or program’s goals.
2. Process-Oriented: Feedback should focus on individual actions and behaviors. It should not be personal nor based on value judgements.
3. Goal-Oriented: Feedback should be based on clear expectations and goals.
4. Candid: Negative feedback should be fair and honest. Shrouding constructive criticism with positive remarks (i. e. “feedback sandwich”) can lead to misunderstanding and a lost opportunity to learn and improve.
5. Empathy: Negative feedback should be delivered clearly but with empathy. Demoralizing the learner can have the contradictory effect and lead to indifference.
6. Focused: Most individuals are unable to pay attention to large amounts of detail. To ensure success, focus only on 1-2 items per feedback session.
7. Actionable: Feedback should provide the recipient with precise, specific actions on how to change behavior"

Challenges

Feedback is already a challenging endeavor, even when everything about the environment is ideal. It can be uncomfortable, even when the amount of constructive feedback is limited. General feedback challenges have also been addressed at length within the literature (including the aforementioned Burns

et. al article) but the challenges presented by a remote environment present another layer that must be navigated.

We will break the following into what we consider the two most common instances of feedback. First, we will address the often informal daily feedback that is experienced when a resident and attending discuss a case for which the resident has prepared a report (i.e. the "readout"). The second includes the more formal feedback sessions that occur at the midpoint or end point of rotation, or when needed to address an issue.

Readout Sessions:

Some of the best experiences that I have had both giving and receiving feedback have been at the viewbox (or "workstation" as it would more accurately be called today). Reading out studies with residents is often where academic faculty get the most joy out of our jobs. The casual back and forth allows us to not only give real time feedback but also build personal relationships with the residents that we work alongside.(1) But how can we best deliver this type of feedback experience from afar?

Remote Conference Software Readouts

Although video conference tools such as Zoom (Zoom Communications Inc, San Jose, CA) and Teams (Microsoft, Redmond, WA) have been around for a long time, they became our daily communication tool during the pandemic. Their introduction to the workflow has now made them a permanent part of how we work.

Clearly, of the tools available, Zoom and similar tools are the best option to get us as close as possible to that in-person readout

experience (that is, until VR technology reaches its full potential, but more on that in a future article). Given our familiarity with this software, it would seem simple to use for readouts, but there are more than a few things to keep in mind if we wish to optimize the experience:

1. If you are sharing your diagnostic monitor screen, be sure to verify the resident is displaying the shared screen on their diagnostic monitor. As you are likely aware, these diagnostic monitors are large, and often in portrait orientation, which will cause the images to be warped and/or prohibitively small when resized to fit on a standard computer monitor. This distortion limits the resident's ability to see what you are trying to show them. Also keep in mind that the resident may not feel comfortable pointing out your display mistake, so it is important for the faculty to ask upfront if the display of your screen is working as intended.
2. If possible, provide headphones and microphones to the resident who may be present in a reading room with other trainees. While over-hearing conversation is unavoidable in an in-person setting, the privacy provided by headphones may help trainees be more receptive to your feedback. They would rather not have their mistakes and misses broadcast into the room.
3. Use your mouse as if you would use your hand to gesture around or towards findings as you discuss them. This will help direct residents' attention to what you are teaching them. Keeping the mouse moving to relevant areas as you discuss them will also lessen the amount of time that the resident must search the screen to find the mouse.
4. If possible, keep your camera on. While not perfect, it does help emulate the in-person teaching experience, by providing at least some of the body language cues that

would augment the feedback session if you were in the same room.

5. Use annotation tools within your PACS. Persistent items like arrows or circles can help emphasize findings and direct resident attention.
6. Allow the resident to take control of the mouse. Many remote software tools, such as Zoom, allow users to take over not only screen sharing but also the control of the mouse and keyboard. This can be essential to keep a readout feedback session flowing smoothly by "handing them the mouse" as you would in an in-person setting. "Here, show me what you mean." This is a very underutilized feature but can work extremely well.(2)
7. Lastly, and perhaps the least interesting, is that you must make sure that the tool that you are using is HIPAA compliant. Do not use your personal account for any patient information discussions. Protected health information (PHI) will be transmitted during this interaction, and the security required to protect that information is essential.

Phone Call Readouts

If conference software is unavailable for some reason (or if the HIPAA compliant version is not), you may have to read out the study with the resident over the phone. Make sure to annotate images and have image numbers ready for reference so that the most can be made from the discussion. Make the conversation clear and detailed. If cases can be pushed between users, this feature must be used. Many PACS systems allow users to annotate the images and then save the annotations as a "presentation state" so that all annotations remain on the images for the next user to view. Text annotations along with arrows or circles are also useful to help the resident see what you are

referring to (keep in mind, though, that your text annotations may be saved as the final image presentation state – the version that referring clinicians may also be able to view).

Chat and other messages

Sometimes (or often) the clinical situation and hectic workflow limit the time available for real time feedback. In other instances, an educational workflow design may have an in-person faculty that does most of the teaching, but also a remote faculty that edits and signs resident reports on other studies to keep up with the workflow. In this situation, leveraging the messaging system provided by your RIS or PACS is essential to maintaining some educational continuity.

When writing messaging feedback for resident reports, it is important to be as clear and detailed as possible. As mentioned in the previous sections, annotating images as clearly as possible and providing image numbers, if applicable, is essential so that the resident clearly understands what you are referring to. You must not only describe what was changed in the report and why, but also any salient teaching points that go with those changes. If you can use a chat feature that provides some amount of mixed synchronous/asynchronous discussion it is important to allow the resident to ask questions and to reply to those questions in a timely manner.

Summative and End/Mid Rotation Feedback

Broader feedback provided to residents regarding their rotational performance, either mid rotation or at the end of a rotation, should ideally be done in person. Some circumstances, either challenges with scheduling or physical location limitations, may require this

type of feedback be done remotely. If done remotely, it is important keep a few things in mind to make the experience flow as smoothly as possible. As discussed above, this should be done over a video conferencing solution if possible, and a phone call should be avoided. Email or messaging feedback should only be used if you wish to send information for the resident to review prior to a future in-person feedback session.

Summative feedback like this should contain at least some constructive criticism, as everyone has areas in which they can improve. Giving constructive feedback is not something that is easy for most people - even when this feedback can be given in person. In-person strategies to lessen the tension may include having the discussion in a calming environment or conveying relaxed body language and social cues to lighten the mood and decrease the formality of the situation.(3) To that point, the only technologic recommendation for this type of remote feedback is that both cameras must be on so that each party can see one another. If there is a technological issue that prevents both cameras from providing video, it is best to reschedule the session to provide the best possible experience.

