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SBI SOCIETY OF BREAST IMAGING SINCE 1985

SBI NEWS

The Member Newsletter of the Society of Breast Imaging

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SBI newsletter editors: inspiring leaders empowering us for a better tomorrow!

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To save lives and minimize the impact of breast cancer

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John Lewin,
MD, FACR, FSBI
President of the SBI

I am writing this immediately after taking my SBI membership survey. I want to thank everyone who has completed the survey already and ask that every member who has not yet done so please complete it. Association Laboratory is a professional consulting firm that we hired to guide us as we optimize the goals and mission of the society to best serve the membership. The survey is an important tool for both them and the SBI board to identify what is important to our members.

The goal of the survey is to guide the direction of the SBI over the next three years. A survey put out three years ago had some of the same questions. One aim of the current survey is to see how our members' views and goals have changed over those years. Are we back to a prepandemic baseline or have things permanently changed? Mostly we want to determine if we are meeting our members' needs.

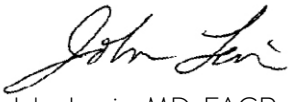
Another large effort is preparation of the SBI diversity, equity, and inclusion (DEI) strategic plan. SBI hired a consulting firm that specializes in DEI to evaluate our members' understanding of DEI and the society's strengths and weaknesses in this area and to assist in the development of a DEI strategic plan. The consultants and the members of the DEI Strategic Planning Committee used survey data to begin to outline main goals and objectives that the society would prioritize over the next five years. Laurie Margolies, director of membership and equity on the Board of Directors, and Tatianie Jackson, cochair of the Inclusion Diversity Equity Alliance, led the committee through the development of the final plan. The plan will be presented to the SBI Board of Directors in May at the SBI Symposium in Washington, DC. Once approved, the DEI Strategic Planning Committee will share the plan with the membership. We are all excited to support this effort with tangible actions in an effort to better align the SBI's values and mission.

Our DEI effort also started with a survey about two years ago, and we have already made changes to our processes based on those results. The biggest change so far is that we now call for applications for open board spots rather than having board leaders just choose candidates based on their prior knowledge of our members. The goal of the change is to broaden the pool of people who are considered each year. This year we have 10 outstanding applicants, all of whom are well qualified to lead SBI into the future. Choosing one will be extremely difficult, of course. In the future, the plan is to have the initial evaluation done not by the board but by a Nominating Committee made up, like all SBI committees, of volunteer members. The Nominating Committee will then present one to three finalists to the board for final consideration.

One of the major achievements of our society during the past six years has been the successful launch of the *Journal of Breast Imaging*. Over the past four years, the journal has published 23 issues. Its success has been a team effort, involving dedicated associate editors, the Editorial Board, reviewers, and authors, but none of it would have been possible without the dedication and expertise of our editor in chief, Dr. Jennifer Harvey. Jennifer is ending her term as editor in chief this year, and I want to take this opportunity to thank her for her amazing work. She is truly leaving behind a legacy. The journal is poised to enter its next phase of growth, which will include indexing by MEDLINE, expected within the next year. Leading the journal will be Dr. Wendy DeMartini, who has been chosen as the next editor in chief. On behalf of the board, I wish Wendy great success in her new role.

Spring is a time of transitions in the SBI, and this spring is no different. My term as president will end at the symposium, and the reins will be taken up by the very capable Dr. Mimi Newell. Dr. Linda Moy will become vice president and chair of education, in charge of planning the 2024 symposium in Montreal, to be held in collaboration with the Canadian Society of Breast Imaging. Planning for that meeting is well under way and the program promises to be fantastic. Dr. Emily Conant will be rotating off the board after her year as past president. I thank her for her years of service to the SBI and for her support as I navigated my own term as president.

Finally, I want to say how honored and humbled I have been to serve as president of this amazing society that has meant so much to my professional life and has been a source of so many friendships and great experiences. Many thanks to the board members, committee heads, and other volunteers for all their hard work and mentorship. Many thanks also to the dedicated SBI staff, without whom SBI would not function. I especially want to thank SBI Chief Executive Officer Yasmeen Fields, both for her help to me personally during my term and for her leadership over the past 10 years. Under Yasmeen's guidance the SBI has tripled in size and is in a strong position to continue as the leading organization for physicians and scientists dedicated to the early detection and diagnosis of breast cancer.



John Lewin, MD, FACR, FSBI
President, Society of Breast Imaging

Editor's Note

By Vilert Loving, MD, MMM, FSBI

Vilert Loving, MD, MMM, FSBI

Grade school, undergraduate education, medical school, internship, residency, and fellowship: the road to becoming a breast radiologist is long, and at the end of this road, breast radiologists are trained experts in breast cancer diagnosis. SBI members should be proud of their accomplishments to practice their craft. Globally, as of 2020, breast cancer is the most commonly diagnosed cancer, and it is the most common cause of cancer death for women.[1] The SBI seeks to minimize the impact of breast cancer, and these sobering statistics indicate that there is still much work to be done.

To tackle this momentous task, radiologists must amplify their clinical expertise with collaboration and teamwork. A nonexhaustive list of potential collaborators includes radiologic technologists, other breast cancer specialists, primary care professionals, health care organizations, medical professional societies, insurers, women's health organizations, legislators and lobbyists, survivor groups, national cancer organizations, news media, public health organizations, global outreach organizations, researchers, and charitable foundations. It is both daunting and inspiring to realize the breadth of resources that are available! By collaborating with these stakeholders, our aim should be to accomplish outcomes that would otherwise be resource prohibitive for radiologists alone.

