



# SBI NEWS

The Member Newsletter of the Society of Breast Imaging



## INSIDE THIS ISSUE:

- Winter 2023 New SBI Fellows
- Fall News From the EUSOBI Young Club
- Highlights From the RSNA 2022 Meeting in Chicago

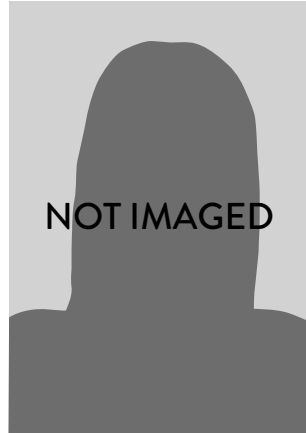
## 2023 NEW SBI FELLOWS



Rosalind Candelaria, MD, FSBI



Heather Greenwood, MD, FSBI



Sadia Khanani, MD, FSBI



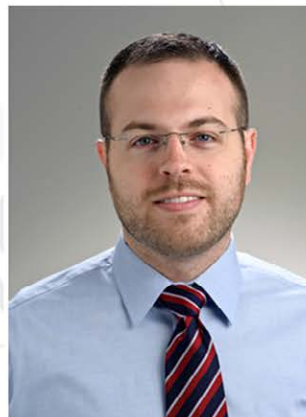
Alana Lewin, MD, FSBI



Anand Narayan, MD, PhD, FSBI



Pamela Propeck, MD, FACR, FSBI



Stephen Seiler, MD, FSBI



Biren Shah, MD, FACR, FSBI

# Table of Contents

3	President's Column
4	Editor's Note
5	Radvocacy: 2022 Year in Review
6	Whats New in the News: A Breast Cancer Diagnosis in the Time of COVID-19: Importance of Social Services in Comprehensive Cancer Treatment
8	Learning From the Experience of Our Inaugural JBI Editor in Chief
10	Winter 2023 New SBI Fellows
12	Technologists' Column: Breast Biopsy Marker Migration: Significance and Potential Solutions
14	Going National: Breast Cancer Awareness and Football: My Experience as the 2022 Kansas City Chiefs Fan of the Year
15	Fall News From the EUSOBI Young Club
16	Career Development Column: A Panel Discussion Offering Diverse Perspectives on Pursuing a Career in Breast Imaging
19	Highlights From the RSNA 2022 Meeting in Chicago
21	Member-in-Training Column: Tips and Tricks for Trainees in Breast Interventions: MRI-Guided Biopsy
24	The Patient's Perspective: Kate Hansen
25	Upcoming Events

## SBI Committee Members

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Vilert Loving

### ASSISTANT EDITORS:

Randy Miles and Nidhi Sharma

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Yasmeen Fields

### TECHNOLOGISTS' COLUMN:

Robyn Hadley and Sarah Jacobs

### WHAT'S NEW IN THE NEWS:

Shinn-Huey Shirley Chou and Anita Mehta

### MEMBERS IN TRAINING:

Wenhui Zhou

### WELLNESS COLUMN:

Claudia Cotes and Sarah Jacobs

### THE PATIENT'S PERSPECTIVE:

Hannah Perry and Danielle Sharek

### LEGISLATIVE UPDATES:

Amy K. Patel

### CAREER DEVELOPMENT COLUMN:

Sophia O'Brien

### OTHER MEMBERS:

Jean Seely



# President's Column

## OUR SBI MISSION:

To save lives and minimize the impact of breast cancer

## OUR SBI VALUES:

Patient-centered and evidence-based care

Excellence in education

Scientific integrity

Collaboration and collegiality

Respect for diversity and inclusiveness



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

The 2023 SBI Breast Imaging Symposium will be held May 4-7 at the Gaylord National Resort and Convention Center in suburban Washington, DC (National Harbor, Maryland, to be precise). The meeting will return to our usual Thursday through Sunday format, providing four mornings of plenary talks and three afternoons of educational/scientific content, each consisting of three sets of five concurrent sessions. Some old favorites, such as the Multidisciplinary Tumor Board and the always entertaining “Jeopardy!” will return. New this year is “Shark Tank!” where your colleagues will pitch their ideas for the future of breast imaging to a panel of experts (actually just a different group of your colleagues). We will also host another President’s Gala to benefit the SBI Research and Education Fund. This year’s gala will be held Friday night on board the Odyssey DC as it makes its way down the Potomac River.

Unlike the 2022 symposium, this will be an in-person meeting only. There will be no virtual option. Some of the sessions will be available as enduring products after the meeting has ended, but the only way to see the sessions in real time will be in-person attendance. Why is there no virtual option? In a word, cost. While both in-person and virtual meetings are cost effective, hybrid meetings (those with both virtual and in-person components) are not. In a virtual meeting, the society pays large fees for the virtual platform and the supporting information technology professionals but saves money on convention space, hotel and travel for staff, and food

and beverage. (Guess how much coffee we served at the last SBI meeting? The answer is at the end of this column.) An in-person meeting is more costly than a virtual meeting, due to all the above costs, but it generates more revenue due to increased vendor participation. Vendors far prefer in-person over virtual exhibiting and will pay more to exhibit at a meeting with more in-person attendees. You may not realize it, but the exhibit hall accounts for about 40% of our symposium revenue.

With a hybrid meeting, we have all the costs of both types of meetings without any of the savings. Having fewer in-person attendees lowers the cost of food and beverage but not much else. The number of breakout rooms is driven by the number of concurrent sessions, even if they are less full, and we still need almost as many staff members to run a slimmed-down in-person meeting as a full one. Finally, to make sure that we can have a venue, we need to reserve our meeting location 4 to 5 years in advance, and the contract comes with minimum requirements for space, hotel rooms, and food and beverage that we pay for even if we don’t use them. The small savings are swamped by the large costs of the virtual portion in terms of software and connectivity fees, as well as additional support staff and information technology professionals.

We certainly acknowledge the advantages of a virtual option for our members, including eliminating travel and lodging costs, allowing more attendees to come from a single department, and enabling more international attendees. We will continue to look for ways to decrease our costs for the in-person and virtual options going forward, but for this year, at least, we cannot afford to do them both.

On behalf of the meeting planning committee and the SBI board, I look forward to seeing you all in person. I am grateful that the pandemic restrictions have abated, and we can meet in person again. For those still wondering, we served 255 gallons of coffee at the last meeting. I am hoping we need even more this year.

A handwritten signature in black ink that reads "John Lewin". The signature is fluid and cursive.

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

# Editor's Note

By Vilert Loving, MD, MMM, FSBI

**When people first interact, they subconsciously “size up” each other and internally ask themselves:** Do I like this person? Is this someone I can trust? Does this person know what he/she is talking about? Should I follow this person's direction? Cuddy and colleagues popularized two fundamental traits that people use to judge each other, namely warmth and competence.<sup>1</sup> Warmth traits encompass friendliness, trustworthiness, and empathy, while competent traits encompass intelligence, power, and skill. The degree to which one displays warmth and competence determines how one is judged by others. These two traits are not mutually exclusive, and people's display of warmth and competence translates into four combinations of how they are judged and treated by others.



Vilert Loving, MD, MMM, FSBI

1. High warmth/high competence: These individuals are trusted and thought to be highly intelligent. Think of charismatic individuals, such as popular Hollywood actors or a respected organizational leader who lights up the room upon his/her entrance.
2. High warmth/low competence: These individuals are “everyone's best friend” or may be popular during social events. However, they aren't necessarily seen as ones to entrust with difficult projects, and they may be passed over for promotions. Think of the stereotypical workplace biases against elderly coworkers or working mothers.
3. Low warmth/high competence: These individuals are seen as highly intelligent and can get jobs done but are not necessarily well liked and potentially not trusted. Think of Doc Brown from the movie *Back to the Future*: a character who is highly intelligent but socially awkward and may have trouble courting investors.
4. Low warmth/low competence: These individuals are typically not trusted and lack power. Think of society's stereotypical view of unemployed or homeless individuals.

How does this warmth/competence concept relate to breast radiology? Breast radiologists are among the most patient-facing subspecialists within radiology.<sup>2</sup> This is important to acknowledge because as radiologists increasingly seek to demonstrate their value in health care, stepping out of the reading room and directly interacting with patients and our clinician colleagues is requisite. As we embrace our patient-facing role, we should always be cognizant of how we present ourselves because how others perceive us heavily influences mutual trust, respect, and medical recommendation adherence.

As physicians, competence is critical. If patients and colleagues do not believe that a breast radiologist has an adequate knowledge base, the radiologist's medical reputation may

suffer and there may be repercussions on his/her ability to continue practicing medicine. On the other hand, if a breast radiologist is perceived as cold, he/she won't be trusted. Even if the radiologist's medical practices are within the standard of care, the lack of rapport may convince patients to seek second opinions, and colleagues may avoid collaborating with this radiologist. The latter is especially true in breast radiology, where much of our work involves publicly advocating for breast cancer screening and immediately building trust with community stakeholders.

We can influence how we project these traits.<sup>3</sup> For example, to project warmth, we can use tactics like open-armed postures, leaning in, smiling, fully facing others, and acknowledging others' emotional states to increase empathy and trust. Standing straight, avoiding fidgeting, speaking with confidence, and purposeful pausing are examples of tactics to project competence. In radiology, peer-reviewed scientific journals focus on bolstering our clinical knowledge base and competence. *SBI News* exists, in part, to bolster our knowledge base in warmth. Articles covering patients' perspectives, career development, and outreach are key elements that help us better empathize with our patients and colleagues. Let's start the dialogue. How do you project competence and warmth? It would be fascinating to share thoughts and tips. I would love to hear from you about this topic or any other ideas that you have for our newsletter: [vilert.lovings@bannerhealth.com](mailto:vilert.lovings@bannerhealth.com). Enjoy the rest of your winter season!