To that end, Therese Huston, PhD, author of "Let's Talk: Make Effective Feedback Your Superpower" addressed these challenges in a recent article in the Harvard Business Review published in 2021.(3) Though this article is directed towards business leaders addressing their employees, the points raised remain applicable to constructive feedback for trainees, as the hierarchical relationship is similar. Here we will address those points raised and describe their application to resident education. Regardless, the reader is encouraged to read the original article as well, as many of these strategies are also useful to enhance feedback in general.

Start by asking questions

Like any good educational session, if you know where the learner is, then you know where you should start. They may already be aware of some issues or weaknesses that have been raised during daily readouts or a prior summative feedback session. Ask them how they think they are doing, or what they see as their biggest challenges. Asking these questions shows that you are interested in their perspective and that you care about their opinion. The learner also becomes more engaged and may be less fatigued by the interaction. Research has shown that there is actual mental fatigue that accumulates with longer virtual meetings due to the cognitive dissonance that occurs. Your brain tires as it constantly tries to reconcile the fact that you are talking to a person and seeing them but are missing the usual social cues it is used to for an in-person setting.(4)

Offer appreciation before criticism.

Point out what the resident has done well, that you appreciate the work they have done, and provide examples of what they have been able to achieve thus far. Often these are stressful conversations for the trainee, made more awkward through the clunkiness of a zoom call. Showing them how far they have come before showing them how to keep moving forward can provide positive momentum to the conversation and keep them engaged.

State your good intentions and Clarify and Contrast.

Remind the resident that you are providing this feedback because you are invested in their success, and this feedback is given with the intention that they become the best radiologist that they can

be. Along those lines, clarify that there are always things that can be improved upon. The need to improve in certain areas is not something that should be taken personally and internalized as a personal defect. The whole point of residency is to make mistakes in a controlled environment and improve. Feedback provides you with an opportunity for improvement, and like any opportunity, it must be seized upon and pursued to ensure future success.

Have the other person state their key takeaways.

Even in the perfect in-person scenario, the learner may internalize something in a way you did not intend. It is always important to end the session asking the learner to communicate back to you what they are taking away from the session. You might discover that they missed an important point, or that a subtle clarification is needed somewhere. Encouraging the learner to take notes can also be beneficial at the start of the session.

Also, I always like to joke that "It isn't officially a Zoom meeting until someone speaks while muted." Although the technology is amazing, it remains imperfect, and some hiccups along the way are inevitable. Small interruptions can be remedied but you can't always be sure that everything was heard correctly. Asking the learner to clarify their takeaways can also ensure that technology did not get in the way of your message.

Conclusion

Post-pandemic remote learning and teaching are permanent fixtures of the radiology educational landscape. As feedback is one of the cornerstones for an effective educational program, it is important that we lean into improving our strategies for given this feedback remotely. We should use what we already know about

great feedback strategies while applying new practices to our remote environment to ensure that we provide the best and most useful feedback experience for our trainees.

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THE ACER CONNECTION

THE OFFICIAL E-NEWSLETTER OF THE ALLIANCE OF CLINICIAN EDUCATORS IN RADIOLOGY

ACER Publications Committee Landscape Photo Cover Contest

The ACER Publications Committee invited ACER and AAR Members to submit their best winning landscape photo to be considered for the front cover of the spring 2025 issue of *The ACER Connection*.

Types of landscape photography that were considered were:

1. Urban
2. Rural
3. Nature
4. Skyscape/Cloudscape
5. Architectural
6. Seascape
7. Mountain landscape
8. Forest landscape
9. Sunrise/Sunset

2023 ACER Landscape Photo Cover Contest Winner: *"Icebergs are blue: Alaska"*. Photo submitted by Susan Summerton, M.D.

ACER and AAR Members could submit up to 3 image entries. Selection of the best photo was made by the ACER Publications Committee with the names of the ACER and AUR Members anonymized.

There was a total of 10 artistic or humorous radiology submissions. photo submissions. The following pages show the winning photo, that is on the cover of spring issue of *The ACER Connection,* along with the other great photos submitted.

Thank you everyone who participated!

ACER Landscape Photo Cover Contest Winner

"In winter air above Segovia"

Photo submitted by: Lauren Hui, 3rd year medical student from Texas Christian University Anne Burnett School of Medicine

Other Landscape Photo Submissions

"Twin palm reflections in Koh Samui, Thailand"
Photo submitted by: Lauren Hui, 3rd year medical student from Texas Christian University Anne Burnett School of Medicine

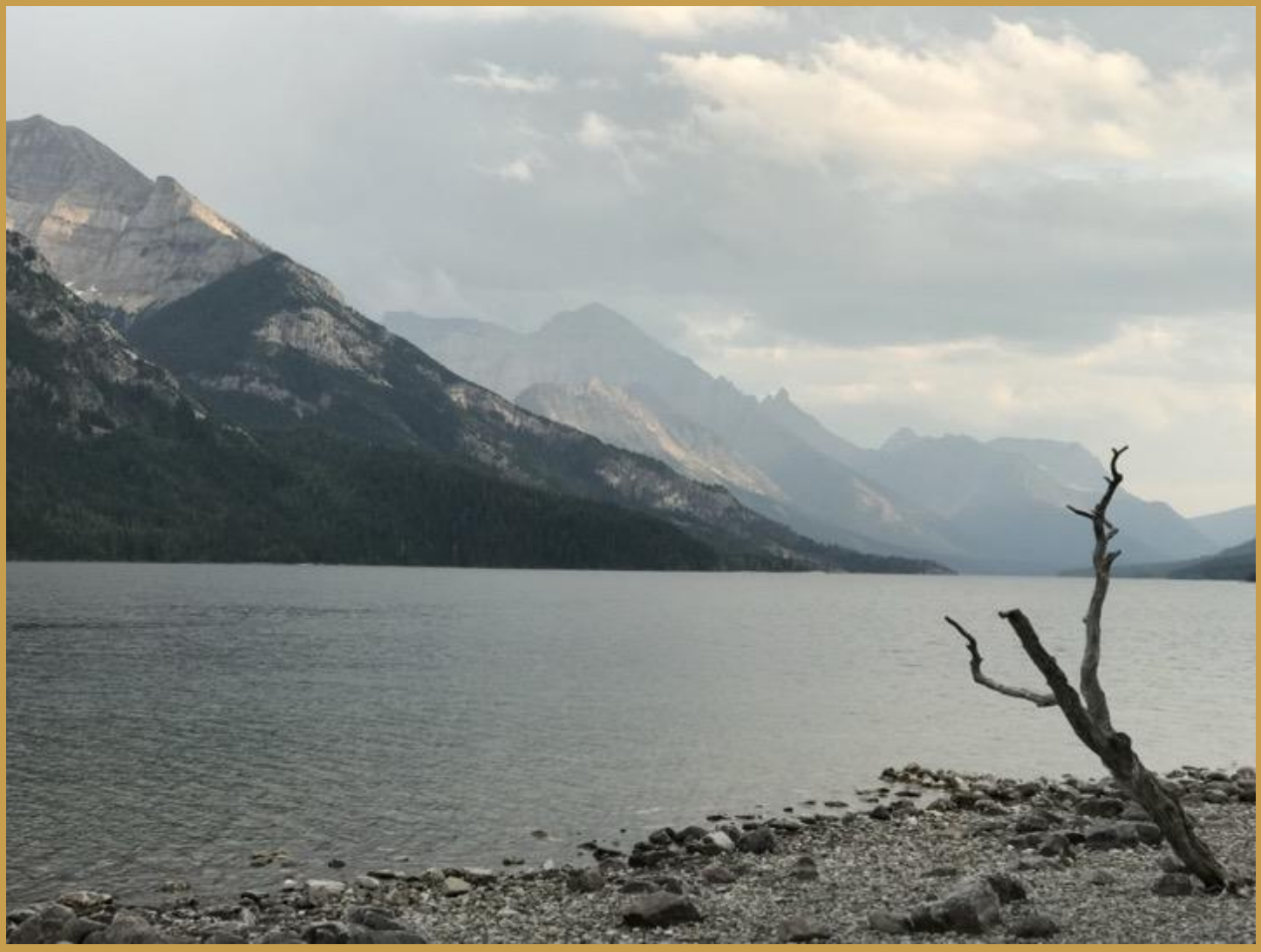
"Catedral de Segovia on New Yea's Eve"
Photo submitted by: Lauren Hui, 3rd year medical student from Texas Christian University Anne Burnett School of