Fortunately, the SBI curates many of these potential collaborators and introduces them to radiologists through communication channels such as the SBI annual symposium, webinars, and the *SBI News*. In this spring edition, *SBI News* offers insight from nonradiologist perspectives, including our Technologist's Column writers, Sarah Jacobs, RT(R)(M)(CT), and Robyn Hadley, RT(R)(M); a breast cancer survivor (who, in this case, is also a radiologist); and global outreach partners in Ghana via the RAD-AID program. As you read our columns, I encourage you to think about your professional goals and consider if anyone in comparable roles to these stakeholders could be collaborators to help you minimize the impact of breast cancer. Take a few minutes, allow yourself the luxury to daydream, and imagine what you could accomplish if you manifested a team of stakeholders from any breast cancer domain. It is possible that the SBI has introduced these stakeholders to SBI members in the past; please reach out to the SBI team if we sparked your interest!

Finally, this spring edition will be my last as editor of *SBI News*. As my tenure comes to a close, I would like to thank my collaborators on this important endeavor: all of the SBI Newsletter Committee volunteers (former and current) who donated countless hours generating article ideas and crafting their stories, the numerous guest column writers, the brave breast cancer survivors who shared their stories, our European Society of Breast Imaging colleagues, our Canadian Society of Breast Imaging colleagues, our RAD-AID colleagues, and the wonderful SBI staff members (especially, most recently, Kesha Willis), who are critical in supporting this publication. The newsletter also receives tremendous help from our copyeditor, Laurie Anne Walden, DVM, ELS, and our graphic designer, Heather Kjar at Uneek Designs. The newsletter will continue under the stewardship of incoming Editor Nidhi Sharma, MD, and Assistant Editors Randy Miles, MD, and Shinn-Huey Shirley Chou, MD.

As always, I appreciate the readership of this newsletter. If you have future newsletter ideas, anecdotes, or questions or are interested in contributing to the newsletter, please do not hesitate to contact the *SBI News* team! We are always searching for fresh perspectives.

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CME & SAM Committee Update

By Ana P. Lourenco, MD, FSBI

The CME & SAM Committee is all about education! Over the last year, our committee has worked to develop multiple-choice questions for lectures delivered at our annual symposium. These products are then bundled into themed SBI symposium collections that are available on the Education Portal of the SBI website. These enduring educational materials help our members meet CME and self-assessment module (SAM) requirements for maintenance of board certification and licensing requirements.

Ana P. Lourenco, MD, FSBI

Committee members also develop and deliver a variety of live summer webinars. CME credit is available for those who attend the live webinars. At the conclusion of each webinar, there is a period of interactive live questions and answers. The webinar videos are available on the SBI website Education Portal for asynchronous learning, although CME credit is not available for those viewing the webinar at a later date. Please check out these terrific webinars from summer 2022:

- "Breast Imaging in the ER," presented by Dr. Honying (Heather) He
- "Highlights From the SBI Resident and Fellow Section's Case of the Month," presented by Drs. Matthew Miller, Erin Aubrey, Shao Zun (Anson) Chen, and Andrew Renaldo
- "Hindsight: What We Can Learn From Missed Breast Cancers," presented by Dr. Michael Taylor-Cho
- "Imaging the Reconstructed Breast," presented by Dr. Sujata Ghate
- "Transgender Imaging," presented by Dr. Mai Elezaby

Our 2022 symposium collections are outstanding summaries of lectures from the SBI annual meeting, centered around a clinical topic. These collections include multiple-choice questions and accompanying CME credit. This year's collections include the following:

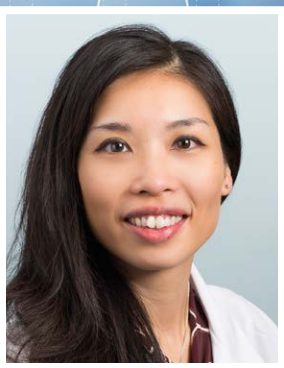
- Contrast-enhanced mammography
- Multimodality breast imaging
- Clinical controversies

In addition, our committee meets virtually every quarter and brainstorms topics for the next webinars, themes for the next symposium collections, and other important educational content we would like to see at our annual SBI meeting. The committee chair works closely with the SBI Executive Education Committee and brings forward the committee's ideas for educational content as future meeting programs are being developed.

We also have fun when we see each other at in-person meetings and share some of our own real-life stories during our virtual committee meetings! We welcome you to volunteer to serve on this committee if you have an interest in education, developing enduring educational materials, and continuing to elevate the educational value that comes with SBI membership!

Technological Advancements in Breast Imaging and Breast Cancer Treatment: Are We Widening Disparities in Care?

By Shinn-Huey Shirley Chou, MD, MPH



Shinn-Huey Shirley Chou, MD, MPH

Radiologists are innovators. In a medical specialty 100% driven by technology, radiologists embrace and adapt to technological advancements and are often charged with leading and navigating cutting-edge technologies that transform the landscape of medical diagnosis and health care delivery. One of the most notable technological advancements that has greatly improved health outcomes is screening mammography. The value of early detection via screening mammography is tremendous, demonstrating a reduction in breast cancer mortality by 40%. Since the widespread adoption of screening mammography programs, rapidly advancing breast imaging technology and breast cancer therapy have improved the diagnostic process and treatment outcomes over the past few decades. This article is a continuation of the Winter 2023 What's New in the News column, which emphasized the importance of linking patients with institutional, financial, and community-based social services to mitigate social risks and improve equity in clinical settings.[1] This article highlights recent publications to remind the breast imaging community of how technological advancements in our field—specifically, inequitable access to and use of these technologies—could contribute to widening disparities in breast cancer outcomes.

