

# Bulletin

## Clinical Research





“The ACR is helping educate radiologists to become more well-rounded to where the education is not limited to radiology.”

**Kailash S. Amruthur, MD**  
Member since 2018

# JOURNEY

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Your 2021 ACR membership expires on Dec. 31. Start the new year with your membership paid in full.  
If you already renewed your 2022 membership, thank you!

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**QUESTIONS? COMMENTS?** Contact us at [bulletin@acr.org](mailto:bulletin@acr.org).  
Digital edition and archives of past issues are available at [ACR.ORG/BULLETIN](http://ACR.ORG/BULLETIN).

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**OUR MISSION:** The *ACR Bulletin* supports the American College of Radiology's Core Purpose by covering topics relevant to the practice of radiology and by connecting the College with members, the wider specialty, and others. By empowering members to advance the practice, science, and professions of radiological care, the *Bulletin* aims to support high-quality patient-centered healthcare.



# The ACR BOC Meeting

The fall retreat addressed population health management, the radiology workforce, and the importance of communication.

Between annual meetings, the ACR BOC and CSC continue the work of governing the College and serving its members. The BOC typically schedules four meetings a year — two in conjunction with the annual meeting and two interim meetings. In recent years, the CSC has been invited to not only attend but also participate in the BOC meetings. There are also synchronous meetings of several standing committees, including the Executive Committee, the Budget and Finance Committee, the Audit Committee, the Governance Committee, and the CSC.

In October, we held our fall BOC retreat. The agenda of the meeting was designed to encourage robust discussion about controversial and/or salient topics in radiology. Standard agenda items included reports from the BOC chair, the CEO, the president, and the secretary/treasurer. The agenda incorporated business matters from the ACR, the American College of Radiology Association® (ACRA®), and the ACR Foundation (ACRF®). Under the ACRA, we received extensive updates from Gregory N. Nicola, MD, FACR, chair of the Commission on Economics, and Cindy Moran, executive vice president of government relations, economics, and health policy. The ACR Foundation is expanding its role in supporting programs such as the Harvey L. Neiman Health Policy Institute® (NHPI) and the Radiology Leadership Institute® (RLI), as well as the College's international outreach efforts.

During the retreat, we held special sessions concerning pressing issues in the College and the specialty, including radiology's contribution to population health management (PHM), the radiology workforce, and the importance of communication, as well as the importance of programs such as the Radiology Health Equity Coalition, the ACR Institute for Radiologic Pathology™, and the NHPI. The workforce portion of the meeting focused on several critical issues, notably the controversy surrounding the role of non-physician radiology providers (NPRPs). The NPRP Task Force, chaired by Timothy L. Swan, MD, FACR, is charged with gathering and processing information about the utilization of NPRPs in current practice. The results of a recent physician membership survey have been

analyzed by an independent third party and are shared with the membership at [acr.org/MARCASurveyResults](http://acr.org/MARCASurveyResults). The workforce portion of the meeting also included a presentation highlighting the critical shortage of RTs that is impacting all of our practices and departments.

Strategically speaking, the Board identified PHM as an exciting “blue ocean” opportunity for radiology. This underexplored territory is a chance to provide important services for a wider patient base, including those in underserved areas. The PHM session included a presentation by John P. Williams, MD, chair of the President's Cancer Panel, which advises the White House on the National Cancer Program. In addition to providing a comprehensive overview, Williams challenged the ACR and the radiology specialty to take a leading role in PHM. Next, Perry J. Pickhardt, MD, FACR, professor of radiology and chief of GI imaging at the University of Wisconsin School of Medicine and Public Health, presented “opportunistic screening” data that his team developed from routine exams.<sup>1</sup> Pickhardt's work illustrated some of the additional information that can be harvested from our digital exams to advance individual, personal, and population health. Finally, Arun Krishnaraj, MD, MPH, chair of the ACR Commission on Patient- and Family-Centered Care, provided an update on the ACR efforts and goals in radiology and PHM.

On a quarterly basis, including at the retreat, the College's commissions provide update reports to the BOC. The College recognizes its responsibility and significant influence with members and external stakeholders, including its patients. By its very nature, the ACR is a highly complex and matrixed organization. These commission reports provide us with a glimpse into the scope and breadth of how the ACR is working to provide value to its members and the profession. I urge you to take a few moments to peruse the reports at [acr.org/Summer21BOCReport](http://acr.org/Summer21BOCReport) to get a sense of the amount of work being done by the ACR's staff and volunteer physicians.