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# Radvocracy: 2022 Year in Review

By Amy K. Patel, MD

## On the advocacy front, we are so fortunate to have made incredible headway in 2022!

We have expanded the ACR Radiology Advocacy Network (RAN) to include a board of all career levels and practice types, continued to build the Young and Early Career Professional Section RAN, and kicked off the inaugural preradiology RAN, composed of medical students and interns who are interested in pursuing radiology and have a passion for advocacy. Given that the SBI works intimately with the ACR when it comes to advocacy endeavors, it is reassuring that radiology advocacy (“radvocracy”) is burning brightly, which bodes well for a promising future in our field!



Amy K. Patel, MD

As we continue to advocate for access to patient care and fair reimbursement for the services we provide, coalition building and synergy are imperative, now more than ever. I am honored to share that in addition to assuming the role of chair of the RAN in the spring of 2022, I have been elected chair of the ACR Association’s Radiology Political Action Committee (RADPAC). We are hopeful that greater cohesiveness of RAN and RADPAC will assist in advancing our mutual mission and engrain into current and future generations of radiologists that active participation in both is the most effective way to make our voices heard on Capitol Hill on behalf of our patients and the profession of radiology. In 2023, more collaboration will be imperative across radiology, including with subspecialty organized societies.

On the legislative front, radiology advocates again vociferously pushed to avert continued Medicare cuts in an effort to achieve budget neutrality in response to increased reimbursement for evaluation and management coding. On December 29, 2022, President Biden signed into law the Consolidated Appropriations Act, 2023 (HR 2617), a \$1.7 trillion government funding package that also includes measures to address Medicare payment cuts that were scheduled to take effect January 1, 2023.

A robust coalition of more than 100 physician and nonphysician organizations was formed to advocate for preventing the full 4.5% cut to Medicare. With our efforts, Congress negotiated an increase to the Medicare conversion factor of 2.5% for 2023 and a 1.25% adjustment for 2024. The final version of the act included provisions supported by the radiology profession: extension of the Protecting Access to Lifesaving Screenings Act, a National Institutes of Health funding increase, increase in Medicare funded residency positions, and recommendations for the Centers for Medicare & Medicaid Services to consider existing evidence to determine the need to provide coverage for computed tomography colonography as a colorectal cancer screening test.

As the 118th US Congress commences, the radiology profession will need to come together to advocate for permanent Medicare payment reform as this will be at the forefront of legislative endeavors in 2023. Your efforts will be crucial as we work together to stabilize continued Medicare cuts, which are detrimental to patient care and access.

We look forward to your participation in our radvocracy efforts in 2023. As always, thank you for all that you do for the field of radiology and, most importantly, our patients.

# A Breast Cancer Diagnosis in the Time of COVID-19: Importance of Social Services in Comprehensive Cancer Treatment

By Anita K. Mehta, MD

The ongoing COVID-19 pandemic has intensified the emotional and financial burdens of a cancer diagnosis. COVID-19–related mental health challenges, personal and family health issues, death of loved ones, and inflation and resulting financial burdens have affected numerous individuals globally. Now more than ever, as clinicians specializing in cancer care, we must be cognizant of these underlying factors and provide appropriate supplemental social services. Such services can provide emotional, financial, and logistical support for our patients when they are most vulnerable.

Social services come in various forms, including mental health counseling, support groups, educational programs, patient navigation services, financial support, and classes in nutrition and wellness. The types of services offered depend on an institution's resources, financial constraints, and sociodemographics of the community. However, it is our responsibility as cancer care physicians to share institutional knowledge and begin a dialogue with the goal of optimizing care across our institutions. Information sharing and conversations on this topic are more important than ever given the superimposed challenges of COVID-19. Before the pandemic, approximately 13% to 20% of patients with cancer had clinical signs of depression and 10% to 19% experienced anxiety.<sup>1,2</sup> Among women younger than 50 years with any type of cancer, 50% exhibited clinical or subclinical signs of anxiety.<sup>1</sup> Among breast cancer patients specifically, Tsaras et al found that 38.2% were classified as depressed and 32.3% as anxious.<sup>3</sup> Although we don't have national data on how these levels have changed for breast cancer patients during the pandemic, the levels have likely increased because levels of anxiety and depression in the general population have grown substantially.<sup>4</sup> This increase in baseline mental health issues is critical because depression is associated with poor adherence to cancer treatment and poor clinical outcomes.<sup>5</sup>

Patient financial burden is another possible hindrance to effective care. The increased financial demand associated with a cancer diagnosis, termed *financial toxicity*, has been shown to be the strongest independent predictor of poor quality of life for cancer survivors.<sup>6</sup> This toxicity can take the form of lost workdays, out-of-pocket medical expenses, and a range of indirect costs associated with cancer care. In a systematic literature review to analyze the costs incurred by patients, researchers found that out-of-pocket costs for adult cancer

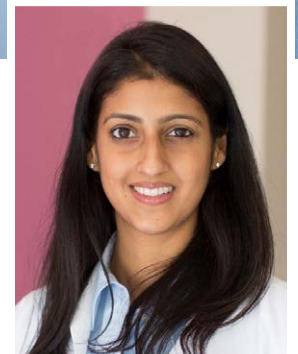
patients and caregivers in the United States ranged from US \$180 to \$2598 per month, with medications as the highest out-of-pocket expense at an average cost of US \$288 per month.<sup>7</sup> Financial toxicity can lead to nonadherence to a treatment plan. Neugut and colleagues found that breast cancer patients are less likely to take adjuvant hormonal therapy if they have higher copayment costs.<sup>8</sup> Unfortunately, financial challenges have only been exacerbated by pandemic-related factors, including delayed care and rising inflation.

Health care institutions are not equipped to address all the social and economic burdens of their patients, but we can leverage our role to improve care and quality of life for our patients. This is best done through having dedicated resources for social services and a coherent process for delivering those services. It is optimal if social services are made available throughout each stage of care from diagnosis to survivorship. At our institution, services are distributed across the radiology, surgery, and oncology departments.

## Institutional Experience

As breast radiologists, we are often the first people to break the news of a cancer diagnosis to our patients. After the initial discussion with the patient to explain the biopsy results and the next steps, we connect the patient with a nurse navigator in our radiology department. The navigator serves as a direct contact person to answer any initial questions and facilitate appointments with the breast surgeon or arrange additional imaging or biopsies. This helps alleviate the feeling of “what do I do now?” that often follows a cancer diagnosis. A cancer diagnosis is a life-changing event, and our social support is limited at this point of care. There is an opportunity here to expand services in radiology, which can come in the form of providing informational brochures or online resources and counseling.

Several services and resources are offered to our patients once they are under the care of the surgery department. At the initial surgical visit, patients are given educational pamphlets specific to their subtype of breast cancer and detailed information about the type of surgery they will undergo. Providing accurate and



Anita K. Mehta, MD



concise reading material is critical given the limitless amount of information on the internet that can be overwhelming or inaccurate. The American Medical Association recommends that patient education materials do not exceed a sixth-grade reading level.<sup>9</sup> At the initial surgical visit, patients are connected with a patient advocacy director (PAD), who is a trained mental health counselor. The PAD conducts distress screening for all patients to assess the type and level of distress a patient may be experiencing and tailors support services as needed. A commonly used test is the National Comprehensive Cancer Network (NCCN) distress screening, and the NCCN guidelines help patients understand the types and causes of distress.<sup>10</sup> The PAD also provides one-on-one mental health counseling in both the short term and the long term and runs a weekly breast cancer support group. She serves as a direct point of contact for any questions or concerns patients may have, and she can either provide the information or direct them to someone who can help them. Once surgery and treatment are complete, the PAD meets with patients at follow-up visits to facilitate survivorship care plans in which she repeats the distress screening and reassesses potential areas of concern, including but not limited to mental health, sleep, diet, fatigue, substance abuse, and work.

Additional social services are offered at the time of oncologic treatment. Before the start of chemotherapy, all patients undergo “chemo class,” led by two infusion nurses. Patients are told what to expect during chemotherapy, including potential symptoms and adverse effects. All patients are also seen by a nutritionist, a social worker, and a member of the finance/billing department to discuss costs, insurance coverage, and potential out-of-pocket expenses. The patient navigator is a critical part of accessing supplemental services in oncology and serves as the contact for any nonmedical issue that may arise. The patient navigator, along with the social worker, assists patients with the following: (1) making appointments; (2) providing information on mental health counseling and support groups; (3) applying for Medicaid; (4) accessing financial support for expenses such as food, rent, transportation, and shelter during treatment; (5) accessing resources to help with medication expenses; and (6) providing access to wigs and other cancer-related products.

### National and Community-Based Organizations

I have shared our institutional experience here with the hope that it can help inform processes at other institutions. Several valuable resources are also available from national and community-based organizations. Some of the well-established organizations are the American Cancer Society (ACS), [breastcancer.org](http://breastcancer.org), the Susan G. Komen Foundation, the National Breast Cancer Foundation (NBCF), and Living Beyond Breast Cancer. These groups offer breast cancer patients a wide array of services such as cancer helplines, online support groups, and financial support. Specific examples of services include the following:

- Road to Recovery (ACS): volunteer drivers provide transportation to and from treatment.
- Hope Lodge (ACS) provides free accommodation for patients and their caregivers who are receiving treatment away from home.
- Komen Financial Assistance program provides monetary assistance to qualified patients who are undergoing treatment or living with stage IV metastatic disease.
- HOPE kits (NBCF) are packages filled with items that are helpful during treatment.
- Metastatic breast cancer retreats (NBCF) are weekend retreats for women with stage IV disease to increase knowledge and provide emotional support.

Community-based cancer centers can be an additional resource for nonmedical support services for our patients. Typically these programs are funded by donations and grants and offer free services to the surrounding community. In the District of Columbia metropolitan area, where I reside, one such program is the Smith Center for Healing and the Arts. The mission of the program is to promote healing practices for physical and mental well-being. Programs offered include numerous support groups and classes in nutrition, yoga, meditation, knitting, and writing.

The implementation of these services does not come without challenges. Services are dependent on hospital and institutional funding and donations, which vary widely across institutions. During the COVID-19 pandemic there has been a significant decrease across the board in funding for social services. In addition, many discontinued services have not yet been reestablished because of ongoing financial constraints and workplace shortages. Furthermore, the demographics of populations served by institutions vary widely. Institutions disproportionately serving populations of low socioeconomic status have additional challenges that cannot be solved solely by improving processes and delivery of social services. Despite the barriers to implementation, we must continue to recognize the nonmedical needs of our patients and inform them of the available resources both within our own institutions and at the national level so we can help ease the burden of cancer treatment.