Marginalized Racial and Ethnic Groups

In their recent *Radiology* article, Dr. Christensen and colleagues from the Harvey L. Neiman Health Policy Institute examined the relationships between the use of newer mammography technologies and race after the transition from screen-film mammography to full-field digital mammography and subsequently to digital breast tomosynthesis (DBT).[2] The authors analyzed over 4 million individual-level institutional mammography claims from 2005 through 2020 from a nationally representative sample of women aged 40 to 89 years with Medicare fee-for-service insurance. They found that within the same institution, Black women were 20% less likely than White women to receive digital mammography in 2005 (odds ratio [OR], 0.80; $P < .001$), with no evidence of persistent differences by 2009 (OR, 0.97; $P = .70$). Similarly, Black women were 16% less likely than White women to receive DBT from 2015 through 2020 (OR, 0.84; $P < .001$). When analyzing data across comparable institutions, the authors identified a U-shaped pattern in such racial differences during the transition to digital mammography, whereas the differences during the transition to DBT remain ongoing but appear to have peaked. Their study adds to prior research that demonstrates lower access to and use of screening DBT in women in racial and ethnic minority groups and those of lower socioeconomic status in the years following the introduction of DBT.[3] As Dr. Christoph Lee and Dr. Marissa Lawson wrote in the accompanying editorial in *Radiology*, "This study by Christensen et al adds to the literature that demonstrates that minority patients are often the last to benefit from newer medical technologies when looking across racial groups."[4]

In their recent article in the *Journal of Breast Imaging*, Dr. Kurumety and colleagues raised urgent awareness of an underserved population that has not yet benefited from the advancements in screening mammography: American Indian and Alaskan Native women, whose breast cancer mortality rate has remained constant over the past several decades.[5] Having the lowest mammography screening rate among all racial groups in the United States, Native American women tend to have breast cancer diagnosed at later stages than their White counterparts. They face unique barriers, such as challenges with the chronically underfunded Indian Health Service that struggles with logistical difficulties, limited scope, and geographic constraints in its health care delivery, and long-standing mistrust toward the Indian Health Service and medical institutions owing to past actions. The authors recommended specific efforts radiologists can undertake to reduce breast care disparities in this population: broadening awareness, partnering with local tribes to generate culturally sensitive educational material, employing culturally sensitive patient navigators or community health workers, and providing geographically convenient mammography units.

Disparities in breast cancer care are also present among Asian women in the United States, as reviewed by Dr. Yiming Gao and Dr. Samantha Heller in their recent *RadioGraphics* article.[6] In this

heterogeneous population, sharper increases in breast cancer incidence as well as breast cancer–related deaths have been observed among Asian subgroups when compared with other racial and ethnic groups in the United States. Breast cancer incidence also appears to peak at a younger age among Asian women, underscoring the need for early screening. However, screening attendance is poor among Asian American women, particularly immigrants, with longer delays to follow-up and higher rates of no follow-up after abnormal screening results compared with non-Hispanic White women. Asian American women, along with Black American and Hispanic American women, had significantly less access to DBT.[3]

Racial disparities in screening mammography uptake are present even among women who were previously diagnosed with and treated for ductal carcinoma in situ (DCIS), as shown by Byng et al in a recent research study in *Radiology*.[7] In their stratified random sample cohort of 12,559 women from the National Cancer Database, Black women were 20% less likely than White women (OR, 0.80; $P < .001$) and Hispanic women were 18% less likely than non-Hispanic women (OR, 0.82; $P = .004$) to undergo the recommended asymptomatic surveillance imaging after breast conservation surgery for DCIS.[7] Other factors, including private (vs government) insurance, receipt of adjuvant therapy (vs no adjuvant therapy), screen (vs nonscreen) detection of DCIS, and re-excision surgery within 60 days, were associated with increased uptake of surveillance imaging.

In their recent article, Chancellor et al conducted a scoping review of 128 studies and found inequities, with less breast cancer screening in historically marginalized groups, residents in rural areas, and women with low income and education levels.[8] The authors identified a significant research gap in the mammography uptake in the LGBTQ+ community. Ly et al also addressed the lack of robust data among transgender and nonbinary individuals in a recent issue of the *Journal of Breast Imaging*. They provided their institutional strategies to collect inclusive data to better understand breast cancer screening outcomes and provide gender-inclusive care within this population.[9]

Artificial Intelligence

Among the newest major innovations in breast imaging, artificial intelligence (AI) has received the most attention in medical and popular media. The potential impact of AI on the disparities in breast cancer detection and diagnosis is multifaceted. AI could assist radiologists with clinical workload during staffing shortages, thereby providing more breast imaging services and greater access for patients, which could help reduce disparities. On the other hand, inequitable adoption and use of AI technology and inequitable performance of AI technology across different populations could widen disparities in breast cancer outcomes. In their study published in *JAMA Network Open* in November 2022, Hsu et al aimed to externally validate the published challenge ensemble method (CEM) that comprises 11 top-performing AI models from the Digital Mammography Dialogue on Reverse Engineering Assessment and Methods (DREAM) challenge using an independent, diverse United States screening population.[10] The team found that the performance of the CEM model dropped when applied to this independent cohort, as compared with the cohorts used in the DREAM challenge. The CEM model also achieved lower sensitivity (0.547 vs 0.826; $P < .001$) and specificity (0.697 vs 0.930; $P < .001$) compared with radiologist assessment outcomes. In their subgroup analysis, both the CEM model and radiologist assessment had significantly decreased performance for dense breasts than for nondense breasts. Additionally, the performance metrics of CEM combined with radiologist assessment were worse than radiologist assessment alone in the subgroups of Hispanic women and women with prior breast cancer. As Hsu and coauthors stated, "Our results support the need for increased diversity in training data sets, particularly for women in minority racial and ethnic groups, women with dense breasts, and women who have previously undergone surgical resection."