A major feature of the fall retreat was the consideration of the new strategic plan. The ACR's last strategic plan was developed in 2014 and revamped in 2017. The new version (at [acr.org/ACR-Bulletin/The-Strategic-Path-Forward](http://acr.org/ACR-Bulletin/The-Strategic-Path-Forward)) was developed to engage our members, especially the early career radiologists, the YPS, and the RFS. The principles of the strategic plan were presented by the emerging leaders and younger members of the core committee. After discussing, the BOC voted to adopt the new plan. The following

*continued on page 22*



## ACR Speaks Out Against Flawed Surprise Billing Rule

The ACR has completed a detailed review and analysis of the “Requirements Related to Surprise Billing; Part II,” released by the U.S. Departments of Health and Human Services, Labor, and Treasury, and the U.S. Office of Personnel Management. The ACR continues to be concerned that the Biden administration’s requirements violate the intent of the No Surprises Act by making the Qualified Payment Amount (QPA) the primary determinant of physician payment rates in the independent dispute resolution (IDR) process.

The details of the QPA calculation were outlined in the first interim final rule released by the departments in July of 2021. The ACR raised concerns about flaws in the methodology in its comment letter on the July rule. The No Surprises Act specifies that the QPA shall be one of several factors considered in the IDR process. However, the rule states, “the certified IDR entity must select the offer closest to the QPA unless the certified IDR entity determines that credible information submitted by either party clearly demonstrates that the QPA is materially different from the appropriate out-of-network rate.”

If the regulations are not changed, the result may be a downward trend of in-network payment rates and/or physicians being dropped from insurer networks. The ACR continues to work with other stakeholder groups to bring the regulations in line with the law.

For more information, email [Katie Keysor](mailto:kkeysor@acr.org) at [kkeysor@acr.org](mailto:kkeysor@acr.org).

## You Are the Future of Radiology

The call for nominations is now open! The ACR is looking for top radiologists to fill 2022 ACR leadership positions and lead the future of radiology. The deadline for applications is Dec. 8, 2021.

For more information and to complete an online candidate application, visit [acr.org/Call-for-Nominations](https://acr.org/Call-for-Nominations). Email [Amy Shipp](mailto:cnc@acr.org) at [cnc@acr.org](mailto:cnc@acr.org) with any questions.



### IN MEMORIAM:

## Christopher G. Ullrich, MD, FACR

Christopher G. Ullrich, MD, FACR, who served on the ACR Commission on Economics, passed away on Aug. 8, 2021. Ullrich began his career at SUNY

Upstate Medical Center in Syracuse, N.Y., where he earned his medical degree. He completed his residency at SUNY in diagnostic radiology and went on to complete a two-year fellowship in neuroradiology at Johns Hopkins University. Ullrich subsequently relocated to Charlotte, N.C., where he practiced for 38 years.

During the span of his career, Ullrich was very active with the ACR, the North Carolina Radiological Society, the Cervical Spine Research Society, and the Southeastern Neuroradiology Society, where he received many awards and medals for his work and publications. He was appointed to the North Carolina State Health Coordinating Council, where he served for nine years, becoming chair in 2014. In 2016, Ullrich was inducted into the prestigious Order of the Long Leaf Pine, an honor presented by the governor of North Carolina as a gesture of friendship and goodwill to people with a proven record of service to the state. Ullrich also served on the board of Hospice and Palliative Care of Charlotte. He retired from Charlotte Radiology on Dec. 31, 2020.

To read more about Ullrich’s life and work, visit [bit.ly/Ullrich\\_NC](https://bit.ly/Ullrich_NC).

## Call for Case Studies on Medical Student Education

The CSC passed Resolution 34 at ACR 2020 and a Task Force on Medical Student Education was formed to investigate avenues to introduce all medical students to diagnostic radiology, IR, and radiation oncology taught by radiologists and/or radiation oncologists throughout their first through third years. Led by Lori A. Deitte, MD, FACR, chair of the Commission on Publications and Lifelong Learning, a 22-member task force completed its work with a report provided to the CSC at ACR 2021. In line with one of the nine task force recommendations, the ACR is seeking case studies where value added is demonstrated by radiology-led teaching integrated into the medical school curriculum. Each case study should include actionable steps that can be followed for educators to implement similar initiatives at their institutions.

Have a suggestion for a case study? Please share your idea with us at [acr.org/Suggest-a-Case-Study](https://acr.org/Suggest-a-Case-Study).



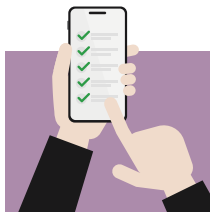
## New ACR Toolkit Helps Sites Continue Breast Screening

With the resurgence of COVID-19 in the late summer, many breast imaging facilities reinstated operational procedures unseen since the weeks following the end of the CDC-mandated non-urgent care shutdown in July of 2020. If your practice is among those reinstating such procedures, the ACR “Continue Mammography Care” toolkit can help you safely provide screenings during this resurgence — as well as inform patients and referring providers about the steps you are taking to ensure patient safety.