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*Continued on page 9>*

# Learning From the Experience of Our Inaugural *JBI* Editor in Chief

By Nidhi Sharma, MD

**The Journal of Breast Imaging (JBI)**, the official journal of the SBI, is a peer-reviewed publication that aims to provide high-quality, evidence-based content for the global breast imaging medical community. The journal seeks to advance the field of breast imaging, with a particular focus on improving patient care and outcomes.



Nidhi Sharma, MD

*JBI* publishes original research and reviews of important scientific, educational, and clinical topics. Among the topics covered are screening for breast cancer, diagnosis of disease, image-guided breast procedures, and imaging management of patients with breast cancer. The journal includes expert reviews of emerging and controversial topics to summarize evidence-based research and practice while updating readers on practice management topics. *JBI* maintains a strong clinical focus with broad appeal and the goal of advancing the field of breast imaging.



Jennifer Harvey, MD, FACR, FSBI

Jennifer Harvey, MD, FACR, FSBI, is the inaugural editor of *JBI* and the Dr. Stanley M. Rogoff and Dr. Raymond Gramiak Professor and Chair of Imaging Sciences at the University of Rochester Medical Center. She previously served as head of the University of Virginia Division of Breast Imaging, codirector of the University of Virginia breast care program, and vice-chair of education and faculty development at the University of Virginia

Health System. To highlight her decades of contribution to breast imaging and derive inspiration for the next generation of breast radiologists, I interviewed Dr. Harvey on behalf of the Newsletter Committee and discussed important points of her career trajectory.

Dr. Harvey shared her insights on a long, successful academic career. She said, “Academics allows you to be very much an expert in your subspecialty....Whether it’s quality, process improvement, patient flow, research, education, [or] all additional aspects affecting patient care, it gives an opportunity to improve these aspects all over the world, which is pretty cool.” When asked about the low points or challenging aspects in her career and how she overcame those stressful times, Dr. Harvey replied, “The hardest and most common challenging times for breast radiologists are when you are not staffed sufficiently with faculty. When one ends up in such a

spot...[you] end up using the nonclinical time catching up from all the other piled-up stuff from clinical work and it’s hard to continue research projects. My advice with that is to keep it going, even if it is slower, as that is what builds your resilience. Making slow but steady progress with monthly quality/research group meetings will make the journey fruitful and make one enjoy what they’re doing.”

It was interesting to learn that being a journal editor was never part of Dr. Harvey’s career goals or even on her radar, despite being on many editorial boards, as she perceived her role in those positions to be more advisory than active. While she was chair of the SBI Scientific Advisory Committee, the need for a pioneer breast imaging journal was discussed during a strategic planning retreat. She explained, “Honestly, I thought this was such an important part of our society’s mission that I had to say yes to the offered role of editor. This was really important for our society and our patients.”

When asked about the high points in her career as the *JBI* editor and what made this role worthwhile, she added, “The number one thing was the opportunity to lead ongoing mentoring of the submitting authors and editorial team and building and honing their writing and reviewer skills, despite great science. The most joy for me was having a paper [that was] initially rejected [undergo a] discussion process for improvement and final acceptance.” Two excellent articles published in *JBI* highlight the leading points of successfully writing a scientific article<sup>1</sup> and being a good reviewer.<sup>2</sup>

Early- and mid-career radiologists can get more involved in academic publishing at any stage of their careers. Dr. Harvey shared many thoughts on this topic, the foremost being to become a reviewer and work with a mentor in that process locally and nationally. As a reviewer, it’s also pertinent to read other reviews for a great learning experience. She added, “I love research, but not everyone does. So I think of scholarship as what [you have] learned by being a subspecialist in the field. For example, implementing a great quality program that has demonstrated good outcomes could be a great Clinical Practice article. General radiology and your subspecialty peers could really benefit from such research coming out of your experience.” There are multiple opportunities for radiologists





in private and hybrid practices alike to contribute to topics like economics, advocacy, practice finances, clinical practice workflow, operations, radiology-pathology correlation, unknown cases, and image spotlights.

Dr. Harvey also emphasized the importance of breast radiologists being actively involved in journals like *JBI*. She continued, “Patients are always our top priority, and to improve that, we come back to the role of writing. Sharing your knowledge through publications helps the rest of us do better patient care. In that process, we really need to be data and literature driven, if we get the science out there, taking us to the next step of implementing them in our practices.” She also shared excellent points to develop one’s career to be a future successful leader and create a healthy, rewarding work environment. If one is new to leadership, it’s important to show up, network, make meaningful connections at meetings, volunteer, and find mentorship outside one’s home institution. To be a good leader, it is of utmost importance to know how to have a hard conversation calmly because shying away from giving feedback doesn’t help with program and personnel growth. Second, delegating tasks is crucial. Great leaders hold themselves to high standards and set an example by taking on leadership responsibilities and setting up a positive work environment.

On work-life balance, workforce shifts resulting from the pandemic, and the recent phenomenon of “quiet quitting,” Dr. Harvey shared some excellent steps one can take in early and middle career to continue building your resume while balancing a young family and increasing work demands. She elaborated, “One of the best pieces of advice I ever got was that if you can pay someone to do something for you at home, pay them! Whether it’s child-care, yard work, or housekeeping, delegate as much as you can as your time is much more precious than those dollars spent to get

help. Also, spending a few extra hours after work to catch up on academic tasks on a weeknight helps achieve a lot of tasks in that effective focused time.” She also discussed the importance of having mentors, sponsors, and supportive peers for academic success. Collaborating with peers from other institutions is a great learning experience. Another piece of advice was to network at meetings related to breast cancer but outside of diagnostic radiology, as not many radiologists attend such meetings. Social activities with peers within the breast imaging section at local institutions, demonstrating one’s willingness to get help on research projects, and constant networking can help alleviate peer competitiveness.

The discussion closed with great advice on key strategies for early-career radiologists. “The word *feedback* makes people uncomfortable. It took me some time to realize how incredibly important feedback was in my career growth. A way to kind of get over that fear and insecurity is to ask for feedback, [which] can be called advice. For aspiring journal editors and associate editors, it is of utmost importance to be a great reviewer and develop a reviewer’s broader perspective and bigger overview. Another key aspect is to interact with [the] existing editorial team to understand their roles better. Sharing new, innovative ideas can help [the] journal expand and grow with new section incorporations.”

For further discussion about why to choose academics as a career in breast imaging, check out the recent discussion featuring Dr. Harvey, moderated by the SBI Newsletter Committee: <https://www.facebook.com/BreastImaging/videos/1498968993846883/>

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## What’s New in the News: A Breast Cancer Diagnosis in the Time of COVID-19: Importance of Social Services in Comprehensive Cancer Treatment (continued from page 7)

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The SBI Fellows Committee recently approved 8 outstanding new SBI fellows.

This distinction is among the highest honors bestowed on SBI members.



Rosalind Candelaria, MD, FSBI

**Rosalind Candelaria, MD, FSBI**, is an associate professor of breast imaging at the University of Texas MD Anderson Cancer Center in Houston. She earned her undergraduate degree from Vanderbilt University and her medical degree at the University of Tennessee Health Science Center in Memphis. Dr. Candelaria completed her residency at the University of Texas Health Science Center at Houston

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Heather Greenwood, MD, FSBI

**Heather Greenwood, MD, FSBI**, is an associate professor of radiology and biomedical imaging at the University of California, San Francisco. She graduated summa cum laude from Northwestern University and subsequently obtained her medical degree from Northwestern University Feinberg School of Medicine. She completed her diagnostic radiology residency training at

New York University School of Medicine and a fellowship in breast imaging at the University of California, San Francisco. Her research is focused on the detection of breast cancer in young women, high-risk screening, ductal carcinoma in situ on magnetic resonance imaging, and advancing technologies in breast cancer imaging. In her free time, she enjoys distance running and spending time with her family and friends.

**Sadia Khanani, MD, FSBI**, is an associate professor of radiology at Mayo Clinic in Rochester, Minnesota. She is a K scholar through the Paul Calabresi Program at Mayo Clinic and has also received a benefactor-funded career development award, among other grants. She was recently selected to be a member of the Academy for Radiology & Biomedical Imaging Research Council of Early Career Investigators in Imaging. Her research interests include using quantitative imaging-based methods to improve the outcomes of patients with breast cancer and those at risk for breast cancer.



Alana Lewin, MD, FSBI

**Alana Lewin, MD, FSBI**, received her bachelor of arts degree from the University of Pennsylvania, graduating magna cum laude in 2005. She attended New York University School of Medicine from 2006 to 2010 and was inducted into the Alpha Omega Alpha Honor Medical Society in 2009. Dr. Lewin remained at New York University for the entirety of her medical training,

including an obstetrics and gynecology internship, diagnostic radiology residency, and breast imaging fellowship. During her residency, she was elected chief resident in 2013 and inducted into the Gold Humanism Honor Society in 2014. Dr. Lewin is currently a board-certified clinical assistant professor of radiology in the breast imaging section of New York University Grossman School of Medicine and serves as associate program director of the breast imaging fellowship. Dr. Lewin's research interests include advanced breast magnetic resonance imaging, artificial intelligence, and breast cancer screening. She has published articles in numerous peer-reviewed journals and presented at national meetings. Dr. Lewin is currently serving as chair of Panel 2 of the ACR Appropriateness Criteria Expert Panel on Breast Imaging.



