Alliance of Clinician-Educators in Radiology

Newsletter Volume 10, Issue 1 February 2021

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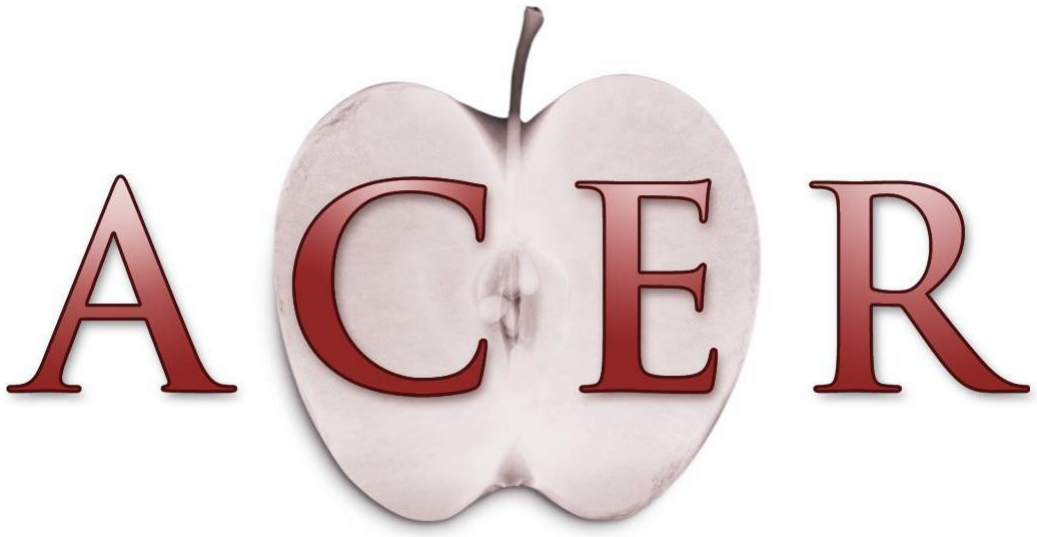

This newsletter serves to highlight the current ACER goals and available resources and to keep members informed of ongoing projects.

Members and potential new members are encouraged to get involved in the stimulating and worthwhile activities of ACER. One way this can be achieved is through committee membership and organizational leadership, please contact Katherine A. Klein, MD, ACER president.

Members are also invited to send their contributions to the upcoming ACER newsletters to Monica Sheth or Jordana Phillips.

~ Jordana and Monica

ACER's 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 AUR meeting targeted towards the needs of clinician-educators.

ACER: Benefits of Membership

• Access to information and networking database for the benefit, awareness, and nurturing of clinician-educators.

• Opportunities for involvement in educational research activities relevant to clinician-educators.

Membership Update

• As of September 2020, the AUR total membership stands at 756.

• ACER has 184 members, consisting of 168 full time members and 16 junior members.

• ACER's membership is second to AMSER's (264) among the AUR Affinity Groups; other Affinity Groups include RRA (121), RAHSR (66) and A_3CR_2 (36).

Reflections on 2020

By **Katherine A. Klein**

2020

One star! That is all I can give 2020. It's been a rough year for everyone. Quick review:

1. Pandemic-400,000 + American deaths and that number is climbing
2. Delays in health care
3. The egregious health disparities and how Covid affected specific populations more than others
4. National AUR meeting cancellation along with many other national society meeting cancellations.
5. Fellow staff members furloughed or let go (RIF'd).
6. Trainees sent home with uncertain return dates.
7. The Death of George Floyd and others brought the horrible divide in our country to the forefront
8. Canceled international and cross-country travel
9. Election Drama and the polarization of our country
10. The quarantining and marked decrease in personal and social interactions for both adults and children
11. The substantial decline in all of our mental health
12. Funeral attendance
13. Canceled weddings and other significant events

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Ok. During my reflection, I can think of a few things that deserve an additional star.