Availability issues led many patients to skip their 2020 and 2021 mammograms, and the continued pandemic may cause many more missed screenings. Missed appointments may lead to delayed cancer diagnoses, unnecessary breast cancer deaths, and the need for more aggressive treatment. This is preventable, and the new toolkit offers free, downloadable, and customizable resources to explain why and how it is necessary to continue to get yearly mammograms.

To access the toolkit, visit [MammographySavesLives.org](https://www.mammographySavesLives.org).

## Participate in the ACR Data Science Institute® AI Survey

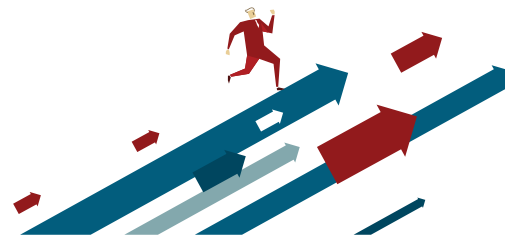


The ACR Data Science Institute® (DSI) is conducting an AI Satisfaction Survey to learn more about whether existing AI solutions are addressing ACR members’ clinical needs. To optimize your time, this brief survey requires as few questions as necessary of respondents (typically 10 questions in total).

The ACR DSI invites all members to complete the survey at [bit.ly/ACRDSI\\_Survey](https://bit.ly/ACRDSI_Survey).

**With the COVID-19 resurgence, many women remain hesitant to come in for their yearly mammogram.**

— STAMATIA V. DESTOUNIS, MD, FACR, CHIEF OF THE COMMISSION ON BREAST IMAGING AND PARTNER/OWNER AT ELIZABETH WENDE BREAST CARE IN ROCHESTER, N.Y.



## Leading the Radiology Community

In a recent Radiology Leadership Institute® Taking the Lead podcast episode, host Geoffrey D. Rubin, MD, MBA, FACR, talks with ACR BOC Chair Howard B. Fleishon, MD, MMM, FACR. An Arizonian for most of his professional career, Fleishon was a partner in Valley Radiologists Ltd. and North Mountain Radiology Group — serving on the medical staff of several community hospitals over a 20-year span and holding a number of leadership positions, including group president, medical director, and vice chair. Six years ago, Fleishon brought his experience and expertise in community radiology practice to Emory University, joining the radiology department as division director for community radiology specialists.

Over his storied career, Fleishon has held numerous roles with the ACR, including a five-year term on the CSC and 12 years of continuous service on the ACR BOC, culminating in his current role as chair. In this episode, you will trace his journey from high school in Philadelphia to Bates College in Lewiston, Maine, and back to Philadelphia for medical school at Temple University School of Medicine and residency at Albert Einstein Medical Center. You will learn about what led Fleishon to medicine, about some of his interesting summer jobs (including harvesting seaweed), and about the important role practice culture has played in his leadership approach.

To learn more about Fleishon’s leadership journey, visit [acr.org/Leading-Community](https://acr.org/Leading-Community).

## IMAGING 3.0: Improving Pay Equity

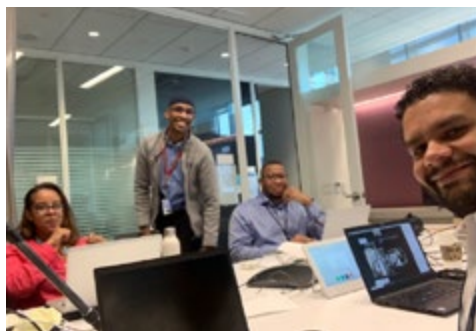


When Carolyn C. Meltzer, MD, FACR, became chair of radiology and imaging sciences at Emory School of Medicine in 2007, she discovered that male faculty members were earning an average of \$20,000 more than their female peers. “It was so glaring that I knew it had to be addressed immediately,” says Meltzer. “It was difficult for me as a new chair to confront my faculty with the revelation that some in the department (predominantly women) were being underpaid compared to some of their colleagues with the same experience and position. Our department really appreciated the transparency, though, and wanted to correct the problem.”

As part of their commitment to diversity, equity, and inclusion (DEI), Meltzer and her team reengineered the department’s compensation structure, closing the pay gap within two years and opening doors for further DEI efforts.

Read the case study at [bit.ly/ImprovingPayEquity](https://bit.ly/ImprovingPayEquity).