Breast Cancer Treatment

Despite advancements in oncologic treatment, disparities in treatment delay and treatment patterns persist, as reported in two publications from January 2023. The COVID-19 pandemic has disproportionally impacted racial minority groups, who also experience poorer cancer outcomes. Llanos et al investigated the individual-level and area-level factors that contributed to inequities in the disruption of cancer treatment by COVID-19.[11] The researchers found that non-Hispanic Black patients were 35% more likely to experience delays or discontinuation of cancer treatment than non-Hispanic White patients following COVID-19 (relative risk, 1.35; $P < .001$). Stabellini et al found that among 17,454 breast cancer patients at a single institution from 2005 to 2022, non-Hispanic Black patients were less likely than White patients to receive curative-intent surgery or endocrine therapy.[12]

Conclusion

As key players in the development, employment, and deployment of advanced medical technologies, radiologists are essential for safeguarding equitable impact and benefits to the populations we serve. It is imperative that radiologists remain at the helm of technological advancements to improve breast cancer care and diagnosis, especially with the influx of research and news media touting the promises of AI. It is crucial for radiologists to stay informed, inclusive, and vigilant

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WELLNESS COLUMN

Wellness in Health Care:
An Executive Suite Responsibility?

By Claudia Cotes, MD

Claudia Cotes, MD

Physician burnout, a state of emotional, mental, and physical exhaustion that results from prolonged stress, overwork, and a lack of work-life balance among physicians, is a known problem affecting the medical field.[1] The percentage of breast radiologists experiencing burnout was as high as 78.4% in 2020. The COVID-19 pandemic has had additional negative effects on radiologists' well-being, confirming that burnout is a significant problem with repercussions on individual well-being and patient care.[2,3] Supporting self-care and stress management, offering resources for mental health support, and providing wellness programs such as fitness classes and healthy food options are common efforts by organizations to promote a culture of well-being and help employees stay healthy and energized. But are these efforts enough?

The ability to prioritize activities that nurture our physical, social, family, and other life priorities with our work is necessary for our well-being. Achieving this work-life balance is a common goal for physicians since it impacts job satisfaction, burnout, and wellness. Dr. Tait Shanafelt studied satisfaction with work-life balance by asking physicians if their work schedule left them enough time for personal and family life.[1] How many times have you asked yourself this same question? Many of our organizations' initiatives that promote work-life balance, such as online training, wellness talks, or onsite fitness and mindfulness programs, may help reduce burnout. However, they increase demands on physicians' already overbooked schedules and compromise the work-life balance that we all long for. These solutions imply that preventing and reducing burnout is a responsibility of each individual physician.[1]

Burnout was first classified as an occupational phenomenon rather than an individual medical condition in the *International Classification of Diseases, 11th Revision (ICD-11)*, which was released by the World Health Organization in May 2019. The *ICD-11* went into effect on January 1, 2022. With this classification, the World Health Organization stresses the importance of addressing and preventing burnout at an organizational level. Thus, physician wellness representation in the executive suite within health care organizations is necessary to create a vision and culture of well-being beyond individual physicians.

The chief wellness officer (CWO) in health care is a relatively new role that emerged to promote employee well-being and positive work environments that support the health and wellness of health care workers and consequently improve patient care. CWOs provide strategic vision and direct evidence-based approaches at the individual, group, and system levels. The goal is to advocate for, budget for, and execute initiatives to address the occupational distress physicians face in their daily work, removing the expectation to improve wellness by increasing physician resilience.

Not many health care institutions in the United States have this role at present. Since the first CWO position was created at Stanford Medicine, California, in 2017, approximately 20 more organizations have implemented this position.[4] Most of us are familiar with wellness committees in our institutions, but unfortunately these do not result in improvements on a larger scale within health care institutions. CWOs can potentially solve this problem because they have the authority to implement tangible changes that improve wellness in a systemwide fashion. For example, they may optimize workloads, improve practice efficiency, implement electronic health records and technology, and reduce clerical loads, all of which positively impact the ability of physicians to integrate their work into their daily lives.[4]

Those of us who practice in institutions without a CWO in the executive suite must strive to implement similar changes at a smaller scale within our teams, especially if holding leadership positions. Funding for wellness initiatives may not be in our administration's budget, but we can find alternatives to create a culture of wellness in our departments. Optimizing patient scheduling and advocating for protected physician time for time-consuming activities that improve patient satisfaction but do not necessarily result in compensation (eg, consulting, obtaining patient consent, etc) can help radiologists gain control of their time. Periodic check-ins with our team

members can give us information about their overall well-being. Leading by example, which is easier said than done, is necessary. Leaders who prioritize their well-being and balance their professional and personal activities successfully reflect a culture of wellness for their team to model.

We should all consider advocating for and supporting a CWO executive position in our institutions. Having representation at the executive table would improve patient care and physician well-being and would also demonstrate interest in creating a real culture of wellness.[5] The saying "If you are not at the table, you are on the menu" applies to physicians in the health care industry, and we have been on the menu for a very long time.

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What's New in the News: Technological Advancements in Breast Imaging and Breast Cancer Treatment: Are We Widening Disparities in Care? ***(continued from page 7)***

when critically considering and examining societal implications of these innovations. Let technological advancements in breast imaging and breast cancer care serve as agents of health equity, not disparities.

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Quality Breast Imaging: Where Does It Begin?