"Spirit Island Maligne Lake Jasper Canada"

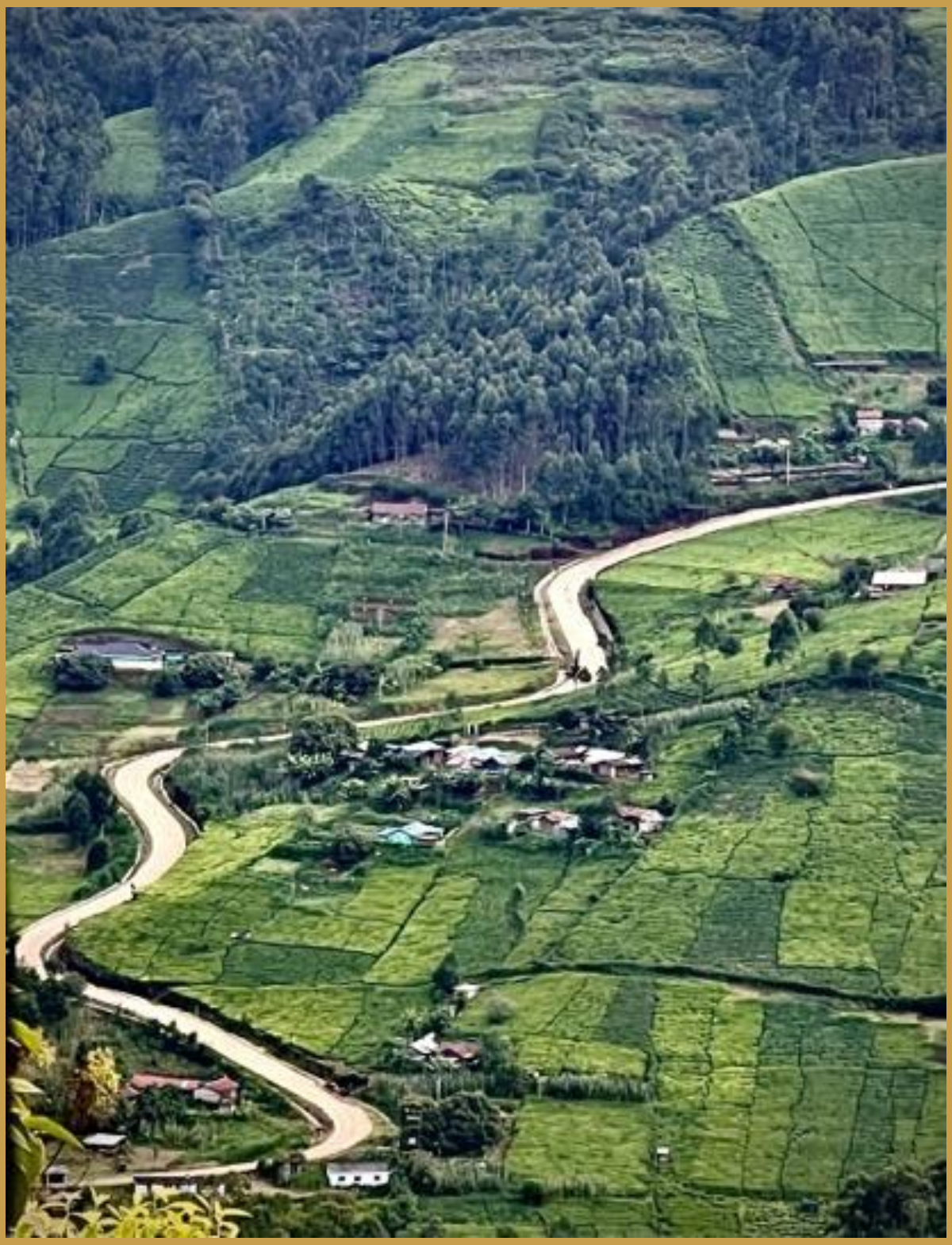
Photo submitted by: Sandra Gad, medical student at St. George's University and research specialist at University of North Carolina .