## Penn Radiology Global Health Imaging Case Report Competition



The Penn Radiology Global Health Imaging Case Report Competition's organizing committee are pictured on the day of the event. From left to right: Hermon M. Derbew, MD, a global outreach and education research fellow at CHOP; Abass Noor, MD, a radiology resident at the Hospital of the University of Pennsylvania; Farouk Dako, MD, MPH, assistant professor of radiology in the cardiothoracic imaging division at the Perelman School of Medicine; and Hansel J. Otero, MD, director of international pediatric radiology education and outreach at CHOP

The inaugural 2021 Penn Radiology Global Health Imaging Case Report Competition was successfully completed on Sept. 18. The free webinar featured presentations by the finalists, an “Unknown Cases” challenge, and a keynote lecture by Hammed Ninalowo, MD — the first U.S.-trained IR working full-time in Nigeria. The event drew more than 650 participants who learned from the 20 best cases in presentations from 12 different African countries.

“The competition was a new way to engage our international colleagues,” said Hansel J. Otero, MD, director of international pediatric radiology education and outreach at Children’s Hospital of Philadelphia (CHOP). “The competition encouraged

academic learning and dissemination among our global peers — and it was fun!”

The Penn Radiology Global Health Imaging Case Report Competition is a collaboration between the departments of radiology at Penn Medicine and CHOP, along with the Perelman School of Medicine Center for Global Health. It was designed for medical trainees in low- and middle-income countries to present cases unique to their region. The Penn Radiology Global Health Imaging Case Report Competition will run a similar program in February 2022 and is accepting case submissions through Dec. 20, with a focus on Latin America and the Caribbean.

For more information, visit [bit.ly/Imaging\\_Compensation](https://bit.ly/Imaging_Compensation).



### Announcing the ACR Learning Network

The ACR Learning Network is a new initiative to improve diagnostic imaging through a learning health system approach. Four initial improvement collaboratives will address important areas of performance in cancer diagnosis. Each collaborative, led by a radiologist expert who will supervise improvement teams at four to six facilities, will be supported by a standard process for improvement.

Participants will share measures, common issues and solutions to improve performance. If your facility is interested in participating, visit [acr.org/learningnetwork](https://acr.org/learningnetwork) to learn more.

The ACR Learning Network is funded by a grant from the Diagnostic Excellence Initiative of the Gordon and Betty Moore Foundation.

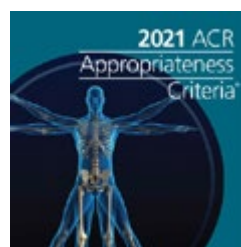
### Last Chance to Renew!

Renew your 2022 ACR membership before your membership expires on Dec. 31. Visit [acr.org/renew](https://acr.org/renew) to continue to enjoy your professional development benefits, including:

- Free leadership webinars and member discounts on upcoming Radiology Leadership Institute® courses including the Maximize Your Influence and Impact course.
- Well-being resources to benchmark and improve your personal wellness.
- Job alerts, free resume review, and tips on interviewing at the ACR Career Center.
- Networking opportunities on Engage and during ACR virtual events. Ask questions or join in-progress discussions to bounce ideas off and collaborate with your peers.

Radiology education, for the most part, has cleverly adapted to the new virtual world.

— NEIL K. JAIN, DO, IR/DR RESIDENT AT MEDSTAR GEORGETOWN UNIVERSITY HOSPITAL AND CHAIR OF THE ACR MEDICAL STUDENT SUBCOMMITTEE



### New ACR Appropriateness Criteria® Released

The ACR Appropriateness Criteria® (AC) are evidence-based guidelines to assist referring physicians and other providers in making the most appropriate imaging or treatment decision for a specific clinical condition. Employing these guidelines helps providers enhance quality of care and contribute to the most efficacious use of radiology.

The new release includes more than 2,400 clinical scenarios. Eight topics have been revised. In addition, five new topics are included for the first time:

- Crohn Disease — Child
- Imaging of Facial Trauma Following Primary Survey
- Imaging of the Axilla
- Newly Diagnosed Palpable Scrotal Abnormality
- Osteomyelitis or Septic Arthritis — Child (Excluding Axial Skeleton)

View the new AC at [acr.org/AC](https://acr.org/AC).



**Daniel A. Rodgers, MD**  
Chair of the GSER  
Committee in  
Economics  
Guest Columnist

## Scope of Practice Update

The ACR continues to actively oppose independent practice by non-physician radiology providers.