By Sarah Jacobs, BS, RT(R)(M)(CT); Robyn Hadley, RT(R)(M)

Robyn Hadley, RT(R)(M)

Sarah Jacobs, BS, RT(R)(M)(CT)

Where does quality breast imaging begin? Quality imaging is directly impacted by the training and education of breast imaging technologists. Initial training and continuous education of technologists will affect nearly every aspect of the patient experience and the quality of the images produced. Proper training and education also influence the incidence of work-related musculoskeletal disorders (WRMSD) and injuries. Using resources to train and provide ongoing technologist education contributes to a number of positive benefits, including increased patient satisfaction, decreased cost for work-related injuries, increased employee engagement, and higher-quality imaging.

Recognizing a Need

Poor positioning can decrease the sensitivity of mammography by 18.1%.[1] In 2015, the ACR reported that 92% of all clinical image deficiencies on the first attempt during the accreditation process were due to mammographic positioning.[1] Mammography technologists are often trained by multiple colleagues and may unknowingly develop habits that do not promote quality imaging. These suboptimal habits lead to inefficiency and ergonomically unsound methods of positioning. There is currently no established, updated, standardized method of mammography positioning used by technologists. Additionally, depending on the state in which a technologist is acquiring certification, the mammography technologist may not physically position a breast, use the machine, or communicate with a patient until being certified to perform the examination. Therefore, many technologists rely solely on peers to teach these skills. According to the Mammography Quality Standards Act, technologists working to become certified in mammography must perform a minimum of 25 mammographic examinations under the direct supervision of a qualified mammography technologist. Unfortunately, the supervising technologist can be *any* registered mammography technologist regardless of their skill level in mammographic positioning, image analysis, or patient care. There are also no specific criteria for what trainers must teach, leaving individual trainers to create their own methods. It is critical for technologists to have a clear understanding of positioning methods that maintain consistency and reproducibility and, most importantly, how positioning impacts image interpretation by the radiologist. Staff shortages and economic constraints have forced organizations to allocate resources and to cross-train and use employees in multiple modalities. This demonstrates a significant opportunity to establish and sustain quality in providing highly skilled training and continuous education by qualified individuals.

Many facilities and technologists are using the 1999 ACR manual as a guided reference for mammography positioning techniques and troubleshooting. This manual promotes a standardized positioning technique based on film-screen technology, although many facilities are now using full-field digital mammography and digital breast tomosynthesis, which may warrant an update in positioning techniques due to the various changes in equipment. Fortunately, the ACR's Mammography Positioning Improvement Collaborative seeks to improve breast cancer detection through screening.[2] The goal of this initiative is to improve positioning and education about mammographic positioning. This improvement collaboration seeks to create "a standardized system for mammography positioning, evaluation and ongoing monitoring, with the goal of delivering images that more consistently meet the ACR positioning criteria." However, there is one important aspect to note: this initiative does not offer technical skill training for positioning.[2]

Technologists increasingly report positioning-related injuries that cause them to lose time at work. In some instances, they may even lose their job, exacerbating an existing shortage of qualified mammography technologists.[3,4] The Society of Diagnostic Medical Sonography reports that up to 90% of medical professionals performing ultrasound examinations are working with pain caused by WRMSD.[4] It is estimated that direct and indirect costs incurred from WRMSD amount to $120 billion each year. Workplace injuries specific to mammography positioning and sonographer scanning can be avoided by encouraging technologists to practice consistent methods that use sound body mechanics. The Society of Diagnostic Medical Sonography reports that ongoing education and training are essential aspects of an effective safety and ergonomics program.[4] Gesme et al noted that the benefits of staff education (formal

training, orientation, maintenance of professional skills, coaching, career development, and personal development) included positive staff morale, increased employee retention, practice efficiency, and patient satisfaction.[5]

Elevate Training and Education Practices

Standardized methods of positioning during breast imaging examinations will produce imaging studies that are of higher quality than those using nonstandardized positioning techniques.[3] Training and education should be provided by qualified staff or experienced trainers. Selecting a trainer who excels in the desired area of expertise is imperative. Educational and training opportunities should be ongoing and occur consistently each year for all team members. Gesme et al reported that continuing training throughout an employee's tenure was important.[5] Providing ongoing training programs establishes a connection between performance and personal development. Recognizing the training needs of various technologist stakeholders is crucial to developing and maintaining a high-quality imaging program:

- **Newly hired technologists**
  - *Initial training:* How and where the new employee was initially trained should be recorded.
  - *Orientation:* Adequate orientation includes an understanding of policies, procedures, and protocols in addition to general patient care and strong mammographic positioning or sonographic scanning skills.
  - *Supervision and coaching:* Ensure that new mammography technologists' positioning techniques are observed before they work independently.
  - *Competency documentation:* Training should include documented competency in all areas for new staff and at least annually thereafter.
- **Ongoing education and training for all staff**
  - *Ergonomically sound practices:* The positioning habits and scanning skills that technologists are practicing must be ergonomically sound and should minimize repetitive motion injuries. Ask your technologists if they experience pain in their shoulders, wrists, neck, back, and other areas prone to repetitive motion injuries. Work with a qualified professional trainer, occupational health department, or physical therapist to provide optimal solutions.
  - *Journal clubs:* Journal clubs incur no additional costs and may include books and journals. Including books and journals pertaining to technical skills as well as customer service, team building, and personal development may be beneficial. Assign specific chapters or articles and meet weekly, every other week, or monthly for discussion.
  - *In-house education:* Encourage and provide time for staff to attend in-house educational sessions. Providing regular, in-house educational programs that focus on problem areas and retraining efficiencies can be valuable. Using the correct processes and procedures and offering opportunities for questions will contribute to a higher-quality imaging program.
  - *Frequency of ongoing training and education:* Training and education for all staff should include documentation of competency in all areas of practice on an annual basis. This schedule will ensure that skill level is maintained, image quality and the patient experience are optimized, and ergonomically sound methods are being used.
- **Qualified professional educators and trainers**
  - Qualified professional educators and trainers should be considered carefully.
  - Educators and trainers must possess excellent technical skills and exhibit proficiency using equipment, efficient positioning, and effective communication.
  - It is essential for the team of educators and trainers to teach consistent methods. Using the same trainers at all facilities, including off-site centers, can be considered.
  - Accountability and follow-through are critical to maintaining quality techniques. Appropriate individuals should be selected for this task.