Anand Narayan, MD, PhD, FSBI

**Anand Narayan, MD, PhD, FSBI**, is an associate professor in the breast imaging section, vice chair of equity in the Department of Radiology, and the associate director of diversity, equity, and inclusion at the University of Wisconsin-Madison Carbone Cancer Center. Dr. Narayan grew up in Baltimore, Maryland, and completed his dual degree at the Johns Hopkins

School of Medicine (MD) and the Johns Hopkins School of Public Health (PhD in clinical epidemiology). He completed his radiology residency at Johns Hopkins Hospital and pursued a breast imaging fellowship at Memorial Sloan Kettering Cancer Center from 2016 to 2017. Until 2021 he was an assistant professor at Massachusetts General Hospital, where he served as diversity and inclusion officer for the Department of Radiology. His clinical, research, and administrative interests focus on equity, diversity, and inclusion, with a particular focus on reducing breast cancer disparities. He has published 78 peer-reviewed journal articles and three



book chapters and serves as a reviewer for several radiology journals. He currently serves on the editorial board of the *Journal of the American College of Radiology* and is an assistant editor at the *Journal of the American College of Radiology* and the *American Journal of Roentgenology*. He is vice chair of the ACR's Commission on Patient- and Family-Centered Care Outreach Committee. He previously served on the Membership Committee of the SBI.



Pamela Propeck, MD, FACR, FSBI

**Pamela Propeck, MD, FACR, FSBI,**

is a professor in the Department of Radiology at the University of Wisconsin–Madison School of Medicine and Public Health. She has served on the American Board of Radiology in many capacities and is currently on the Board of Trustees representing breast imaging. She also has been involved with several ACR breast accreditation committees over the years and is now serving as a senior reviewer for the ACR Breast Ultrasound/Biopsy Accreditation Program. She is a fellow of the ACR and was designated a Champion of Women's Health in the state of Wisconsin for her contributions in breast cancer screening and diagnosis. She currently works in the community division of the University of Wisconsin School of Medicine and Public Health Department of Radiology, providing breast care services within the University of Wisconsin health system and in outlying rural communities. She has 3 daughters: Kristin Borovsky, MD; Erika Wood, MD; and Ingrid Wood, PA-C. Dr. Propeck lives in Madison with her fiancé, Scott Perlman, MD. Her free time is spent traveling, hiking, and gardening.



Stephen Seiler, MD, FSBI

**Stephen Seiler, MD, FSBI,**

graduated from the University of Texas at Austin before completing medical school at University of Texas Southwestern in Dallas. He started residency at the medical branch in Galveston, shortly before Hurricane Ike pummeled the island, and then completed residency and fellowship back at University of Texas Southwestern. He joined the faculty thereafter and has recently been named interim chief of the breast imaging division. Stephen met his wife, Stephanie Joslin, on the first day of college, and she joined him at University of Texas Southwestern to complete her PhD in molecular microbiology. Together they have 10-year-old twins, Audrey and Owen, and a 9-year-old son, Colin, who keep them both very busy. Over the last several years, they have enjoyed exploring 34 of the national parks, most recently Great Sand Dunes in Colorado.



Biren Shah, MD, FACR, FSBI

**Biren Shah, MD, FACR, FSBI,** is the section chief of breast imaging for Detroit Medical Center and professor in the Department of Radiology at Wayne State University School of Medicine, Detroit, Michigan. He completed his diagnostic radiology residency at William Beaumont Hospital and his breast imaging fellowship at Henry Ford Hospital. He received his medical

degree from the Sackler School of Medicine New York State/American Program at Tel Aviv University and his undergraduate degree in cellular and molecular biology from the University of Michigan. Dr. Shah's passion is radiology resident and medical student education. He is the founder and series editor of the *A Core Review* series, a 10-volume radiology board review book series. He has coauthored two radiology textbooks and has given numerous invited visiting professor lectures at many national radiology institutions and radiology professional organizations. He is the preceptor for the medical student breast imaging elective at his institution and a medical student career advisor for three medical schools. Dr. Shah has been a member of SBI since 2008, with service on the SBI Membership Committee and as a manuscript reviewer for the *Journal of Breast Imaging*.



# Breast Biopsy Marker Migration: Significance and Potential Solutions

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

Migration of breast biopsy markers, immediate or delayed, is frustrating for breast radiologists, particularly during mammography-guided vacuum-assisted biopsy (MGVAB). These biopsies are often performed in either the conventional biopsy approach or the lateral arm biopsy approach. Studies show that no matter the approach, marker migration is a common complication. Breast marker migration rate for MGVAB ranges from 2% to 44% across all methods and marker types when migration is defined as a distance of 1 cm or greater between the final marker clip location and the targeted biopsy site.<sup>1</sup> A retrospective study by Teichgraeber et al reported a migration rate of 38% when migration was defined as greater than 0.5 cm from the site of biopsy. The study also found migration to be more likely with decreased breast density.<sup>2</sup> Another study of migration associated with older- and newer-generation markers reported a migration rate of 35.6%, with no significant difference according to marker type or generation. However, older-generation markers migrated an average of 0.7 cm farther than newer-generation markers. The study also reported less migration occurrence in dense breasts.<sup>3</sup> Funaro et al reported that the migration rate after magnetic resonance imaging-guided biopsy was 14%, with 38% of those migrations occurring within fatty breast tissue.<sup>4</sup> Understanding the significance, causes, and potential solutions of marker migration can ease breast imager frustration with this complication of MGVAB.

## Significance of Marker Migration and Impact on Patient Outcomes

With breast biopsy markers serving as important landmarks indicating biopsy sites for both malignant and benign findings, the placement of metallic markers after breast biopsy is important for future reference. When a finding is benign, markers make it easy to monitor changes on future mammograms, so migration can affect lifelong surveillance.<sup>5</sup> When atypical or malignant pathology is discovered, the marker aids in localizing the area for subsequent surgery and ensuring accurate excision. For patients undergoing neoadjuvant therapy, the malignancy may change and become more difficult to visualize. Thus, the marker remains as mammographic evidence of the initial site of malignancy. Migration or displacement of the biopsy marker may contribute to inaccurate preoperative needle localization, positive margin rates, and increased re-excision rates. Marker misplacement is typically noted on postprocedure images immediately after biopsy. However, marker migration has been reported days, weeks, or even months after placement of the marker, although such delayed migration is rare.<sup>2,3,5,6</sup>



Robyn Hadley, RT(R)(M)



Sarah Jacobs, BS,  
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## Causes of Marker Migration

Multiple studies have aimed to discern the reasons for marker migration in MGVAB, although there is no certainty on any particular theory. Breast density, hemorrhage, and gravity may all be contributing factors. Patient age, the type of marker used, and the breast imager's technique have been studied in relation to marker migration. A study published in the *American Journal of Surgery* in 2002 found that migration of biopsy markers did not change according to the age of the patient, the size of the breast, or the location within the breast.<sup>7</sup> However, more recent studies published in 2020 and 2021 by Weaver et al, Teichgraeber et al, and Stahl et al found that breast density was a significant factor in marker migration and that migration was more likely in patients with decreased breast density.<sup>1-3</sup> Additionally, a study by Lee et al published in 2022 reported that intrinsic breast composition was the most important determinant for accurate marker placement.<sup>8</sup> Thin breasts, superficial lesion location, high specimen number, and a more posterior biopsy location were associated with significant marker migration in a study by Wang et al published in November 2020.<sup>9</sup> Another cause of marker migration is the accordion effect, which occurs when breast tissue compressed for biopsy is allowed to re-expand after the biopsy, forcing the marker to move along the z-axis away from the original target during re-expansion.<sup>15</sup>

## Solutions for Marker Migration

Continued research is needed to assess solutions for breast biopsy marker migration. However, breast radiologists may consider a number of options to reduce marker migration. Postprocedure imaging considerations include the type of projection used and decompression techniques after biopsy. Baker reported a marker migration rate of only 23% when the first view obtained after marker deployment was the same as that used for the stereotactic core biopsy. Baker also reported an 83% rate of clip migration when the first view obtained after marker deployment was orthogonal to the view used for the core biopsy.<sup>10</sup> Conversely, the type of projection



used to obtain the first view on the postbiopsy mammogram, relative to that used during the stereotactic biopsy procedure, did not affect biopsy marker clip migration in a study by Le-Petros et al.<sup>11</sup>

For certain biopsy devices, such as the Eviva [Hologic], steps can be made to try to reduce the biopsy cavity in order to decrease the risk of migration. Allison Boatman, MD, suggested on the SBI Connect forum that after obtaining biopsy samples and lavaging the biopsy cavity, the saline flush can be disconnected. This allows one to aspirate the cavity with air. In doing so, it is believed that this helps collapse the cavity and dry it out so that it stays collapsed.<sup>12</sup> Then, when the biopsy clip is placed, the hope is that the clip is in a smaller cavity space in order to improve marker localization and accuracy of the biopsy site.

The following decompression technique used by Dianne Georgian-Smith, MD, during wire localizations improved the accuracy of marker/seed placement: when deploying a marker in a compressed breast, manually release the compression by 4 to 5 mm while at the same time manually adding forward pressure to the back of the needle. By doing so, the tissues slide up the needle shaft, minimizing the accordion effect on marker placement.<sup>13</sup>

Parikh<sup>6</sup> and Philpotts et al<sup>14</sup> recommend obtaining repeat craniocaudal and lateral mammography images on the day of the localization before the procedure regardless of the time between biopsy and surgical excision. Since migration can occur days or weeks after the procedure, orthogonal views obtained on the day of the localization will confirm accuracy. Other methods can also be used to ensure accuracy during preoperative needle localization. On the day of the localization, the z-axis depth of the marker can be compared with the z-axis depth of the lesion on the day of the biopsy to determine significant z-axis migration. This technique can be used if digital stereotactic guidance is used with the same approach and equipment as the original stereotactic biopsy. When mammographic-guided localization is done, obtaining views orthogonal to the initial approach of the biopsy allows for comparison of the depths of the localizing needle, the marker, and the location of the lesion on the prebiopsy views. Postbiopsy hematoma can be localized if sonogram guidance is used.<sup>6</sup>

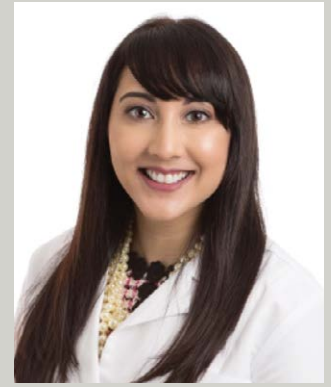
Breast biopsy marker migration after MGVAB continues to be a common complication and can be attributed to a number of causes. Given the high rate of marker migration, Funaro et al suggest that informed consent documents include information on the possibility of marker migration during biopsy procedures.<sup>4</sup> The numerous potential solutions to marker migration are encouraging; however, no single specific method has been widely accepted as a standard solution to this frequent complication. Continued research efforts may help identify a few of the most effective approaches to mitigate this biopsy complication.