1. Zoom and virtual communication platforms
2. E-medicine and virtual medical appointments
3. Masks and PPE volume improvement
4. Jigsaw Puzzles
5. Cooking and mixology
6. A slight increase in Inpatient visiting
7. Stimulus checks
8. Increase in car sales
9. Major companies overhauling their factories to create ventilators and masks
10. Only having to style the front half of your hair

Maybe even better.

1. Opportunity to be creative in the development of our teaching curriculum
2. Virtual teaching from any location
3. Work flexibility

4. Masks covering unpleasant facial expressions
5. Bread making
6. Food and Grocery delivery service
7. NBA bubble
8. Virtual interview for students and residents
9. Blouses with jogging pants
10. Return of Drive-in movies
11. Virtual Museum tours
12. Starting new hobbies

There are a few good things. Like the following:

1. Recorded virtual meetings and conferences for flexible viewing
2. Aquifer online round tables
3. Informative and interactive ACER Twitter chats
4. International guest lecturers without travel
5. The adopting, fostering, and purchasing of new pets
6. Cheaper Airline costs
7. Easier parking at hospital and workplaces
8. Netflix and other TV binging apps
9. Peloton
10. Easier commutes
11. Increased awareness of cleanliness
12. Increased IT knowledge
13. More facetime with family and friends
14. Online cooking classes
15. Significant Increase in charitable acts and volunteerism in our country

What deserves the big Five Stars (I'm trying to make lemonade).

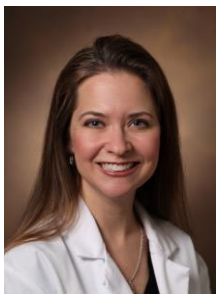
1. 2020's New Year's Eve
2. Availability of effective vaccines
3. ACER's future and its plan for increased online and interactive content throughout 2021 for our members.
4. All the money saved from not traveling
5. All the new pandemic babies entering 2021
6. Strong focus on improving wellness and mental health.

As you can see from my lists, I am trying to reflect on a troubled, dangerous, and depressing year. Thinking about what we learned that deserves more than the initial one star we all feel. This year, my goal as the ACER president is to have more interactive online sessions to keep our members connected. 2021 will be a new year of caring, innovation, inclusion, integrity, and teamwork! So proud to be a part of this Alliance and looking forward to a new year with better ratings.

Pivoting During the Pandemic: Challenges of Breast Imaging Education Magnified and Solved

By **Katie M. Davis DO, Christine K. Dove MD**, & **Tamarya L. Hoyt MD**





One could imagine the hurdles the Vanderbilt Breast Imaging Center faced in March 2020: screening examinations paused, diagnostic examinations markedly decreased, new safety precautions implemented, faculty and staff workflows adjusted-all of which impacted resident education. "When the pandemic hit and social distancing became a priority, our traditional methods of teaching breast imaging had to evolve quickly," describes Dr. Christine Dove. "Sitting together in a shared workspace for eight hours was no longer an option, and we had an opportunity to reimagine resident education."

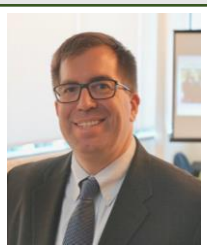
Despite the changes caused by the pandemic, one thing remained steadfast-the desire to provide a meaningful educational experience for rotating radiology residents. In collaboration with my colleagues, Drs. Dove and Hoyt, a virtual breast imaging curriculum was created to supplement the resident workstation experience. Using *the RadioGraphics ABR Diagnostic Core Exam Blueprints Article Breast Imaging Index* as an outline, we compiled articles, book chapters, recorded lectures, widgets, and question banks under subject headers applicable to each level of training (1st, 2nd, 3rd+ breast imaging rotation).