Breast imaging, especially mammography, is one of the most regulated of all imaging modalities, and therefore the utmost care and concern should be used to ensure that technologists are initially educated and trained properly. Efforts to improve ongoing training and education are essential in promoting organizational loyalty, employee well-being, and decreased WRMSD using ergonomically sound positioning methods. A focus on improving the training and education of staff will assuredly elevate patient experiences and contribute to higher-quality breast imaging.

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CAREER DEVELOPMENT COLUMN

Early Career Series for an Enlightened Tomorrow

By Rend Al-Khalili, MD; Allison Aripoli, MD

Rend Al-Khalili, MD

Allison Aripoli, MD

Collaboration between SBI committees is essential to continued growth and development. The Young Physician Section (YPS) Committee aims to create a community of early career members by offering opportunities for mentorship, networking, and access to learning resources to strengthen the foundation for a successful career in breast imaging.

In alignment with our purpose, the Fellowship Match, Resident and Fellow Section, and YPS Committees are pleased to announce a new web-based lecture series targeted to early career breast radiologists. The program is designed to cover varied topics of particular interest in the early career setting, although it is also applicable to members in training who are about to embark upon their careers. Committee collaboration has enabled us to design this new, exciting early career curriculum.

To determine which educational content would be of highest value to future participants, a survey was designed and delivered to members in training and early career members (within 8 years of fellowship) to guide topic selection and program design and delivery. Of 260 survey respondents, 103 (39.6%) were private practice early career radiologists, 100 (38.5%) were fellow or resident members in training, 37 (14.2%) were academic early career radiologists, and 20 (7.7%) were early career radiologists in hybrid private-academic practice. Our pilot program is set to kick off in fall 2023, offering live CME lectures also recorded and available for offline viewing. The program will address topics that commonly impact early career development.

Results from the survey provided insight on topics of particular interest. The three top-rated topics that have been selected for our first lecture series are as follows:

- MQSA [Mammography Quality Standards Act] 101 and Breast Center Roles
- Introduction to Legal Literacy
- Payment Models 101, Introduction to Financial Literacy

As the program expands, additional lecture content will be added. We hope that this program will provide support and value to those early in their breast imaging careers. In addition, the program aims to create a sense of community among in-training and early career breast radiologists with networking opportunities during the live Q&A session.

To learn more about the YPS, please visit us on the SBI website (https://www.sbi-online.org/young-physician-section). If you are interested in future collaboration, please contact the YPS cochairs, Dr. Rend Al-Khalili at rend.al-khalili@gunet.georgetown.edu and Dr. Allison Aripoli at aaripoli@kumc.edu.

Marcela Böhm-Vélez, MD, FACR

By Danielle Sharek, MD

Danielle Sharek, MD

Dr. Böhm-Vélez is the president of Weinstein Imaging Associates, a private practice radiology group in western Pennsylvania that focuses on breast imaging, ultrasound, and bone densitometry. She is also a diplomate of the American Board of Radiology and a fellow of the ACR, Society of Radiologists in Ultrasound, and American Institute of Ultrasound in Medicine. She is currently an assistant clinical professor of radiology at the University of Pittsburgh and has served as president of the Pennsylvania Radiological Society, member of the ACR Steering Committee, and Board of Directors of the International Society of Densitometry. She is an active participant in the mammography accreditation process for the ACR and has served as the chair of many ACR practice parameters, including the initial ACR Appropriateness Criteria expert panel on ovarian cancer screening and adnexal masses. She was a coauthor of the fifth edition of the *ACR BI-RADS Atlas* for ultrasound. Her research interests include the role of breast ultrasound in dense breasts (ACRIN 6666 study), molecular breast imaging, and optoacoustic imaging. She has also assisted in the development of breast ultrasound transducers.

Please describe yourself and your background.

My paternal grandmother, one of the first female dentists in Argentina, was diagnosed with breast cancer at the early age of 37. She traveled to Europe with my father and his sister to find the latest treatment, which at that time was mastectomy and radiation. She survived about a year after the diagnosis. In addition, my mother died of pancreatic cancer at age 48; therefore, I was very conscious of my increased risk for breast cancer.

How were you diagnosed with breast cancer?

I always got an annual mammogram. The year Weinstein Imaging replaced their units with 3-D mammography, I waited a few months until the unit was installed to get my mammogram. When my chief technologist took the first image, I immediately saw the cancer and was in a state of shock. Even though I was always giving this diagnosis to my patients, I never thought I would have breast cancer. On the same day I had my mammogram, I subsequently had an ultrasound, and my partner performed an ultrasound-guided core biopsy. My business manager arranged for me to go immediately to have breast MRI [magnetic resonance imaging], which was probably not a good idea. At first glance of the MRI, I saw a second lesion in the same breast and almost fainted. Since I had just had the ultrasound-guided core biopsy, the MRI showed additional possible abnormalities.