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# Going National: Breast Cancer Awareness and Football: My Experience as the 2022 Kansas City Chiefs Fan of the Year

By Amy K. Patel, MD



Amy K. Patel, MD

I'm incredibly honored to be named the 2022 Kansas City Chiefs Fan of the Year, now competing against the other 31 Fans of the Year chosen by their respective National Football League (NFL) teams. This was revealed to me during a surprise encounter by NFL Commissioner Roger Goodell and Chairman and CEO of the Chiefs, Clark Hunt, before the home opener in September!

I truly feel as though I won the lottery! I love this team with all my heart since I was born and raised in Chillicothe, Missouri. I was chosen for this honor due to my love of the Chiefs and my community impact as I work tirelessly to bridge the gap to breast care disparities and access. To practice within the area in which I was raised and to be able to serve Chiefs Kingdom has truly been a dream come true, and I am cherishing this special moment in my life.

I am the first physician chosen for this honor, and I am using this national platform to raise awareness of who we are as radiologists and the integral role we play in patient care. I am also spreading the word about early detection and annual screening mammography beginning at age 40 years as well as being risk assessed by age 30 to see if earlier cancer surveillance is warranted and what that means for patients and families. I have had such a warm reception, and during all of the media engagements I have had for this honor, usually half of the discussion is talking about breast radiology and breast cancer, which is a huge win in our book! In fact, I have predominantly male-listenership radio shows and podcasts asking me to come back to talk more about breast health! I will also be in *Sports Illustrated* magazine, in which breast cancer awareness

is also highlighted. This experience has revealed a subset of the population that is less commonly educated on this topic, and I understand the gravity of this effort as we work to tirelessly educate the entire public on breast cancer awareness.

I don't take this immense honor lightly, and I am doing all that I can leading up to the Super Bowl to win this not only for Chiefs Kingdom but also for the house of radiology and medicine! I have deeply appreciated everyone's support thus far! I live a life of service. This is no different.

I hope to earn your vote. To vote, go to <https://www.nfl.com/honors/fan-of-the-year/2022/vote>. You can vote as many times as you want leading up to the Super Bowl, and the winner will be announced at the NFL Honors Ceremony on Friday, February 10. I have the honor of attending the ceremony as well as the Super Bowl, where I will be representing the Chiefs.

I am proud that we as a breast radiology and cancer community are going national as we work tirelessly to save the most lives.

Go Chiefs and go national breast cancer awareness!



Dr. Amy K. Patel (left) named 2022 Kansas City Chiefs Fan of the Year by NFL Commissioner Roger Goodell (center) and Chairman and CEO of the Kansas City Chiefs, Clark Hunt (right).



VOTE HERE!



## Fall News From the EUSOBI Young Club

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

After two years of online events, this year the annual European Society of Breast Imaging (EUSOBI) congress was organized for in-person attendance in Malmö, Sweden, with Prof. Dr. Sophia Zackrisson as local congress organizer, in close collaboration with EUSOBI President Prof. Dr. Fiona Gilbert and the program planning committee. On Thursday, September 30, the EUSOBI Young Club (EYC) organized an educational workshop dedicated to artificial intelligence (AI) and interventional procedures. After an interactive session with Dr. Alexandra Resch, participants were able to improve their skills with ultrasound-guided interventions like puncture, biopsy, and marker placement using phantoms with numerous types of biopsy devices and marking clips. The workshop was a great success with more than 100 attendees.

The scientific program started with the presentation of an emerging tool, contrast-enhanced mammography (CEM), with the question “Can it replace MRI [magnetic resonance imaging]?” opening the discussion. The sports environment of the Malmö Arena, usually hosting ice hockey matches from the local club during the year, animated the discussion, with the CEM team supporting the emerging method versus the MRI team supporting what is considered the “best” method for patients. The latter team stated, “No discussion, MRI is better.” Discussions on staging and utility of diffusion-weighted imaging completed the first day of the congress.

The topic of the present and the future of screening opened the second day. Several awards were presented, including the most cited breast imaging paper of 2019 published in *European Radiology* (“Radiomic Nomogram for Prediction of Axillary Lymph Node Metastasis in Breast Cancer”) and the EUSOBI Young Researcher Grant winners of 2021, moderated by the *European Radiology* deputy editor, Prof. Rossano Girometti. After lunch, a lecture on molecular subtypes in breast cancer by Prof. Therese Sørlie (Oslo, Norway) improved knowledge for all participants in this complex area of research that increasingly influences our daily clinical practice.

After an amazing ABBA-themed EUSOBI evening (still singing “You Are the Dancing Queen”), the Saturday morning session started with EUSOBI Gold Medal winner Prof. Ingvar Andersson. He provided an impressive overview of the implementation of

breast imaging modalities into the national breast cancer screening program in Sweden. The present and future perspectives of AI and novel developments animated the third day of the congress, with an illuminating presentation titled “The Future of Cancer Imaging” by the president of the European Society of Radiology, Prof. Regina Beets-Tan. In the afternoon, Japanese colleagues showed us differences in breast cancer treatment on the other side of the globe, including impressive recent improvements in the field of breast cancer screening. Before the last session, “Breast Imaging in Specific Subgroups,” a moving award ceremony during the Young Scientists’ Session allowed everyone to remember Carla Boetes. Thiemo van Nijnatten, the new vice chair of the EYC, was awarded this year’s Carla Boetes Young Investigator Award for his research focused on axillary lymph node staging.

The sparkling annual Malmö congress crowned Prof. Ruud Pijnappel as the new EUSOBI president for the two-year term 2023-2024. The annual meeting closed with a final social evening event on Saturday, October 1, organized by the EYC at the Malmö Arena Hotel, with a guest of honor, the editor in chief of *Radiology*, Prof. Linda Moy, who answered questions from all attendees and inspired the young generation of breast imagers while enjoying Swedish-style slices of pizza.

We are looking forward to 2023. The next annual meeting of EUSOBI will be in Valencia, Spain (September 28-30), with Dr. Julia Camps Herrero as the local congress organizer.



# A Panel Discussion Offering Diverse Perspectives on Pursuing a Career in Breast Imaging

By Fatima Elahi, DO, MHA; Tejas S. Mehta, MD, MPH; Heba Albasha, MD; Dana Bonaminio, MD; Juan Villa Camacho, MD; Katerina Dodelzon, MD; Monika Tataria, MD; Michael Taylor-Cho, MD, MPH; Rifat Wahab, DO; Gary J. Whitman, MD

The SBI Inclusion Diversity Equity Alliance aims to identify the inclusion and diversity strengths and opportunities within all aspects of breast imaging. In alignment with our mission, we hosted a panel discussion in collaboration with RadDiscord and the SBI Resident and Fellow Section on October 6, 2022. The panel discussed efforts to improve recruitment of diverse candidates to the field of breast imaging and provided a broad range of radiologists' perspectives.

The structure of the panel was a 45-minute large-group panel discussion followed by 30-minute informal small-group breakout sessions. Each panelist was asked questions pertaining to fellowship, career, and the field of breast imaging. The eight panelists were from diverse backgrounds, practice settings, and locations. The panelists were Dana Bonaminio, MD; Juan Villa Camacho, MD; Katerina Dodelzon, MD; Tejas S. Mehta, MD, MPH; Monika Tataria, MD; Michael Taylor-Cho, MD, MPH; Rifat Wahab, DO; and Gary J. Whitman, MD. The moderators were Fatima Elahi, DO, MHA, and Heba Albasha, MD.

Attendees were surveyed at the time of registration and given an opportunity to anonymously submit questions. A postpanel discussion survey was also sent to attendees.

We hope to host more virtual events to provide greater exposure to the field of breast imaging, targeting students earlier in the pipeline, in high school, at the college level, and locally in the communities. Some feedback from participants included that they found the session to be "very comprehensive and informative." Additionally, "the selected questions were everything I was curious about and more. I was very grateful for the opportunity to attend the session and hear all of the excellent advice from the attending [radiologists]." Another attendee noted that there were "lots of topics covered and [at the] perfect rate/speed. The physicians were great, a mix of private practice and academics—really enjoyed hearing their input and advice."

For future directions, attendees requested sessions covering specific details of the fellowship application process, advice for future applicants who are not training in a major academic center and are looking for more exposure to the field, dedicated sessions on job search, additional private practice perspectives, and tailored sessions for junior R1 and R2 residents interested in breast imaging.

These are highlights from the panel event in a Q&A format.

## Why did you choose to pursue breast imaging?

**Dr. Tataria:** I had a very roundabout way of getting into breast imaging. Basically, I started after medical school during my surgery residency. I thought I wanted to be a pediatric surgeon and wasn't interested in breast surgery at all. I worked at a lab at Stanford. It was really innovative there, and I realized that when I was in the lab, that all the future of medicine was radiology and that some surgery was being phased out to some degree due to less invasive procedures. So I decided I wanted to be a radiologist, still not knowing that I wanted to do breast imaging. During my residency, I realized that breast imaging is so interesting in that every case is like a mystery; it's like a puzzle, and I like puzzles. It's like solving a mystery from multiple different sources—not only the different imaging types, but also the information you get from patients and clinicians. I loved it, and I still love it every day. No matter how busy I am, I enjoy what I am doing. I think you have to do what you love, and I think I found it.