The number of non-physician providers in the U.S. has doubled in 10 years — with over 325,000 advanced practice registered nurses (APRNs) and 150,000 licensed physician assistants (PAs) in 2021, compared to 148,000 APRNs and 81,000 PAs in 2010.<sup>1</sup> Their scope of practice has also dramatically increased, with over 20 states now allowing full practice — independent from physicians. Federal regulations related to COVID-19 have further loosened restrictions around scope of practice nationwide.<sup>2</sup>

In our own specialty, non-physician radiology providers (NPRPs) were originally hired to assist IRs during complex procedures and with periprocedural care. This scope was later expanded to NPRPs being able to perform “minor” procedures under varying levels of supervision, including peripherally inserted central catheter lines, arthrography, biopsies and drainages, and barium studies. Some practices have embraced this trend while others have not, resulting in varied opinions among radiologists. One particularly contentious issue has been the quest for federal payment and supervision parity between registered radiologist assistants and other types of NPRPs. While there are many points of division, most radiologists can unite behind these four basic principles:

1. Opposing further NPRP scope of practice expansion
2. Aggressively enforcing the red line that NPRPs should not interpret imaging studies
3. Adequately training radiologists to mitigate the underlying need for NPRPs
4. Supporting Imaging 3.0® and raising radiologist visibility by interacting with patients and personally performing as many procedures as possible

Almost all radiologists can agree that NPRPs should not be interpreting imaging studies. Published reports of at least one medical center using RTs to dictate draft reports led the ACR’s Commission on General, Small, Emergency, and/or Rural Practice (GSER) to write two resolutions strengthening the College’s position against non-physician interpretation of imaging.<sup>3</sup> These resolutions passed overwhelmingly at the Council

meeting at ACR 2021 with support from a wide variety of stakeholders, including the American Society of Radiologic Technologists.

Two primary factors driving the growth of NPRPs in radiology are cost-saving initiatives and a lack of adequately trained radiologists. The economics is simple — the highly paid radiologist can focus on more remunerative exams, while the NPRP handles necessary but lower-reimbursing activities. Surging volumes, growing practice sizes, and evolving practice ownership patterns have further fueled this trend. As volumes increase, it is much less expensive for the radiology department to offload work onto an NPRP than to hire a new radiologist.

A less-appreciated factor driving the increased use of NPRPs is a growing dearth of radiologists willing to perform these “minor” procedures. Nearly all residents now complete fellowships, with fewer practicing radiologists identifying as general radiologists. Subspecialization has been driven by demand from our increasingly sophisticated and highly subspecialized referrers. This has resulted in the unintended consequence of some radiologists wishing only to practice within their subspecialty and feeling uncomfortable performing procedures outside their subspecialty. The entry of this cohort into the specialty and the retirement of older radiologists has created a vacuum, with the resulting coverage gap most easily and inexpensively filled by NPRPs.

At ACR 2020, the GSER Commission proposed a resolution that resulted in the formation of a Task Force on General Radiology and the Multispecialty Radiologist, chaired by Robert S. Pyatt Jr., MD, FACR (learn more at [bit.ly/GSER\\_TaskForce](https://bit.ly/GSER_TaskForce)). While we can and must fight against further expansion of the scope of practice for NPRPs, the outcome of the College’s legislative efforts is largely outside our control. However, the training of new radiologists and the delegation of work within our practices is entirely ours to determine.

In my own practice of multispecialty radiologists, our versatility means we have no need to outsource work to NPRPs. Radiology is best performed by radiologist-led teams. More complex exams are directed towards those most competent to interpret them, but we all share in reading most exams and performing most procedures. The resulting interactions with patients serve to raise radiologist visibility among the public, referring physicians, and hospital administrators — just one example of the tenets of Imaging 3.0 in practice. **B**

ENDNOTES available in digital edition at [acr.org/bulletin](https://acr.org/bulletin)

According to the results of a recent ACR member survey on NPRPs, most respondents (60%) do not support MARCA passage. Yet only 43% of the survey population, which represents 16% of ACR membership, oppose NPRP use in their practice. See the full results at [acr.org/MARCASurveyResults](https://acr.org/MARCASurveyResults).



# Clinical Research

The ACR is committed to innovation in radiological clinical studies.

“Clinical research allows us to quickly translate new technologies and innovations that impact healthcare from the bench into patient care,” says Pamela K. Woodard, MD, FACR, chair of the ACR Commission on Research and professor of radiology and biomedical engineering at the Mallinckrodt Institute of Radiology. “The research determines how new technologies should be used to improve imaging quality and clinical decision-making to best impact patient health and clinical outcomes.”

Radiologists need time to participate in research, however — and, ultimately, time isn’t free. Funds are needed to cover time for radiologists to participate in research, and administration at academic centers needs to involve radiologists in clinical research when possible, Woodard says. “The key to innovation is the engagement of radiologists to provide expertise in clinical context, significance, and impact,” she says.

To facilitate this engagement, the ACR offers several current opportunities for ACR members to apply for research grants through two research centers at the College: the ACR Center for Research and Innovation™ (CRI) and the Harvey L. Neiman Health Policy Institute® (NHPI). These funding opportunities will facilitate future practice innovations through research and education for the benefit of patient outcomes, patient experience, and population health management.