V2On any given day, a resident was assigned to the virtual curriculum, usually for half a day, and would be responsible for reading one article and book chapter, watching one recorded lecture, and answering 5-10 review questions through an accessible online database. Each day (for a total of 20 days), different topics were available to ensure new material was provided. "We developed the virtual curriculum to continue our academic mission remotely. We were able to provide a robust, structured, educational resource to guide the residents through their educational goals," Dr. Dove further explains.
While nothing can replace the dynamic workstation experience, the curriculum has been well-received among our trainees. "Due to the popularity of our easily accessible virtual curriculum, many residents have requested early access to the syllabus, prior to their mammography rotation," Dr. Hoyt states.
Dr. Ryan Adams (R4), one of Vanderbilt's diagnostic radiology chief residents elaborates, "Having curated, high quality, and poignant resources made my personal study far more efficient and effective. When I sat at the reading station with an attending, I was better prepared to ask deeper questions to solidify my learning – and improve my patient care." While formal evaluation of the virtual curriculum is on-going, we consider it a success.

References:
https://pubs.rsna.org/page/radiographics/abr-core-exam-study-guide/br

The Simulated Daily Readout: A Radiology Education Lifeline during COVID-19 Pandemic






By **Monica Sheth, MD; Nancy Fefferman, MD; Jason Hoffmann, MD; Michael Recht, MD**
~ NYU Langone Health, Department of Radiology

When the COVID-19 pandemic hit New York in March 2020, our imaging volumes and diversity of studies plummeted, and with that, so did our ability to perform one of the cornerstones of radiology education, daily readout sessions with our trainees. To maintain radiology resident education, the department implemented several initiatives such as case of the day presentations, additional web-based didactic and case conferences and enhanced use of teaching files. However, none of these resources had the same educational impact as the routine case read out experience.

To address the educational needs and engage our trainees during these unprecedented times, the simulated daily readout (SDR) was created. This required an intensive collaborative effort between radiology faculty and the radiology informatics team to create SDR's two crucial components: 1) resident level-specific curated worklists of normal and abnormal cases for each subspeciality, and 2) an educational picture archiving and communication system (PACS) and dictation system that mimics the routine workflow of study interpretation and report generation. Once both of these components were developed and integrated, SDR was born.

A total of 4910 curated normal and abnormal cases from various modalities were divided into resident level and subspecialty specific SDR daily worklists in hopes to recreate a normal day readout experience in both case mix and number. Trainees were able to review imaging sequences for each case, dictate a complete report, formulate a differential diagnosis, and determine when findings required urgent communication of results to referring clinicians. In the same way that real-time cases are finalized, teaching attendings were engaged in extended read-out sessions with trainees at the workstation, either on-site maintaining social distancing or virtually via video communication tools.

Pre- and post-SDR implementation surveys showed that both residents and teaching faculty felt strongly that this innovative resource mitigated the negative impact of COVID-19 on resident education by effectively mimicking a resident's daily work on rotations. Once case volumes returned, trainees shifted from SDR to reading live cases. However, SDR worklists show promise in non-pandemic times as a means of supplemental teaching and training on radiology rotations, standardization of case exposure to low disease prevalence pathology, or even as an end of rotation assessment tool. Regardless of its future potential, one thing is clear, the development of the SDR provided an effective method for preserving radiology resident education during the COVID-19 pandemic.

Additional details regarding this project can be found in the following publication:

Recht MP, Fefferman NR, Bittman ME, Dane B, Fritz J, Hoffmann JC, Hood J, Mercado CL, Mahajan S, Sheth MM. Preserving Radiology Resident Education During the COVID-19 Pandemic: The Simulated Daily Readout. Acad Radiol. 2020 Aug;27(8):1154-1161.

5 Tips for Teaching Trainees to Present at Case Conferences

By **Jordana Phillips MD, Rashmi Mehta MD MBA**

With the COVID-19 pandemic in full-swing and case numbers increasing around the country and globe, more and more case conferences are being held remotely. As use of remote platforms increase, we provide concrete recommendations to trainees (and staff) for how to use them to effectively present cases while reinforcing the radiologist's role in the healthcare team.

1. Tailor presentation to purpose of conference: We recognize that not all conferences are the same and the relevant imaging varies significantly based on the purpose of the conference. For example, images relevant to a radiology-pathology correlation case conference include those highlighting correct target sampling. These same images are not critical for a discussion of patient management at tumor board.