"Waterton Lakes Alberta Canada"

Photo submitted by: Sandra Gad, medical student at St. George's University and research specialist at University of North Carolina

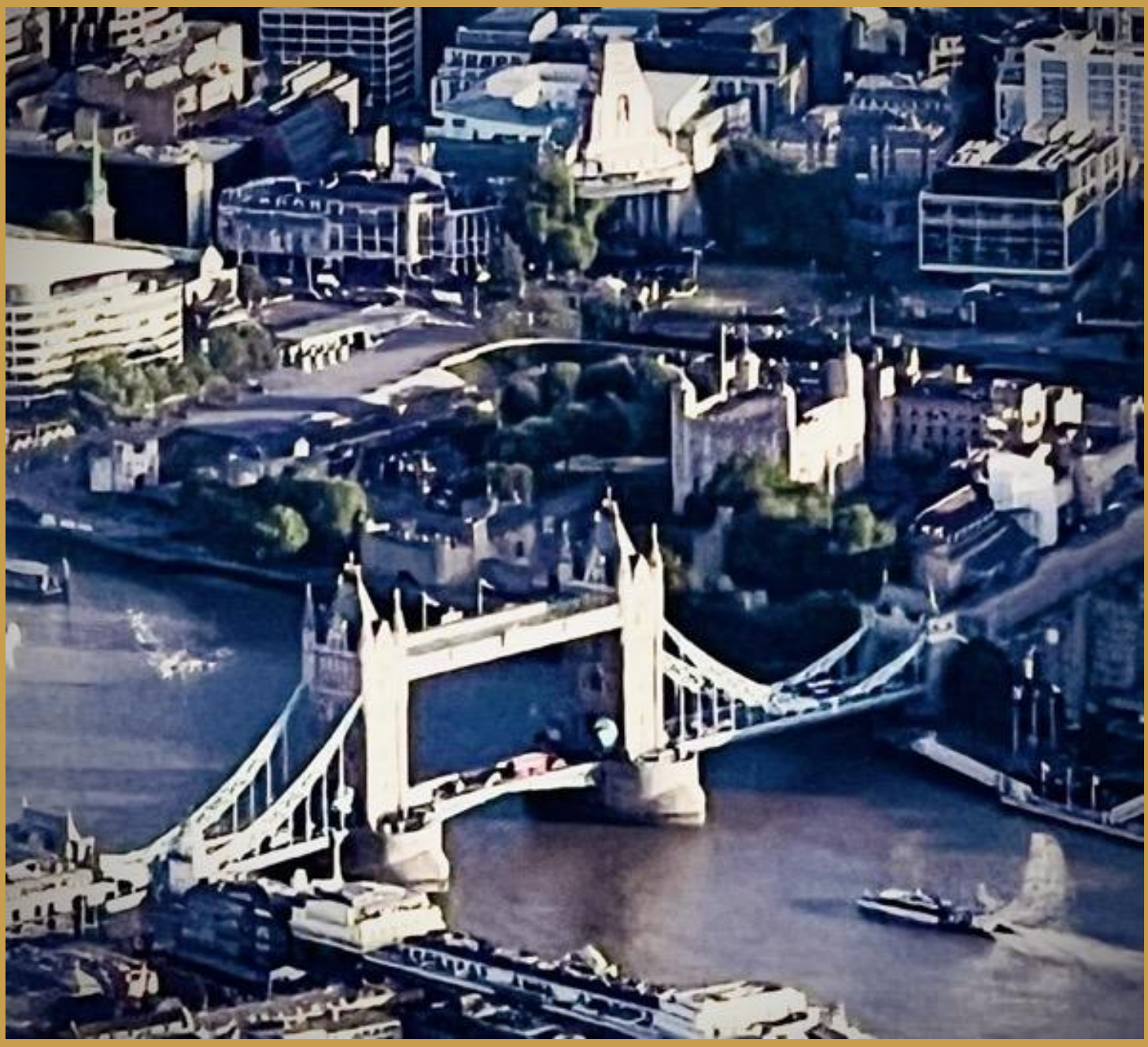


"Team Farms; Tutho, Kenya"
Photo submitted by: Ruth W. Magera, MD, MBA from Dartmouth Hitchcock Medical Center



"London Bridge; London, UK"

Photo submitted by: Ruth W. Magera, MD, MBA from Dartmouth Hitchcock Medical Center



"Doha @ Dusk; Doha, Qatar"

Photo submitted by: Ruth W. Magera, MD, MBA from Dartmouth Hitchcock Medical Center

"Kanyakumari; Tamil Nadu, India"

Photo submitted by: Nickolas (Nick) Koshy from
Western Michigan University Homer Stryker M.D. School of Medicine

"Atlanta Botanical Gardens"

Photo submitted by: Nickolas (Nick) Koshy from
Western Michigan University Homer Stryker M.D. School of Medicine

Maximizing the Fourth Year: Mini-Fellowships in Radiology Residency Training from the Views of Program Directors

By Victoria Reick-Mitrisin, DO

Introduction

The field of radiology is experiencing unprecedented changes in volume, practice patterns, artificial intelligence advancements, and social advocacy initiatives. To prepare future radiologists for success in this evolving landscape, resident education must adapt accordingly. The fourth year of radiology training presents a unique opportunity for residents to expand both their analytical capabilities and humanistic awareness while developing specialized skills. This critical period allows trainees to not only survive in an ever-changing field but also contribute to its evolution through innovation and comprehensive development.

This article outlines a few examples of how various programs maximized their fund of opportunities for their fourth year residents. Two Program Directors were interviewed to provide their input and recommendations to trainees: Dr. Nana Y. Ohene Baah is program director at University of Louisville. Dr. Baah is an Assistant Professor in the Department of Radiology at the University of Louisville School of Medicine. He specializes in vascular and interventional radiology. Dr. Steven S. Harris is the program director at Vanderbilt University. Dr. Steven S. Harris is an Assistant Professor of Clinical Radiology and Radiological Sciences at Vanderbilt University School of Medicine. He specializes in abdominal imaging.

The Fourth Year Advantage

During the fourth year of radiology training, residents have typically met their basic requirements for graduation. However, as Dr. Harris emphasizes, this period should be viewed not as a continuation of routine training but as an audition for independent practice. While it's impossible to become an expert in every aspect of radiology within a lifetime, this year provides the privilege of both broadening knowledge and focusing on areas of specific passion or interest.

The 2023 ACER newsletter highlights the importance of regular meetings between trainees and advisors during this period in Dr. Bello's prior article on radiology residency tracks. Through monthly discussions of specific interests, these meetings have the potential to foster deeper mentorship connections and may help prevent long-term burnout. This structured guidance helps residents challenge themselves with less familiar aspects of radiology, establish systematic search patterns, and build confidence in clinical decision-making.

Institutional Support and Programs

Many institutions have created innovative environments that support fourth-year initiatives through protected academic time and resources. At Emory University, the department has implemented a pioneering approach by partially funding positions that allow residents to pursue global initiatives or dedicate specific blocks exclusively to research. Their research track provides not only protected time but also structured formal instruction for guidance.