## What does a typical workday look like for you [in an academic setting]?

**Dr. Dodelzon:** One of the attractive aspects of breast imaging is that every day is different. I'm in an academic setting and practice, and every day I am assigned to a different rotation. I may be doing procedures one day, screenings or consultation video visits another, or diagnostic imaging on yet another day. I get to utilize different imaging modalities, consult with patients, and provide care guidance to our multidisciplinary team. So every day is very different in the hours, the things I do, and the people I interact with. The one thing that is unifying is the opportunity to really make an impact. That impact is a privilege in everything we do, which I don't think is as immediate in other fields. [I appreciate] our impact daily in the simple relief a patient experiences by having an expert to speak to them, to educate them, to empower them with information on their breast health. In addition, and in every basic sense, we are gatekeepers to the health care system because most patients we see are healthy, and [I may be] one of the only physicians they see. That allows us the opportunity to further educate and





care for a patient as a whole by providing a positive interaction and introduction to health care. So every day is different, but [each day] is focused on the patient and adding value to their care and that is a very rewarding experience.

### What does a typical workday look like for you [in a private practice setting]?

**Dr. Bonaminio:** I've been a private practice breast imager for seven years. I practice 100% breast imaging, which hasn't changed since I joined my group in Nashville. Every day is different. I rotate to a handful of breast centers, and instead of having a set block where I do only diagnostics or procedures in one day, each radiologist handles the volume of work at their specific site—so all the screenings, diagnostics, and procedures scheduled for that day. I enjoy the mix. Our section shares the daily screening and breast MRI [magnetic resonance imaging] volume which funnels centrally into PACS [picture archiving and communication system] from our 19 outpatient imaging centers across middle Tennessee. But just like in fellowship, we spend time discussing results with patients, back-scanning our sonographers, and reviewing outside workups; we just do it in the community. We have tumor boards weekly. I practice in a collaborative environment, working daily with breast surgeons, oncologists, genetic counselors, support staff, and high-risk nurse navigators.

### What do you look for in an ideal candidate for breast imaging?

**Dr. Taylor-Cho:** We look at the quality of the individual. Diagnostic and intervention skills can be taught. It is the responsibility of the program and faculty to teach those skills during fellowship. However, it is hard to teach someone how to be a committed and caring physician. So we look at the personal statement and the letters of recommendation to get a sense of the person's values and priorities. We look for those qualities during the interview, too. A candidate who is committed to patient care, has an inherent desire to go above and beyond and to do right by the patient every time—that is the ideal candidate we look for.

### Should residents interested in breast imaging pursue a 12-month dedicated fellowship or a mixed breast-body fellowship?

**Dr. Mehta:** I'm going to tell you my story. I did a women's imaging fellowship; I spent six months doing all types of breast imaging and six months doing OB/GYN [obstetrics/gynecology] imaging, including fetal MRI and hysterosalpingograms. At that time, I en-

joyed both subspecialties and I spent the first part of my attending career in academics doing 50/50 of each; it was not until later that I transitioned to 100% breast imaging. My one piece of advice to applicants is to make sure your fellowship gives you skills for what you ultimately want to do. There is value in doing a 12-month dedicated breast fellowship as there is a lot to know and learn about breast health and imaging. However, it is also very easy to forget skills learned [in residency]. While doing a breast fellowship, it's good to maintain some of those other skill sets, whether in the form of call or moonlighting. Learning is an ongoing process, and we have to continue to want to learn indefinitely. I do think in the current day, a one-year dedicated breast fellowship is the way to go, and that's what I tell my mentees because you need the year to learn the things needed to be a solid breast imager. But if you are not sure what the future holds for you, moonlighting is one way to supplement your salary and to keep those other skill sets fresh during that dedicated breast year. I love what I do and would pick this subspecialty again in a heartbeat.

### What attracted you to certain programs and what should we [trainees] be looking for when interviewing?

**Dr. Villa Camacho:** I am very grateful that I was able to find a place that was very supportive and gave me the opportunity to pursue what I really wanted to pursue. My advice to trainees is that when interviewing, be attentive to finding a program that provides you an opportunity to pursue your interests. If you have an interest in leadership, for example, find a place that will give you that opportunity. If you really like quality assurance, find a place that has a track record of doing [quality assurance] projects. It is important to recognize what you value and to be transparent about it [to the programs]. This way, we can tell you if we have the resources you need [to support your interests].

### What actions do you think an R1 or an R2 can take to be considered a competitive applicant for a fellowship placement?

**Dr. Whitman:** I think one of the first things to assess is if breast imaging is something you really like. Is it something you are able to get exposure to during your rotations? Is it possible to ask for earlier exposure as a first- or second-year resident? You should have some breast imaging rotations before you apply. If you do like it, and it's something you are likely to devote the rest of your life to, it may be good to join some projects to take it to the next level, depending on the amount of time you have available. Some people could do bigger projects, and some could do smaller projects. Even if you have something straightforward that you can do in a short amount of time, at least it is something that creates interest and shows you can take something from beginning to middle to finish

*Continued on page 18>*

## Career Development Column: A Panel Discussion Offering Diverse Perspectives on Pursuing a Career in Breast Imaging (continued from page 17)

in a short period of time. It serves you well because when you are interviewing it will be on your resume, and you can discuss it, and the person writing your letter of recommendation could refer to that [project].

### What are your virtual interview tips?

**Dr. Wahab:** One of my tips is that you do come appropriately dressed, as you would present yourself in an in-person interview. It shows that you are committed and dedicated to the whole interview process. Also, the location where you are having the interview [is important]. Probably a busy coffee shop is not ideal. Try to find a quiet location where you can focus on the interviewer and vice versa, instead of the interviewer focusing on what's going









on in your background. Know a little bit about the program. I did this for my own interviews too. Know something about the city or the attending [physicians] that you are interviewing with. Know their interests. Can you generate a conversation with them? Can we sit together for the next 12 months? We can learn—you can teach me, I can teach you—because I always learn something from my fellows as well. We have a very collaborative environment. Can we get along for those next 12 months? I know that you are capable as you have made it thus far.

Visit us on the [SBI website](#) for the recording of the full panel discussion. If you are interested in future collaborations, please email Dr. Tejas S. Mehta at [Tejas.Mehta@umassmemorial.org](mailto:Tejas.Mehta@umassmemorial.org) or Dr. Fatima Elahi at [elahirads@gmail.com](mailto:elahirads@gmail.com).



**SOCIETY OF BREAST IMAGING (IDEA & RFS) AND RADDISCORD PRESENT**

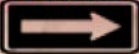

**SBI** **Breast Imaging Fellowship Panel** **RAD**


**PANELISTS**


 Michael Taylor-Cho, MD, MPH Duke Radiology	 Rifat Wahab, DO University of Cincinnati	 Dana Bonaminio, MD Premier Radiology Tennessee	 Katerina Dodelzon, MD Weill Cornell Medicine
 Gary Whitman, MD MD Anderson Cancer Center	 Monika Tataria, MD Camellia Women's Imaging	 Tejas S. Mehta, MD, MPH UMass Memorial Health	 Juan Villa Camacho, MD Massachusetts General Hospital

**MODERATORS**

 Heba Albasha, MD Diagnostic Radiology Resident, R4 University of Cincinnati	 Fatima Elahi, DO, MHA Diagnostic Radiology Resident, R3 Ascension Illinois
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**REGISTRATION LINK**  

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 **OCTOBER 6, 2022**  
**7:00 PM (EST)**





## HIGHLIGHTS FROM THE RSNA 2022 MEETING IN CHICAGO

By Claudia Cotes, MD



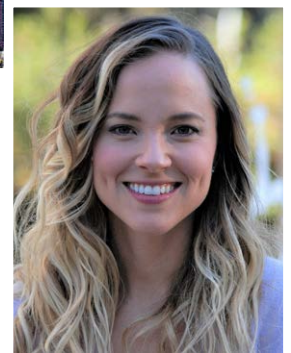
The Radiological Society of North America (RSNA) 108th Scientific Assembly and Annual Meeting took place in Chicago, Illinois, from November 27 to December 1, 2022. The first in-person RSNA conference for many after a COVID-19 hiatus had a significant increase in attendees compared with 2021, with up to 34,385 people in attendance. There was tremendous excitement; the opportunity to once again network, meet colleagues, and see old friends was unparalleled. The programming was centered on patients and their needs, which exemplifies our role in radiology as breast imagers.

As usual, topics in all areas of radiology were extensively covered during the meeting. For those of us interested in premier research, educational opportunities, and demonstrations of the latest technologies in breast imaging, there was plenty to see daily.

The opening session by Dr. Elizabeth Morris could not be a better representation of breast imaging and the theme of this 2022 meeting: “Empowering Patients and Partners in Care.” She delivered an honest and touching perspective as a breast radiologist who was also a breast cancer patient. She highlighted disparities in breast care and addressed opportunities to increase screening access for all patients.

Familiar faces discussed relevant topics during the various breast imaging sessions. Dr. Lars Grimm and Dr. Marc Ryser discussed overdiagnosis and overtreatment, including the role of imaging in tackling overtreatment of low-grade ductal carcinoma in situ. Factors influencing breast cancer risk were detailed by Dr. Wendie Berg, Dr. Jennifer Harvey, and Dr. Christiane Kuhl. Dr. Pascal Baltzer, Dr. Christopher Comstock, and Dr. Ritse Mann reviewed abbreviated breast magnetic resonance imaging and its role as a breast cancer screening modality.

To continue with the meeting’s theme, Dr. Constance Lehman, Dr. Maryellen Giger, and Dr. Fredrik Strand discussed the applications of artificial intelligence (AI) in mammography and how it impacts patient care. Dr. Siddhartha Mukherjee also discussed AI in the plenary session, “Three Visions for the Future of Medicine,” in which he stressed how AI should complement our work as physicians while we strive to understand and set global goals in patient care. Additionally, Dr. Reed Omary discussed how radiologists can and must lead the way to change the multiple barriers to efficient and patient-friendly health care systems.



Claudia Cotes, MD

There was also space for sessions about interesting cases. A presentation of challenging breast imaging cases stressing the importance of radiologic-pathologic correlation was given by an international panel composed of Dr. Bonnie Joe, from the United States; Dr. Jean Seely, from Canada; and Dr. Sarah Vinnicombe, from the United Kingdom. Their interactive approach with audience participation was perfect for trainees. The importance of a multidisciplinary approach for our patients was highlighted by Dr. Avan Armaghani, Dr. Bethany Niell, Dr. Anna Shapiro, and Dr. Lorena Gonzalez. Dr. Sarah Friedewald and Dr. Laurie Margolies presented different clinical scenarios and troubleshooting during imaging-guided breast biopsies. This presentation was complemented by the hands-on simulation laboratories, where multiple experts in our field instructed attendees in the art of ultrasound-guided biopsies.