## NEW FUNDING FUND FOR COLLABORATIVE RESEARCH IN IMAGING (FCRI) GRANT

The ACR has issued a request for applications for its FCRI grant to power compelling, innovative research that advances radiology practices. The FCRI grant, available to all ACR members, fuels pilot projects to test a new idea or support a new area or direction of clinical radiology research (see sidebar on page 11).

“The FCRI grant presents researchers with an opportunity to discover new paradigms in patient care,” Woodard says. “Researchers are making new discoveries at a rapid pace, and this grant plays an important role in fueling further innovation.”

Grants generally address a specific hypothesis and generate preliminary data that could be used to justify or strengthen subsequent comprehensive applications to national peer-reviewed funding agencies. The grant project must use ACR systems or staff expertise and outline a plan for future research and funding needs.

“The FCRI grant is a launch pad for cutting-edge radiology research,” says Etta D. Pisano, MD, FACR, ACR chief research officer. “The potential for advances in radiology is boundless, and I strongly urge clinical researchers to apply.”

## NEIMAN INSTITUTE GRANTS PROGRAM

The second research grant opportunity is through the NHPI, which studies the value and role of radiology in evolving healthcare delivery and payment systems (see sidebar on page 11). This includes examining quality-based approaches to care and the impact of medical imaging on healthcare and its cost.

**"With an aggressive strategy that includes a wide breadth of priority topics, expanding collaborations is critical. One organization cannot reasonably have all of the data or expertise necessary to tackle every topic on the policy horizon."**

— ELIZABETH Y. RULA, PHD

The work of the NHPI complements clinical research by paving the way for the policy that improves patient access to needed radiologic care. The operational model of the NHPI is rooted in academic partnerships and collaborations that are central to ensuring relevant research that translates clearly into policy and practice. "With an aggressive strategy that includes a wide breadth of priority topics, expanding collaborations is critical. One organization cannot reasonably have all of the data or expertise necessary to tackle every topic on the policy horizon," says Elizabeth Y. Rula, MD, executive director of the NHPI.

The NHPI is looking for proposals that meaningfully expand the evidence base that paves the way for advances in radiological practice that improve patient outcomes, reduce health disparities, inform the appropriate use of that care, and demonstrate value to support adequate reimbursement needed to ensure patients have access to a high level of care from trained radiologists.

The NHPI gained support for its new grants program for exactly these reasons — to build bridges and momentum to have a larger positive impact on patient care. To accomplish this goal, having a diverse field of researchers is key. "We see Neiman HPI grants as a way to deepen the bench by partnering with researchers that bring different perspectives, skills, and resources," says Rula.

In partnership with Pina C. Sanelli, MD, MPH, vice chair of radiology research and director of the Imaging Clinical Effectiveness and Outcomes Research division

at Northwell Health, the NHPI also introduced a new fellowship to help foster the next wave of researchers contributing policy research in radiology. The Neiman Institute Fellowship in Clinical Effectiveness and Health Policy Research provides a unique opportunity to gain experience and mentorship, while contributing important evidence on radiology services to inform health policy.

## PANDEMIC SETBACKS

"COVID-19 really hurt research that dealt with active patient enrollment for clinical trials," says Arun Krishnaraj, MD, MPH, chair of the ACR's Commission on Patient- and Family-Centered Care and vice chair for quality and safety at the University of Virginia. "Any study that entails you having to get a volunteer to come in to participate in the hospital is potentially hurt by the pandemic."

The pandemic impacted research in another way too. "When work started shifting to home-based workstations for many radiologists, there was a bit of a burnout factor — working in isolation and missing out on the kind of novel ideas that happen serendipitously because you are interacting with people," Krishnaraj says. "The lack of interactions leads to fewer opportunities to find collaborators both within and outside of radiology. One outcome of this new normal are the generation of fewer novel ideas that lead to publications and presentations, the currency academics need not only to have an impact but also to get promoted."

Pisano agrees that research is a vital part of radiology but points out that funding is only one barrier for some members of the radiology community. "The ability of those individuals who are taking care of children, for instance, who have no time to use grant money for research is not going to be impacted by the availability of the grant," Pisano says. "For people to squeeze in research and education on top of that requires departmental support."

## PUTTING IN THE WORK

According to Pisano, you really have to want your research to be published. "The way you get papers published is to actually write down your ideas," says Pisano. "You have to put in the work, take the time to define the research, and then refine the research."

"Just having an idea and speaking up in a meeting doesn't add much value to the system," Pisano says. "You have to go out and find the money to do the project — you have to hire the people to help you with the project or run a site that is spearheading a project. There are so many things that need to be executed to run a big clinical research project — or a small research project for that matter."