The University of Louisville demonstrates the value of flexibility in fourth-year programming. Their comprehensive approach includes specialized pathways such as, advanced body rotation, vascular ultrasound rotation, and advanced imaging rotations that allow residents additional exposure to interventional cases. Beyond these structured options, residents have the freedom to design their own fourth year curriculum based on specific interests. Past residents have leveraged this flexibility to create lasting improvements in the program, from developing hands-on workshops for vertebral augmentation, establishing mentorship pathway programs with high schoolers, to establishing trauma databases that continue to benefit future residents.

Vanderbilt University's integrated pathway system, implemented over five years ago, represents another successful model.

Residents begin by selecting projects early in their residency that culminate during their fourth year. During their final year, residents typically receive one day per week for project work. The scope of these projects varies widely, from clinical focus to sustainability initiatives and educational programs. Dr. Harris notes that some of the most successful projects build upon previous work, citing an ongoing patient education initiative in breast imaging as a prime example.

Keys to Success

Dr. Baah emphasizes the crucial importance of self-assessment in maximizing the fourth year's potential. After three years of training, residents must engage in honest introspection about their strengths, weaknesses, and goals for future practice. This self-awareness enables residents to structure their fourth year as truly supplementary training that addresses specific deficiencies while building on existing strengths.

Mentorship plays a vital role in the success of fourth-year initiatives. Dr. Harris particularly emphasizes the importance of early mentor identification, given the relatively short timeframe of the fourth year. Residents who establish these relationships early in their training often find greater success in their projects and overall professional development.

Impact and Outcomes

The breadth of recent resident projects demonstrates the tremendous potential of well-structured fourth-year programs. Some residents have developed novel engineering techniques that have led to patent applications, while others have focused on community outreach, creating comprehensive screening programs that extend radiology's impact beyond hospital walls. Patient education initiatives have proven particularly rewarding,

with residents developing materials and programs that continue to benefit patients long after their graduation.

Expert Guidance for Future Success

Dr. Harris provides valuable perspective on ensuring fourth-year success, emphasizing the importance of authentic career planning over market-driven decisions. He advises residents to focus on areas that bring personal satisfaction and reward, rather than simply pursuing what might look impressive on paper. This period offers a unique opportunity to receive expert feedback and guidance while still in a supportive training environment. However, as Dr. Harris emphasizes, this period should be viewed not as a continuation of routine training but as an opportunity to hone and develop new skills for independent practice.

Dr. Baah offers a practical approach to specialty selection, suggesting that residents imagine themselves in a reading room with multiple PACS stations representing different modalities. He advises that the station to which one naturally gravitates often indicates the best specialty choice, while the least appealing station might represent an area requiring focused attention during the fourth year.

Conclusion

The fourth year of radiology training represents a crucial period for professional development and specialization. Through structured programs, meaningful mentorship, and self-directed learning, residents can use this time to build both confidence and competence. This year offers a unique opportunity to pursue specialized interests while addressing areas for improvement, ultimately preparing residents for successful careers in an evolving field. The key to maximizing this year lies in thoughtful planning, honest self-assessment, and a willingness to embrace both challenges and opportunities for growth.

Retrospective Vignette on the Radiology Residency Experience, by a Stellar Ex-Chief Resident

By

Ruth W. Magera, MD, MBA

Interview with Dr. Brian Barnacle, MD.JD. current Neuroradiology Fellow & future Staff Neuroradiologist at Dartmouth Hitchcock Medical Center.

Q1: Congratulations again on completing your radiology residency, with extra kudos for your role as Chief Resident. Congratulations too on starting your Neuroradiology fellowship. Now that you are almost halfway through fellowship, let us reflect on the journey. Think back on Day 1 of Radiology residency. What was that like? What was the reality of that first day? Did you have any dreams and expectations? How did that compare to your more recent first day of fellowship?

BB: *When I started my radiology residency back on Day 1, I was very excited to start practicing in the specialty I had chosen. I had already spent my first-year practicing medicine and completing the required preliminary year outside of radiology. Now I had the chance to actually start practicing in the field of my interest. I welcomed the experience.*

My first day as a radiology resident was on MSK. I did not know what to expect and therefore I did not have any specific expectations. I opened my first radiograph and did not know what to say in my dictation. It was an open template to build upon throughout the rest of the residency.

In contrast, my first day of neuroradiology fellowship was very different. Because I already had basic knowledge of reading studies and performing procedures and knew what to expect. In fact, I entered my fellowship with the specific goal of working to improve my knowledge and procedural skills.

Q2: What section of radiology did you think you wanted to specialize in, when you started residency? Did your choice remain the same or did it change? What was the evolution of your initial *choice as you progressed through your residency?*

BB: When I started residency, I leaned toward neuroradiology. I thought a neuroradiology fellowship would be beneficial because of the high number of neuroradiology studies ordered by clinicians. I also found neuro anatomy to be quite interesting and thought the subspeciality provided opportunities to read a mix of acute studies as well as other interesting pathology. As I progressed through residency and became involved in neuroradiology procedures, I became more convinced that a neuroradiology fellowship was the right path for me. As a resident, I had the opportunity to perform CT guided pain procedures such as nerve blocks, spine biopsies, and vertebroplasties, which were quite interesting and provided a good change of pace between reading diagnostic studies.

Q3: Three to six months into residency, once you were settled and had a real sense of what being a radiology resident entailed; what was a typical day like? What were some highlights? Are there any particular challenges that stand out from that time?

BB: A typical day involved rotating on a service with a senior resident who could provide mentorship. Some of our diagnostic

rotations such as MSK and neuro perform a lot of procedures. On neuro I was responsible for helping to work up biopsy requests, and was also expected to perform procedures, such as lumbar punctures. On MSK, I was expected to perform joint injections and aspirations, at least a half day per week. Other rotations focused on reading basic studies. For instance, on chest rotations, we focused on reading as many chest radiographs as possible. There were no particular challenges that stand out from that time.

Q4: What can you tell us about your classmates & how you interacted with them? What about the other class years? How did these relationships impact your residency? Were there any particular activities or arrangements that were already set up before that helped the process? Were there any new activities initiated by your class?

BB: My fellow classmates were smart, knowledgeable, and personable. During my first year of residency, I was always paired with a senior resident on rotations. They were great resources of knowledge and provided guidance. The program also had peer mentor groups set up for this purpose, and they worked out quite well. As a result, our class did not initiate any new activities.

Q5: If you could pick three things that worked well during residency. what would they be, and why?

One thing that worked well in residency was the number of procedures that we had the opportunity to perform. On my first week of MSK, I was in the procedure room performing joint injections and aspirations. This trend continued during my neuroradiology rotation as well, where I started performing lumbar punctures and myelograms on my first rotation. In retrospect, I

now feel very comfortable performing a variety of procedures as a diagnostic radiologist, thanks to being able to learn and perform these procedures from day one.