Science sessions and scientific poster discussions covering all breast imaging modalities in detail were available daily. New topics and updates were also covered nicely. Pending updates in the next BI-RADS edition were discussed by Dr. Wendy DeMartini, Dr. Stamatia Destounis, and Dr. Jessica Leung, and the management of elevated-risk (high-risk) lesions was discussed by Dr. Peter Eby, Dr. Husain Sattar, and Dr. Nisha Sharma.

The importance of diversity was also a main topic during the meeting and was included in the breast imaging session titled “Beyond the Binary: Imaging Findings, Screening Guidelines, and Radiology Practice Considerations for Transgender and Gender-Diverse Patients.” This session also covered the importance of creating inclusive and diverse radiology departments.

*Continued on page 20>*

## Highlights From the RSNA 2022 Meeting in Chicago (continued from page 19)

As usual, the RSNA annual meeting did not disappoint. Spaces for mentorship, relationships, and collaborations are a key component of this meeting, and the innumerable opportunities for aspiring breast imagers to learn, participate, and network are unmatched. Being able to attend all sessions is nearly impossible,

but thankfully, virtual access is still available and open until May 2023 for those who are interested. The RSNA meeting continues to be the ultimate networking and learning platform in radiology. It guarantees to leave you inspired!

### WHAT DOES A FIRST-TIME ATTENDEE THINK?

By Steven Lee, MD

The RSNA meeting offers many opportunities and experiences for residents. As a first-time attendee, I initially felt lost navigating the convention center and planning for each lecture or exhibit. However, unlike many other meetings, the RSNA meeting is unique since everyone can arrange their day according to their own preferences. Many events are specifically tailored to residents and trainees focusing on applications, résumé building, and networking involving leaders in their specific subspecialties. The meeting has offerings for everyone throughout their radiology career, from job recruiting for fellows and recent graduates to technical exhibits showing newer technologies and equipment to practicing radiologists.

One pleasant surprise that I observed was the vast diversity of people attending the RSNA meeting. Many had traveled long distances to attend, coming from countries such as Japan, Spain, Italy, and Argentina.

It is a multicultural experience whereby people can come together and share how they practice radiology. A common theme in breast radiology lectures this year was comparing differences between the United States and Europe in classification and treatment of high-risk breast lesions. Data from research in other countries may vary greatly due to different incidence rates and populations. The RSNA meeting allows radiologists to experience a broader perspective of practice in other countries.

As the meeting is centered within the heart of Chicago, opportunities outside of the convention center allow you to explore the rich culture of the city. Chicago offers various unique cuisines, such as the famous deep-dish pizza from Lou Malnati's and the cake shake and Italian beef from Portillo's. Chicago is also known for its artistry. You can visit galleries such as the Museum of Contemporary Art Chicago or the Bean in Millennium Park.



Steven Lee, MD

After experiencing the RSNA meeting, I can say that it is a transformative event that every radiologist should try to experience at least once. It offers something for radiologists at every point in their career, no matter where they trained or their area of expertise.

*Dr. Lee is a postgraduate year 4 radiology resident physician at the University of Texas Health Science Center Houston.*



# TIPS AND TRICKS FOR TRAINEES IN BREAST INTERVENTIONS: MRI-GUIDED BIOPSY

By Wenhui Zhou, MD



Wenhui Zhou, MD

The multiple modalities for image-guided breast biopsy include stereotactic guidance, ultrasound guidance, and magnetic resonance imaging (MRI) guidance. Radiologists should generally choose the imaging guidance modality that best demonstrates the lesion. However, due to the numerous benefits of ultrasound guidance, an attempt should be made to identify an ultrasound correlate for all sizeable lesions noted on MRI before choosing on an alternative modality to use for sampling.

In this three-part Member-in-Training series, we have dedicated each article to a brief overview of one breast biopsy modality with trainee-specific tips and tricks. The prior two articles discussed stereotactic-guided and ultrasound-guided breast biopsies. We are rounding out this series with MRI-guided breast biopsies.

## Basics

Breast MRI is currently the most sensitive imaging method to detect abnormalities of the breast, making MRI indispensable for breast cancer screening and diagnosis. However, due to its relatively low specificity, MRI-detected suspicious lesions often require tissue sampling to establish histologic benignity or malignancy.<sup>1</sup> In general, second-look ultrasonography should be performed as the reported correlation rates range from 23% to 57%.<sup>1-3</sup> Lesions that are occult on ultrasound or mammography require MRI-guided biopsy, which is routinely performed with vacuum-assisted devices. MRI-guided biopsy is contraindicated for patients with certain implantable devices or a contrast material allergy.<sup>1-3</sup> For most patients, this procedure is safe and well tolerated. The most common complications are bleeding and hematoma formation, which are self-limiting and can be managed by compression at the biopsy site.<sup>4</sup>

## Equipment and Technique

1. The patient lies in a prone position, and a dedicated interventional breast coil is used. Gentle compression prevents motion and breast deformity during the procedure without compromising the flow of blood and gadolinium contrast material to the breast. Using saline bags can help further stabilize the breast. A grid is placed within the compression plate and against the breast. A fiducial marker must be placed within the grid to localize the lesion.
2. Optimal patient positioning is key. The expected lesion location is used to plan the approach. The approach is typically medial

or lateral, although newer systems can use a craniocaudal approach. Additional maneuvers such as arm-down, arm-up, oblique, and arm-through-the-hole positioning can help target anatomically challenging lesions.<sup>5</sup> Work closely with the patient and technologist to ensure appropriate positioning and patient comfort for the duration of the procedure (up to an hour).

3. Contrast-enhanced breast MRI guides lesion targeting and sampling. A precontrast T1-weighted fat-saturation sequence is obtained to ensure the target lesion is within the grid and the patient is appropriately positioned. If the lesion is not within the grid, the patient is repositioned before contrast material is administered. Postcontrast and subtraction images are used to identify the target. The image number for the skin surface (identified via the fiducial marker) and image number of the target are used to calculate the depth of the lesion. A computer-aided detection system can be employed to automatically perform these calculations and depict the appropriate grid location pictorially. Delayed, subtraction, and diffusion-weighted images may help improve visualization when the target lesion is not seen. A lesion that remains not visualized might be attributed to normal hormonal change, and six-month follow-up MRI is recommended instead of nontarget breast biopsy.
4. After satisfactory target visualization, trocar placement is performed to the target depth using sterile technique. Sterile cleansing of the breast is followed by local anesthetization of the skin entry site and deeper breast tissues. A small skin incision may be made to allow for smooth entrance of the trocar and guide sheath to the measured depth. A twisting motion is helpful to minimize skin tenting and tissue movement during trocar placement. The trocar is removed and replaced with a plastic obturator to confirm appropriate placement at the target depth. The tip of the obturator corresponds to the epicenter of the sampling bed, ideally at or near the center of the lesion on the prebiopsy images.
5. After appropriate positioning of the obturator, the obturator is exchanged with the vacuum-assisted biopsy device through

*Continued on page 22*>

**Member-in-Training Column: Tips and Tricks for Trainees in Breast Interventions: MRI-Guided Biopsy**  
(continued from page 21)

the stationary introducer sheath. Most biopsy procedures are performed with a 7- to 9-gauge needle, and six to 12 core tissue specimens are obtained. If the tip of the biopsy needle is at the periphery of the target lesion, directional sampling is performed to ensure optimal lesion sampling.

6. At the completion of biopsy, the vacuum-assisted biopsy device is replaced with the obturator to obtain postbiopsy images. A minimum of one postbiopsy MRI sequence should be obtained to demonstrate the biopsy site and its relationship to the targeted lesion. This scan is performed before or after biopsy clip placement.
7. An MRI-compatible titanium biopsy clip is placed at the end of the procedure and a postprocedure mammogram is obtained to confirm placement. This clip facilitates subsequent mammographic- or ultrasound-guided localization of abnormal findings for surgical excision and follow-up for benign lesions.
8. At the end of the procedure, hemostasis is achieved with manual compression, usually for 5 to 15 minutes. A sterile dressing is then applied to the wound.