"With the radiology workforce getting strained — and

an unprecedented number of early retirements and people leaving the specialty during the pandemic — finding time for research is challenging,” Pisano says. “Doctors doing clinical medicine are overloaded. There is just not a lot of time or capacity right now for clinical research.”

## FORWARD THINKING

“COVID-19 has highlighted disparities in healthcare — more Blacks, Latinx, and Native Americans have died from COVID-19 in comparison to Whites,” Woodard says. “The answer as to why is multifactorial — more people of color are essential workers but with fewer protections in place. There is more multigenerational housing and less access to emergency-use therapies.”<sup>1</sup>

Disparities continue in clinical research among White men and women and people of color, Woodard says. “Key factors are barriers to access — including a lack of access to clinical trials because of lack of proximity to a trial center.” There is a transportation issue as well, she says, and potential inability to pay a copay.

While some trials cover patient expenses, large oncology trials and others still include standard-of-care imaging in their paradigms that require a copay, Woodard says. “This can not only severely bias research towards the more privileged but also can prevent access to new life-saving cancer therapies for patients who can’t participate in the trial,” she says.

The ACR is advancing research on a number of fronts, Woodard says. “First and foremost, the CRI’s Tomosynthesis Mammographic Imaging Screening Trial (TMIST) and New Imaging Dementia Evidence for Amyloid Scanning (IDEAS) study seek to understand the impact of new technologies in decision-making,” she says. “TMIST now has 20% of patients recruited who are Black.”

According to Woodard, the New IDEAS program focuses on the recruitment of Black patients with

Alzheimer’s disease. “The NIH has shown interest in how registries can also be used to answer clinical questions, leveraging CRI and ACR Data Science Institute® expertise,” Woodard says.

“From our perspective, the challenge of COVID-19 in our research is the different patterns of utilization — stemming both from patients skipping or delaying imaging, but also because of increases in imaging of COVID-19 patients,” Rula says. “As a result, studies have this new confounding factor that makes data interpretation more challenging.”

“Clinical research is imperative, arguably now more than ever, especially considering how COVID-19 has immensely impacted so many areas of medicine,” says Amy Patel, MD, medical director of the Breast Care Center at Liberty Hospital and assistant professor of radiology at the University of Missouri-Kansas City School of Medicine. “It is important to push for clinical research not just from academic institutions, but from private practices that encompasses all demographics and geography, including rural settings.”

“Some radiologists lack the resources, mentorship, sponsorship, and support to take on these research activities within their practices,” Patel says. “The ACR has the powerful ability to support those radiologists who want to do this kind of work.” **B**

By Chad Hudnall, senior writer, ACR Press

ENDNOTE available in the digital edition at [acr.org/bulletin](http://acr.org/bulletin)

**“You have to put in the work, take the time to define the research, and then refine the research.”**

— ETTA D. PISANO, MD, FACR

## HOW TO APPLY FOR THE FCRI GRANT

The FCRI Grant Program is designed for unique, one-time investments in the most compelling and innovative research ideas that ultimately lead to advancement of the practice of radiology. Projects are typically pilot or seed-grant ventures that test a new idea or help support a new direction of clinical research in radiology. These grants generally address a specific hypothesis and generate preliminary data that could be used to justify or strengthen subsequent comprehensive applications to national peer-reviewed funding agencies. Successful proposed projects require collaboration with the ACR and overall project sustainability. For more information, contact ACR staff at [research@acr.org](mailto:research@acr.org) or visit [acr.org/FCRIGrant](http://acr.org/FCRIGrant).

## HOW TO APPLY FOR NHPI'S GRANT

The NHPI is accepting applications for its new grant to fund novel research to inform health policy and radiology practice. Grant topics include payment models, AI/emerging technology, and practice advancements to improve efficiency, outcomes, or equity. The deadline to apply is Dec. 20. For details, visit [neimanhpi.org/grants-fellowships](http://neimanhpi.org/grants-fellowships) or contact [grants@neimanhpi.org](mailto:grants@neimanhpi.org).

# Demystifying Radiology Reports

A provision of the 21st Century Cures Act has put information directly into patients' hands — and a new resource on *RadiologyInfo.org* can help them understand their results.

The 21st Century Cures Act, signed into law on Dec. 13, 2016, aims to “modernize the U.S. healthcare system by removing regulatory hurdles and obstacles to health information exchange with the goals of facilitating research and development of pharmaceuticals and medical devices to bring innovations to patients faster and more efficiently.” Embedded within the Cures Act is an information-blocking provision that requires healthcare providers to make a core set of clinical data available to patients in a timely manner to allow interoperability and portability of health data. The Information Blocking Rule took effect on April 5th, 2021, and for radiologists this has meant there is essentially no delay in patient access to clinical information, including radiology reports, once entered into the EHR.<sup>1</sup>

“Since the Cures Act, groups across the country have struggled with reports being released immediately,” says Jay K. Pahade, MD, vice chair for quality and safety at the Yale Department of Radiology and Biomedical Imaging in New Haven, Conn. “Patients have struggled to understand what radiology reports are actually trying to say.” According to Pahade, recent implementation of the Information Blocking Rule has highlighted the need to help patients make sense of their imaging results.