A second thing that worked well in residency was the design for Core exam preparation. Several faculty dedicated their time to review cases, to help us prepare for the CORE exam. We usually met in the mornings at 7 AM before the work day started. One faculty member also bought all of the R3s case books, which was also quite helpful and kind.

The third thing that really worked well was the residency programs scheduling of call in a way that was conducive to learning and minimized burnout. Once we started formal radiology call, if we were assigned to cover an evening shift, then we were given the morning prior off from our clinical rotations. Also, when we had weekend call, which was quite busy, our prior work week schedule was adjusted to have the prior Thursday and Friday off from our clinical duties as well.

Q6: Two things that did not work well. What are they and how would you change or replace them?

One thing that definitely did not work well in residency was the requirement that residents perform afterhours ultrasound procedures. Given the high volume of our emergency department, this meant frequently foregoing the chance to read high-yield cross sectional studies, to perform the emergent ultrasound procedure. While proficiency in performing an US is a great skill for radiologists, the opportunity cost of not reading the complex cross-sectional imaging, quickly exceeded the benefit of performing ultrasounds once we became proficient at US, which

happened quite early in residency. This situation could be improved by hiring overnight sonographers.

Another aspect that did not work well, was that we did not have MRI techs on site overnight. Instead, we had a limited number of specific emergent circumstances for which an MRI tech could be called to come in to perform. We were involved in determining if a study ordered met the criteria to be performed immediately or had to wait until the regular scheduled daytime hours. An additional complication was also that we could not 'guarantee' when the study could be performed the next day, as the MRI schedule was managed separately from this process and was often backed-up with no open slots to schedule the cases triaged from the night before. This resulted in lengthy consults, often about why we could not perform the study right away. Ultimately, this was another time-consuming situation that detracted from the main work of reading studies. Our program finally resolved this situation just as I completed my residency, by employing dedicated afterhours/overnight MRI techs.

Q7: If you could add any single thing or process to improve the training. What would it be and why?

BB: During our first year of radiology training, residents spend seven weeks on fluoroscopy. While we did learn how to perform esophagograms and GI leak studies, most of our work involved operating the fluoroscopy tower for speech therapists, a low yield task. Similarly, to learn how to perform US for Call, residents spend seven weeks on US learning to performing scans on patients. This specific time spent on fluoroscopy and ultrasound rotations, takes away valuable time from reading studies. I would shorten this time spent on fluoroscopy and ultrasound, to allow more time actually reading studies or on other rotations, where

residents could read advanced imaging.

Q8: What do you know now, that you wish you were aware of throughout your residency?

BB: Early in residency, I don't think I appreciated the modern trend of where radiology was going. Our clinicians need us to interpret advanced cross-sectional imaging and perform image guided procedures for them. I wish I spent more time reading MRI in residency. In fellowship, some clinicians admitted to me that they don't always understand what they are looking at on cross sectional imaging. In addition to the interpretation of imaging, our clinicians also rely heavily on us for procedures. Our Neuroradiology service is very busy performing biopsies, spine pain procedures and also frequently doing image guided lumbar punctures. I appreciate that our expertise on interpretation of advanced cross-sectional imaging and performing radiology procedures, provide a lot of value to our clinicians and their patients.

Q9: Any profound life lessons that you have learned and continue to use?

BB: I did not take a traditional path into medicine. I spent 6 years on active duty in the U.S. Army before pursuing a career in medicine. I volunteered during the height of the Iraq and Afghanistan wars, when the Army struggled to recruit. I was not a one-time volunteer though. I also volunteered for Airborne School and jumped out of a plane 9 times, and again for Air Assault School and repelled out of a helicopter. I had the chance to lead soldiers and spent a year in Iraq. When I returned from Iraq, my request to deploy to Afghanistan was denied and it was at that point, that I left the Army to start my career in medicine.

The life lessons I learned operating in stressful situations, communicating with people from other cultures, and leading people, was extremely handy during my residency. In healthcare, it is really important for providers to remain level headed, not panic, and communicate compassionately with patients and their families. I have also used these skills, with fellow colleagues, when I have had more than one emergent finding to report at the same time. It is important for radiologists to remain level headed and use good judgement to triage, in order to optimize patient care.

Q10: What advice do you have for our newbie first year radiology residents?

BB: It is really quite simple. First year residents, from day one, strive towards becoming proficient at reading studies and at performing image guided procedures. This is the 'be all end all' of your residency.

Bridging Healthcare Gaps Through a Volunteer-Run Imaging Clinic

By Hernán Bello, MD

According to the World Health Organization, two-thirds of the global population lack access to any diagnostic imaging services. While many of the underserved live in low- and middle-income countries, where stark healthcare inequalities exist, disparities are also present and growing in wealthier nations like the United States. In the U.S., the uninsured and underinsured population remains significant, particularly in certain geographic regions and among vulnerable groups such as immigrants and refugees.

One such community is the city of Clarkston, Georgia (population 14,756), located just 10 miles East of downtown Atlanta, —often called "Ellis Island of the South" and once dubbed "the most diverse square mile in America."[1,2] For decades, Clarkston has been a designated refugee resettlement community, welcoming people from all over the world fleeing war and persecution. While refugees in the U.S. may be eligible to receive government healthcare assistance for a limited period[3], they are expected to secure their own healthcare access afterward. The need in Clarkston is well documented: as of 2017, over 40% of its population lived below the poverty line, and 33% were uninsured—nearly three times the national average[4]. Numerous organizations, including community health centers, have long worked to provide healthcare services to this vulnerable population.

Recognizing this need, a group of Emory radiology residents and their advisors in 2019 envisioned offering free imaging services to the Clarkston community in partnership with local health centers[5]. Given its affordability, portability, and safety, ultrasound was the natural starting point. Leveraging donated equipment and government grants, our partner health center was able to secure an ultrasound machine. Our clinic’s vision was to provide the expertise and human resources required to operate an imaging

clinic by recruiting volunteer sonographers, medical students, radiology residents, and faculty.

However, establishing a volunteer-run ultrasound clinic proved more complicated than anticipated. Initially, we faced questions about financial management and tax liability, prompting us to form a separate 501(c)(3) nonprofit organization with the help of a pro bono attorney. Medico-legal liability concerns also arose: Would our volunteers—students, residents, sonographers, and faculty—be covered by malpractice insurance while working outside the boundaries of their regular day jobs? Could they be held personally liable? Regulations vary by state, and we discovered that Georgia offers legal protection to healthcare volunteers serving low-income populations under certain conditions. Addressing these financial and legal issues was essential before we could begin seeing patients.