How did you feel when you learned of the news?

I could not believe it.

What was your treatment process? Did you face any treatment obstacles? How did you overcome them?

I had a lumpectomy followed by radiation and Arimidex [anastrozole]. Since I had a small cancer at the 12-o'clock position and another at the 3-o'clock position, they removed 5 cm of breast tissue in a B-cup breast. After surgery, I developed necrosis of the nipple, which required debridement and left an ugly scar. The Arimidex caused me to become osteoporotic and worsened my gastrointestinal problems. These symptoms improved after I completed five years of Arimidex.

Continued on page 15>

Ghana Update

By Melissa Durand, MD, FSBI; Augustina Badu-Peprah, MB ChB, FWACS; Mark Kettler, MD; Seth Quanash; Erica Pollack, MD

Melissa Durand, MD, FSBI

Augustina Badu-Peprah, MB ChB, FWACS

Mark Kettler, MD

Seth Quanash

Erica Pollack, MD

Ghana is a coastal West African country slightly smaller than Oregon but with about eight times its population (approximately 33 million). Women in Ghana have a life expectancy of approximately 71 years, placing many Ghanaian women within the age demographic for breast cancer.[1] Indeed, breast cancer is the most common cause of death for Ghanaian women. With the five-year survival rate quite low at 25%, as compared with greater than 80% in high-resource areas of the world, breast cancer mortality is a real concern. Furthermore, triple-negative breast cancers, known to be more aggressive and more often associated with the *BRCA1* gene mutation, are the most common subtype of breast cancer in Ghana and occur in Ghanaian women more frequently than in their European or African American counterparts.[2,3]

In 2019, RAD-AID International, a nonprofit organization whose mission is to improve and optimize access to radiology in low- and middle-income countries, tasked SBI Fellow Melissa Durand to perform a breast imaging needs assessment in Ghana. The RAD-AID Radiology-Readiness Assessment is a key tool to identify how a country's radiology needs can be met in the short term with RAD-AID's assistance and sustained for the long term by their own radiologists. While in Ghana, Dr. Durand met Dr. Augustina Badu-Peprah, current president of the Ghana Association of Radiologists and head of radiology at Komfo Anokye Teaching Hospital (KATH), Ghana's second largest teaching hospital. Although the COVID-19 pandemic stifled some of their ideas, Dr. Badu-Peprah's goal of establishing Ghana's first breast imaging fellowship blossomed under this collaboration.

Conversations on how to create this curriculum began in late 2021. Together with SBI member Dr. Erica Pollack, director of breast imaging for RAD-AID International and associate professor of radiology at the University of Colorado, Drs. Badu-Peprah and Durand defined RAD-AID's role as one of educational support. RAD-AID would supply didactic and interactive lectures, educational material, and in-country workshops; in-country Ghanaian radiologists and the Ghana College of Physicians and Surgeons would ensure that proficiency was attained. Cofacilitators at each of the three main teaching hospitals in Ghana were identified (Drs. Badu-Peprah and Ijeoma Anyitey-Kokor at KATH, Dr. Klenam Dzefi-Tettey at Korle Bu Hospital, and Drs. Ewurama Idun and Kofi Amedi at 37 Military Hospital). On the RAD-AID side, a volunteer team of attending physicians and residents stepped up to create lectures, quizzes, and virtual live events that would form the backbone of the curriculum.

As a road map, we used the ACR/SBI guidelines for breast imaging fellowship training outlined in 2021 by Katzen et al. These guidelines favor a 12-month fellowship and emphasize four factors (clinical, noninterpretive, collaborative, and scholarly factors).[4] Drs. Pollack, Badu-Peprah, Durand, and Mark Kettler (Oregon Health and Sciences University) drafted a 10-page document outlining the curriculum, which was submitted last September to the Ghana College of Physicians and Surgeons and is currently under review.

Given the scarcity of imaging resources in Ghana, a 24-month timeline was established to complete the fellowship, with a nine-month minimum for clinical breast imaging training, up to three months for electives, and the remaining months for completion of research and scholarly work. Elective training could include breast surgery, medical oncology, radiation oncology, plastic surgery, genetics, and others at the discretion of the program. If possible, out-of-country observerships will also supplement the training program.

Eligible fellows will have completed a radiology residency and been vetted by the Ghana College of Physicians and Surgeons. Training will occur at the three main teaching hospitals and be coordinated with the cofacilitators. RAD-AID committed to

23 didactic online lectures organized around the four factors from the ACR/SBI guidelines, with live question-and-answer sessions to be given every other week along with five live case conferences and in-country procedure workshops. Fifteen ACR Case in Point activities and BI-RADS atlases were also provided, and additional reading material has been recommended. Six case conferences will be given by local radiologists. Weekly tumor board participation at KATH or Korle Bu Hospital will be directed by in-country radiologists. Upon completion, successful fellows will defend a completed dissertation and undergo an oral examination in breast imaging.

A trial run of the lecture series was presented to radiology residents and interested attending physicians in 2022. The lecture series comprised prerecorded material from the RAD-AID Learning Center and live lectures, which were recorded in real time and archived into the Learning Center. The RAD-AID Learning Center is an online portal designed to provide high-quality radiology educational content to radiology professionals in low- and middle-income countries as a supplement to their in-country training. Following each lecture, a live question-and-answer session was hosted by a volunteer attending physician from the United States. Case conferences were also presented live and run by a volunteer US attending physician. SBI volunteers included SBI Fellows Drs. Regina Hooley and Michael Linver and SBI members Drs. Michelle McDonough, Kiran Sheikh, Debra Copit, Mark Kettler, Christopher Doyle, Nhat-Tuan Tran, and Amina Farooq.