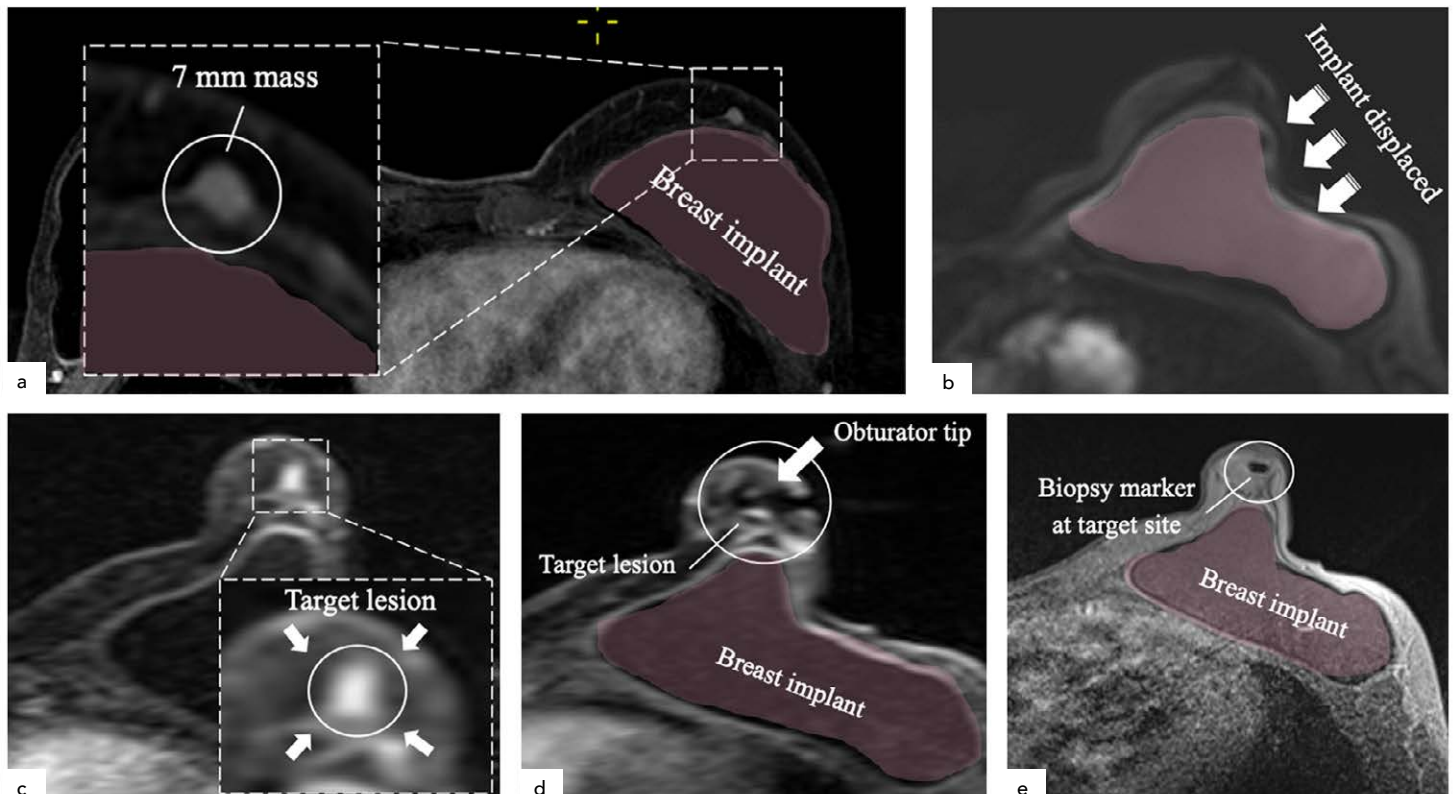
An example case of an MRI-guided breast biopsy is illustrated in the Figure.

### Conclusion

Trainees should expect a learning curve for performing MRI-guided breast biopsies, with progressive autonomy and ownership. Before the procedures are performed, careful review of preprocedural imaging and planning of the patient position, biopsy route, and approach tailored to the individual patient and target lesion are key to successful and safe breast biopsies. After each biopsy, follow the case to ensure radiologic-pathologic correlation and help make management recommendations. As always, trainees should not be afraid to ask questions or ask for help. Let the attending physician know your personal skill level and alert them when you encounter difficulties.

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**Figure. Example case of an MRI-guided breast biopsy.** (A) A diagnostic contrast-enhanced, T1-weighted MR image shows a 7-mm enhancing mass (circle) in the left breast. The mass is anteromedial to the breast implant (outlined in pink). (B) An axial precontrast, T1-weighted MR image illustrates displacement of the breast implant to allow adequate access to the target lesion. (C) A prebiopsy MR image demonstrates the location of the 7-mm enhancing mass, which has been displaced from the breast implant. (D) A repeat axial T1-weighted MR image confirms that the obturator and introducer sheath (white arrow) is near the center of the target lesion (white line). The planned biopsy route is sufficiently away from the breast implant. (E) A postbiopsy MR image shows biopsy marker placement at the expected location of the target lesion. On histologic examination, the target lesion was confirmed to be pseudoangiomatous stromal hyperplasia.



## Kate Hansen

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

As individuals and professionals, we constantly face challenges that we hope to overcome. Some are insignificant, while others are terrifying. These difficulties can make us take a step back and dare us to find gratitude in the uncertainty of our situation. What happens when we deny our challenges an outlet to survive? What happens when we make the conscious decision and effort to thrive in the face of uncertainty instead of allowing our challenges to define who we are?

I had the privilege and opportunity to interview Kate Hansen, owner and founder of Cabin No. 4, an online outdoor clothing and adventure shop, about her recent breast cancer diagnosis. Our conversation was inspiring and provided a valuable patient perspective to draw from. Kate was diagnosed with stage II breast cancer in September 2022 at the age of 43, shortly after finding a lump in her left breast. After the initial shock and disbelief, Kate made the decision that breast cancer would not define who she is and what she will accomplish. She chose to accept that breast cancer is one of her challenges right now, one that will not last forever. Kate understands challenges are inevitable. Just when one is conquered, another will eventually arrive in its place.

Kate's first mammography experience was slightly different from the status quo. Her first experience with a mammography exam was a diagnostic workup. Just like many other individuals uncertain of the baseline mammography screening age and the frequency of screening mammography exams, she thought the age to begin screening mammography was 50 years.

During her first visit in breast imaging, Kate had a diagnostic mammogram and ultrasound, then waited patiently for the radiologist to verbally deliver the results of her imaging studies. That is when Kate heard the word "suspicious" on numerous occasions coming from beneath the mask of the radiologist. Masks are still prevalent in many health care institutions. We may fail to remember that it is extremely challenging to read each other's facial expressions and decipher inferences while a mask is covering more than half of our face. Patients have difficulty hearing our words with clarity and interpreting facial expressions. Initially, the mask worn by the radiologist prevented Kate from truly understanding what she was not

immediately saying. Kate's radiologist kept asking, "What questions do you have?" Kate sensed a level of indirectness in the radiologist's tone and in the words the radiologist so carefully chose. Kate finally asked the question "How concerned are you about this?" The radiologist's response was simple; she said, "I'm very concerned. I believe you have cancer." This response blindsided Kate. The result of her imaging that day was assessed as BI-RADS category 5. Kate's perception of the recommended biopsy was that it would be performed to prove the "suspicious" abnormality was not cancer. Once Kate received the radiologist's response to her question, she realized the biopsy would be performed to prove that the abnormality was breast cancer. Unfortunately, medical terms that are common in our vocabulary are often perceived in a different light by the patients we serve.



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

### Overcoming Challenges

During the first few weeks after her diagnosis, there were appointments, calls, and a great deal of information overload. Kate found herself unengaged with the information that was passed along to her. She let her mind shut down, and she wasn't able to focus on the path that her medical team laid out for her for the upcoming months. To combat feeling overwhelmed, Kate chose to focus on "the next thing" rather than focusing on anything beyond that. The next thing might be her upcoming appointment, imaging test, or chemotherapy visit. Focusing on surgery or anything that was further down the line was just "too much" and seemed "too big" to comprehend. Focusing on one aspect at a time is how she stays focused when she finds herself struggling. As health professionals, we glean value in Kate's gentle reminder that focusing on just one task at a time is a basic mechanism that helps us be more productive and focused and feel less overwhelmed. However, it's a task that so many of us tend to forget.

Early on, Kate's mantra became "I can do hard things." She said, "Everyone has their own mountain to climb. Not everyone's [mountain] is cancer...mine just happens to be right now. Everyone has their own hard thing. When this [hard thing]

*Continued on page 24>*

## The Patient's Perspective: Kate Hansen (continued from page 23)

is done, I'll find another mountain, I'm sure." A close friend encouraged her to create T-shirts with this same mantra and sell them in her online clothing store, Cabin No. 4. It didn't take long for the T-shirt sales to take off, and in the first week, over 750 "I Can Do Hard Things" T-shirts were sold. Kate decided to donate all of the proceeds to local organizations that help support cancer fighters and their families. Being a small business owner, it was now Kate's job to package and ship all of these orders. Again, her family, friends, and community showed up to help. It was in this moment of creating, selling, and then shipping out the shirts when Kate thought, "I can do this. I can manage to ship out these shirts while fighting breast cancer." Her world had been turned upside down, but she managed to deliver and ship out the shirts while also accepting help from others.



### Accepting Help

The feeling of losing control can be devastating. Limitations on routine physical tasks that otherwise brought normalcy made Kate feel as though some of the control she once had was lost. Early on, when friends and family offered to help Kate and her family, whether by driving the kids to their activities, cooking a meal, or cleaning her home, she found it difficult to accept the assistance of others. She felt guilty accepting help until she took a step back and allowed her mindset to shift. If they were in Kate's shoes, she'd want to help them. She would want that person to accept her generous assistance and good intentions. Once this shift happened, Kate felt she had a little more control. Her perspective moved to a place in which it felt as if her friends and family members were fighting the challenge alongside her.

Self-discovery during any challenge is a choice. Since her diagnosis, Kate has discovered she is a lot stronger and more resilient than she thought she was. She has learned that accepting help from others has actually brought more than a meal to her table and a clean home. The support from family, friends, community members, and random strangers from across the United States purchasing her "I Can Do Hard Things" T-shirts has brought her a sense of strength and encouragement.

Kate offered advice for supporting a loved one who is going through breast cancer. "Don't ask them how they're feeling all of the time. Instead, show them you care through ways that don't ask how they feel." Much can be learned from Kate's advice. Professionals can use this concept when facing challenges, whether cancer or something else. Individuals thrive when they feel supported, and actions often speak louder than words.

### Finding Joy

Finding joy when various life challenges are present can be tough; finding the energy and motivation to search for and recognize the joyous moments after a breast cancer diagnosis can be incomprehensible. For Kate, watching her children thrive while doing the activities that they love brings her joy. She reminded me that everyone has something that warms their soul. It may be a person, a place, or an act of selflessness toward others. Kate also finds joy in witnessing the constant support of her community.

"There is power in opening yourself up to love and hope." Accepting help and embracing vulnerability can be difficult. When you share your mountain publicly and let others know you've begun your climb, you may find some who are willing to climb beside you. Those individuals remind you that you're not alone and that climbing with someone else can be life changing and inspirational. Witnessing the support from the individuals who purchased T-shirts took Kate's mind off of the negative aspects of her breast cancer diagnosis. "It helped me stay focused on the fact that everyone has something they're fighting." May we all find the strength and courage to do hard things.

Special thanks to Kate Hansen for her perspective on overcoming and accepting challenges through her breast cancer diagnosis.

If you are interested in supporting Kate and learning more about Cabin No. 4, please visit <https://cabin4gear.com/icandohardthings/>



Kate Hansen





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