The Role of Informatics in Expanding Access

A common bottleneck in running a specialty clinic is the availability of physician specialists. For example, in an ophthalmology clinic, a trained ophthalmologist must personally evaluate each patient, limiting scalability. Radiology, however, benefits from a distinct advantage—our workflows have long been designed for remote image interpretation, enabled by advancements in information technology and systems.

The clinic's founders, Dr. Thongkham, in our residency program's clinical education track, and Dr. Chung, specializing in the imaging informatics track, recognized that detaching image acquisition and early interpretation by residents from final interpretation by volunteer faculty radiologists, offering flexibility in reporting, would be crucial. Implementing a HIPAA-compliant system for online storage and remote image viewing and

interpretation via a cloud-based PACS became a priority. Our workflow requires transferring ultrasound images from the modality to PACS, storing them securely per legal requirements, and ensuring that preliminary reports and sonographer worksheets are accessible to interpreting radiologists. Once finalized, reports must be sent back to referring providers using an online EMR. While these processes are streamlined in hospital settings, we are continuously looking for ways to enhance efficiency in a low-resource environment.

Overcoming Challenges and Sustaining Growth

Launching the Clarkston Imaging Clinic in 2020 was further complicated by the COVID-19 pandemic. However, because all our volunteers were affiliated with the same institution, we were able to follow uniform safety protocols mimicking the procedures that we were using in the hospital. Despite these challenges, we began seeing patients that same year and have held nearly uninterrupted monthly clinics since.

One of the biggest challenges is recruiting enough volunteer sonographers—a key factor in determining our clinic's capacity. To address this, we focused on engaging highly motivated sonographers in a leadership role, where they can participate in quality improvement as well as recruitment of other volunteers within their networks. Technologists' motivations for volunteering vary, some are semi-retired or simply looking to give back, others have personal ties to the community, and some are early-career sonographers seeking leadership experience or considering a transition to medical school or physician assistant programs.

Clarkston Imaging Clinic volunteer checking patients in.

A Unique Learning Environment

Since its launch, the clinic has provided a unique space for faculty, residents, medical students, and sonographers to collaborate in ways that busy hospital schedules rarely allow. A dedicated medical student serves as the clinic coordinator, working closely with residents and faculty advisors, and gaining valuable leadership and organizational skills. Residents in the education, global health, and/or informatics tracks of our residency program volunteer to lead the clinic, focusing on improving workflows and service quality while primarily interfacing with our partners in the community health centers where we operate. Medical students are introduced to radiology through a health equity lens, often absent from the usual hospital experience. Radiology residents and medical students work closely with sonographers, developing their ultrasound scanning technique. Additionally, residents have the opportunity to hone their teaching skills while working with medical students.

Opportunities for direct community engagement can seem difficult to come by in radiology, but its capacity for remote work makes initiatives like ours sustainable. A volunteer-run imaging clinic can serve as a nexus for education, mentorship, imaging informatics, and health equity—helping bridge healthcare gaps that exist in our own backyard.

Acknowledging the Clarkston Imaging Clinic leadership team (past and present): Charlotte Chung, Dean Thongkham, Kieko Smith, Annie Goodwin, Jada Hislop, Wilson Battle, Fiza Khan, Roger Gerard, Edna Wang, Patrick Arraj, Joshua Volin, Sadhna Nandwana, Smyrna Tuburan, Nabile Safdar, our partners over the years at Ethne Health and Mosaic Health Center, and all who volunteer at our clinic.

People pose for a group photo during the World Refugee Day Celebration hosted by the Coalition of Refugee Service Agencies at Refuge Coffee Co. in Clarkston on Saturday, June 25, 2022. Photo by Dean Hesse.

Source: https://decaturish.com/2022/06/photos-clarkston-celebrates-refugees-at-world-refugee-day-event/

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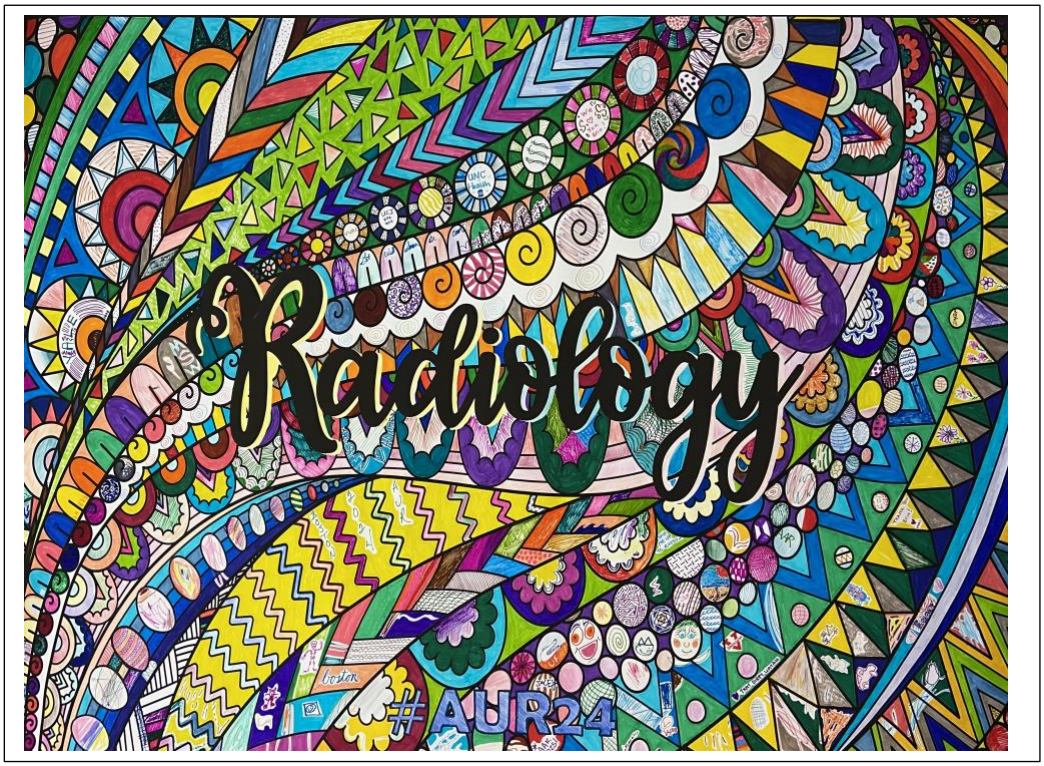
The Integration of Art in Radiology: Enhancing Education, Wellness, and Connection

By Victoria Reick-Mitrisin, DO



Art has emerged as a powerful tool in radiological education and practice, offering unique opportunities for communication, learning, and professional development. By bridging the gap between clinical practice and creative expression, the integration of art in radiology is transforming how professionals approach their work and connect with colleagues.