As these lectures are archived in the RAD-AID Learning Center, they can also be deployed for use in other countries, following a similar model of in-country and virtual collaboration. A comparable program was successfully run for one year during the pandemic in Nigeria. Pending the curriculum's approval, the first class of fellows will be interviewed in July 2023 for a start date of January 2024. If this model proves effective, we hope that the breast imaging fellowship will be independent of RAD-AID in 5 to 10 years. Our long-term goal is to see this model scaled to provide breast imaging education for the rest of West Africa.

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The Patient's Perspective: Marcela Böhm-Vélez, MD, FACR *(continued from page 13)*

What motivated you during your diagnosis and treatment process?

My family. My most difficult task was breaking this news to my kids and my father, who had lost his wife and mother.

What did you learn from your experience?

My experience made me more compassionate toward my patients. I am now able to share my experience with my patients.

How has this diagnosis impacted your life? How have you used your diagnosis to impact others?

After a few years, I was able to share with my patients that I was a breast cancer survivor and I understood what they were going through.

Are there any lessons that you think the breast imaging community can learn from your experience?

I had always been passionate about educating patients and physicians about the value of screening for breast cancer with mammography and breast ultrasound. The addition of breast MRI, which detected my second cancer, proved the important role it can play in diagnosis of the extent of disease. On a daily basis, I find myself preaching the significance of understanding one's risk, breast density, and options for breast cancer screening since early detection does save lives.

What advice would you give to other patients who are going through the diagnosis and treatment process for breast cancer?

Take someone with you to your appointments. I found that I could not clearly remember what the doctors had told me.

ECR 2023 Report: The Cycle of Life

By Stephanie Morscheid, MD; Iva Biondic Spoljar, MD; Paola Clauser, MD, PhD; Marianna Fanizza, MD; Elisabetta Giannotti, MD; Machteld Keupers, MD; Maria Adele Marino, MD; Simone Schiaffino, MD; Thiemo van Nijnatten, MD, PhD; Mirjam Wielema, MD; Ruud Pijnappel, MD, PhD

Back to its traditional month in March, this year's European Congress of Radiology (ECR) took place in Vienna with more than 17,000 attendants, including radiologists, technologists, residents, and physicists from all over the world. The conference was held in person for a memorable on-site conference from Wednesday, March 1, through Sunday, March 5, 2023.

The conference week started on Monday, February 27, with the two-day course "Mammography and Beyond" by the European Society of Breast Imaging (EUSOBI). This course focused on mammography-based techniques, providing an overview from the basics of breast imaging to ongoing clinical trials.

At the ECR, participants were offered a comprehensive and well-structured program covering all fields of radiology. An outstanding breast imaging program not only provided profound insight into the latest research findings from all over the world but also provided a forum for professional discussion and active participation.

Breast imaging was well represented at the opening ceremony, where two prestigious ECR awards were assigned: Dr. Sue Barter (Bedford, England) received the European Society of Radiology Gold Medal and Dr. Beatriz González Ulloa (Zapopan, Mexico) received honorary membership in the European Society of Radiology.

This year's ECR general topic, "The Cycle of Life," aimed at emphasizing the major significance of radiology as well as its changing requirements throughout patients' stages of life, with a special focus session on breast imaging through the different phases of life. The speakers highlighted the need for individualized approaches to patients at each life stage.

The pros and cons of breast cancer screening in the general population, including awareness of the risk of overdiagnosis, were also discussed. Basic principles, the performance of different imaging modalities (including mammography, digital breast tomosynthesis, ultrasonography, and breast magnetic resonance imaging [MRI]), and their appropriate use were explained with a focus on the implication of breast density on screening modalities.

An outstanding debate on the pros and cons of using contrast-enhanced imaging (MRI/contrast-enhanced mammography [CEM]) for the follow-up of patients with a history of breast cancer featured EUSOBI President Ruud Pijnappel and Past President Julia Camps Herrero. The representative of the pro group stated that contrast-guided treatment would be beneficial in high-risk patients and therefore should be performed with risk adjustment because one size does not fit all. In contrast, the opposing team argued that maximal efforts should rather be invested in the initial screening process because the outcome (including survival rate) highly depends on the initial tumor stage. The role of CEM in imaging and diagnostic interventions, its relevance compared with MRI, and whether it will replace breast MRI were widely discussed, resulting in general agreement that both modalities provide high diagnostic accuracy. However, further studies on the effectiveness of CEM are needed.

Research regarding artificial intelligence–based breast imaging modalities and the challenge of integrating them into everyday practice were also presented. These modalities aim to reduce workload and enable more individualized screening pathways in the future.

The EUSOBI Young Club organized the popular interactive lunch symposium with quiz cases and discussions dedicated to pointing out the relevance of research to constantly advance clinical practice. In addition to its educational aspects, the symposium offered young breast radiologists an optimal opportunity to meet and connect with colleagues from all over the world and to exchange ideas in a more casual setting.

ECR 2023 was again an impressive and memorable conference, offering a rich and diverse program of innovative lectures, research sessions, and inspiring debates that provided a basis for continuing to offer our patients, throughout their stages of life, the best radiologic care.

We are very much looking forward to continuing the European debate and discussions in Valencia at the EUSOBI Annual Scientific Meeting on September 28 through 30, 2023.

MARK YOUR CALENDAR

Upcoming Events

Some events may be tentative, depending on the status of the COVID-19 pandemic.
Please check SBI Calendar of Events at www.sbi-online.org for a complete list of events and updates.

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