2. Know your audience: Along with the myriad of conferences, there is heterogeneity of the audience with varied comfort reviewing imaging. It is important for the trainee to know the target audience of the presentation and tailoring the content accordingly. For example, a conference directed to radiologists can include a more detailed imaging review, with an entire cross-sectional study shown. In contrast, a conference directed to non-radiology colleagues should use key representative images and terminology that best conveys the overall impression of the study.

3. Know how the virtual conference platform works: Zoom, Microsoft Teams, and Starleaf are commonly used for conferences, but we are aware that other remote meeting platforms are commonly used. It is critical for the trainee to understand the capabilities of the imaging platform to present the case smoothly. For example, understanding whether two monitors can be displayed simultaneously. If not, then the trainee must ensure to prepare the case using only one monitor. Another example is knowing how to seamlessly mute and unmute the microphone, and how to screen share.

4. Optimize Image Display: Not all imaging displays are the same. When having a conference in person or remotely, presentations are often displayed on horizontally oriented screens. For this reason, images should be displayed to maximize the horizontal dimension. For example, in breast imaging, mammographic CC and MLO images should be placed next to each other, in one horizontal row, rather than having multiple rows of images (see below). The images should be large enough to show the findings, which can be highlighted with clear annotations.

5. Reduce unnecessary distractions: Every effort should be made to minimize distractions during presentations. Avoid rapidly circling the imaging findings with the cursor or continually scrolling through cross-sectional imaging exams without pausing to highlight the actual imaging finding. A final consideration is to maximize keyboard shortcuts rather than opening toolbars during the presentation.

From Survive to Thrive: Where do we Take Radiology Education?

By **Harp Bedi, MD**

We can't go back to the old way when radiology education was dominated by in-person lectures and passive learning. And we can't continue this new era of near-exclusive remote learning, virtual meeting fatigue and disconnection. There has to be a better way.

With the old way, it was difficult to ascertain whether learners actually understood the material and honestly, I don't think this is any better with the new way. True, learners can listen to lectures on their own time, listen at their own speeds, repeat portions of talks as necessary. But does this independence and flexibility allow for deeper understanding? As educators, how would we ever know?

An important missing piece of the puzzle with independent learning is follow-up. We are quick to coach residents to explore the vast array of online content now available, sending them off into the abyss of virtual resources. However, we seldom provide sufficient guidance or structure on what online content they should consume and the cadence with which they should consume it. We don't follow-up to see if they viewed the content or if they truly understood it.

Closing the loop with interactive follow-up is key to remembering, understanding, and applying what one has learned. Assessing understanding through interactive sessions creates energy and emotion, which in turn facilitates the learning and memory process, providing a foundational framework to build future knowledge.

It is not a coincidence that the neurotransmitter dopamine is responsible for both emotion and memory! Energy and emotion in teaching sessions promote learning and memory of content. We have more time to engage our learners with cases, patient scenarios and "real life" critical thinking when we don't have to deliver foundational content.

We can combine the best of pre-Covid and Covid–era learning by creating structured blended curricula. Assigned online content followed by in-person interactive sessions leverages what we do best ---share clinical experiences and our most important teaching points.

Our in-person time with our learners is precious. Since the physical isolation of Covid, our residents hunger for connection with their colleagues and staff. Our residents have met and exceeded the challenges presented by this unprecedented pandemic. Let's not recreate the past and waste that precious time delivering passive lectures. They deserve better and now it's our time to step up to the challenge.

Radiology & Art

By **Erin Cooke MD**

This 40” x 30” acrylic on canvas piece, “Charleston” is part of my "Places" series. Using photographs I've taken over the years both while traveling and observing my local settings, I translated the basic elements from the photos as the basis of form, color and light of each piece. Then I allowed the paintings to evolve with the goal of staying true to the underlying imagery, but letting the pieces take their own shape in abstracted, imaginary versions.

These visual explorations allow me to think freely and form connections. I find many parallels in the process of noticing, analyzing, and problem solving in both creating art and in the practice of radiology. Radiological imagery is inspiring not only in regarding the beauty of the human form but also in terms of the many abstract patterns imaging creates.

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