The Educational Impact

Research has demonstrated that incorporating visual thinking strategies through art can significantly enhance radiological education. These approaches help illustrate the crucial relationship between perception and clinical conclusions while reducing pressure on learners. Importantly, studies have shown that integrating art into educational strategies improves both empathy and comfort with ambiguity—essential skills in radiological practice. (Bentwich, Cooke)

Institutional Initiatives

The field has seen several notable developments in recent years. The ACER task force stands as a prime example, focusing on clinician wellness, resident education, and diversity and inclusion. At Vanderbilt, the annual DEI week incorporates art-related events, including discussions on African American art and community engagement activities. These initiatives reflect a growing recognition of art's value in medical education and professional development.

Personal Perspectives

Nicholas Gatto, currently in his transitional year, offers compelling insights into the intersection of art and radiology. His experience at the AAR, where he participated in collaborative art projects like group murals, highlighted art's ability to foster connection among colleagues. "I was excited to see that so many people had an outlet to share their creativity," Gatto reflects. "We forget that we all have our separate lives and being able to share a bit of our lives with one another is this beautiful thing."

As a parent balancing professional responsibilities, Gatto has found artistic activities particularly valuable for both personal and professional growth. He notes that relating medical concepts to artistic mediums enhances his pattern recognition and problem-solving abilities, while also improving information retention. He reflects, “I think art and radiology learning are deeply entrenched. You start seeing visual patterns and start thinking in visual ways. When I see something, I start to relate to something non-medical it helps me learn better.”

As the president of his TY cohort, he also plans to incorporate some of the initiatives he saw at the AAR into his program to enhance resident wellness and communication.

Teaching Through Art

Dr. Erin Cooke has implemented innovative approaches to incorporating art into resident education. Her quarterly art wellness sessions range from group drawing activities to museum visits during noon conferences. These sessions serve multiple purposes: enhancing problem-solving skills, improving communication abilities, and fostering team bonding. Learning via art can also help us understand how we approach an image and where we are making errors. (Cooke)

"The residents can practice describing something that is a little bit outside of their normal range, similar to being on call, learn to convey to somebody that cannot see what you are looking at what it is we are seeing," Cooke explains. She emphasizes the dual benefit of these sessions—educational value combined with stress relief. The activities provide a welcome break from routine clinical work while maintaining educational objectives in a less intimidating environment.

Appreciating the Aesthetic in Clinical Practice

Beyond its educational applications, art in radiology helps practitioners maintain perspective on their work's inherent beauty. As one Dr. Cooke notes, "When we are looking at images, we are sometimes very busy and stressed. But if we can pause for just one second, you can appreciate that it is often visually beautiful. There are often images that are very striking... We are in this one piece and this very special piece of this clinical picture."

Looking Forward

While the integration of art in radiology has made significant strides, there remains considerable untapped potential. As more institutions recognize the value of artistic approaches in medical education and professional development, we can expect to see continued innovation in this space. The combination of clinical expertise with artistic expression promises to enhance both the practice of radiology and the experiences of those who work within it.

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Informal Feedback

By

Juan D Guerrero-Calderon, MD

Feedback is central in medicine, promoting learning and ensuring the meeting of standards. Providing feedback to trainees, colleagues, and staff is an important skill that will ultimately result in better patient outcomes. Feedback facilitates the progress of the learning process. (1) It can be frequent and ongoing (formative) or can take place as an impression at the end of a major step (summative). (2,3) When feedback is inadequate, it is just an assessment. When feedback is effective, it reinforces good practice, contributes to learning, and promotes progress from actual to desired performance. (1)

The ACGME recognizes formal and informal feedback. Formal feedback is structured, consisting of completing forms assessing the six Core Competencies of Patient Care, Medical Knowledge, Professionalism, Interpersonal and Communication Skills, Practice-based Learning and Improvement, and Systems-based Practice. It should be followed with a documented discussion. (4) Informal feedback occurs ‘on-the-spot’ and may result in uncomfortable conversations. It usually occurs spontaneously, usually during or immediately after observation of the recipient. Different from instruction, it focuses on principles, concepts, and patterns more than on facts or events. (1) A common complaint from learners is that the receipt of informal feedback is infrequent and inadequate. (2)

Feedback can have different specific purposes. We tend to utilize feedback to point out gaps and areas of improvement. However, it is important to also provide positive feedback. Regardless of the

purpose, feedback is ideally constructive. Constructive feedback is task-focused and enhances the learning experience. Inspiring feedback enhances the learner's confidence and achievement potential; it is powerful in education and is considered an essential element of leadership. (1) Finally, corrective feedback is a task-focused feedback that intends to correct frequent or significant mistakes or below-normal performance. (1)

The recipient's response to feedback can't be predicted with certainty. Although not ideal, the sandwich technique is used by many to improve how it is received; it layers the difficult points of feedback between strength points or encouragement. Nevertheless, there is higher educational value in the dialogue-based Pendleton approach to feedback, which is centered on the learner's input. The educator asks the learner what went well and responds with educational insight. This is followed by a clear discussion of improvement points and an achievable plan of action that will accomplish the desired outcome. (2)

Feedback goes beyond evaluation and into the realm of coaching. The evaluation process and result must go beyond a paper sheet and into a dialogue in which the educator shares guidance on improving the learner's performance. This is how an evaluation becomes feedback. Feedback is successful if it motivates the receiver to proactively address their gaps in order to arrive to the desired outcome. Feedback contributes to lifelong learning skills. We have to plan the delivery of our feedback in order to be effective educators. Our health systems and radiology practices should include feedback practice in faculty development activities and in the educational curriculum. Like other quality improvement

projects, we should regularly re-assess our practice of feedback so that we can continue being effective educators. (1)

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Answers to Fun Facts about Los Angeles

Fun Facts About Los Angeles

ACROSS

1 Pier with a Ferris wheel
4 Iconic observatory in LA
5 Scenic drive in LA
8 Neighborhood with a namesake lake
11 Studios with a theme park
13 Famous tar pits in LA
16 Major thoroughfare in LA
17 Hills, affluent LA suburb
18 LA's Major League Baseball team
19 Famous boulevard in LA

DOWN

1 Center for sports and concerts
2 City of ___
3 Historic neighborhood in LA
6 NBA team based in LA
7 Historic theater on Hollywood Blvd
9 Beverly Hills shopping street
10 Famous film industry hub
12 Beach known for its canals
14 Baseball team in Anaheim
15 Renowned art museum in LA

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Biren A. Shah, MD

bshah@dmc.org

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