## Providing Access

According to Arun Krishnaraj, MD, MPH, chair of the ACR's Commission on Patient- and Family-Centered Care, prior to the implementation of the Cures Act, many institutions had varying degrees of embargoes regarding radiology reports. “The rationale behind this wasn't to keep the results of a radiology report from reaching a patient; it was to ensure the radiology report — which is written with the technical jargon that radiologists often use to communicate with their referring providers — could be reviewed by their referring provider in advance of the patient getting the information,” Krishnaraj says. “It was believed that the referring provider would be better equipped to communicate those results and any potential treatment options or additional testing that was needed based on those results.”

The Cures Act changed this, Krishnaraj says — and not necessarily for the better. “The imperative is to improve transparency for patients,” he says, “but the feedback that I've gotten from some of our Virginia state chapter leaders is a sense of frustration, even among those who are very patient-centered.”

“For example,” Krishnaraj continues, “a faculty member shared that in his practice, parents were finding out that their kids had brain tumors prior to anybody being able to speak to them.

So that's been a source of not only frustration but also consternation among many radiologists.”

Pahade echoes this concern. “For many patients, this is the first time they're seeing the report in its entirety, sometimes before the ordering provider has, as opposed to being told what the findings were from their provider,” he says. “That's led a lot of institutions and groups across the country to struggle with this concept of how to keep our reports directed towards the referring provider, but also allow them to be digestible by a layperson.”

## Providing Context

According to Pahade and Krishnaraj, there has been a lack of resources to support radiologists in communicating within the radiology report in terms that patients understand. So, the two set out to develop and distribute a simple translation resource for patients — helping them to understand the basics of a radiology report.

First, Krishnaraj, who serves as co-chair of the RSNA-ACR Public Information Website Committee for *RadiologyInfo.org*, wrote a piece entitled, “How to Read Your Radiology Report,” which was published on *RadiologyInfo.org* (available at [bit.ly/ReadYourRadReport](https://bit.ly/ReadYourRadReport)).

Then, Pahade, who serves as incoming co-chair of the RSNA-ACR Public Information Website Committee for *RadiologyInfo.org* with Krishnaraj, championed a pilot program at Yale Radiology in which post-visit email communications included a link to the piece on *RadiologyInfo.org*. “This free resource gives patients a basic overview of the different parts of a report — the introduction, the techniques section, the findings section, the conclusion/impression section — so they can get a little context and better understand their results,” says Pahade.

In October, Yale Radiology and Yale New Haven Health took the pilot a step further and began including the link within their electronic patient portals. According to Pahade, in just two weeks of including the link in EPIC MyChart across the health system, the link garnered over 4,000 hits.

“Our intention is to provide another avenue for patients to access this information,” Pahade says. Many patients are unaware of *RadiologyInfo.org*, he says, so the more radiologists can get the word out and make it accessible for patients, the better.

To start, Pahade suggests practices explore options available to them to embed links for the patients in their report or patient portal, which many have the capability to do. “Our hope is that by spreading awareness about this resource, other groups could explore doing something similar to help improve basic understanding of radiology reports among our patient populations,” Pahade says. “The longer-term vision for the specialty will be making patient-friendly interpretations of the report more easily available as well.” **B**

By Cary Coryell, publications specialist, ACR Press

## ENDNOTE

1. Mehan WA, Brink JA, Hirsch JA. 21st Century Cures Act: patient-facing implications of information blocking. *J Am Coll Radiol.* 2021;18(7):1012–1016.

# Zeroing In on Value

A radiology leader shares how his practice established a method for quantifying non-interpretive activities — helping to demonstrate his group’s unmatched value.



In 2010, Radiology, Inc., a radiology group based in Mishawaka, Ind., entered into contract negotiations with one of its client hospitals. During these talks, a startling fact came to light: Referring clinician partners at the hospital considered the group little more than a collection of image readers, and for that reason the perception was that they could easily be replaced if they didn’t accept the hospital’s terms.

Identifying a serious perception gap, Samir B. Patel, MD, FACR, Radiology, Inc. Value Management Program founder and director, set to work developing a data visualization tool to capture the non-interpretive relative value unit (RVU) activities undertaken by his group. Patel, who also serves as a member of the board of directors at Beacon Health System — the region’s largest locally owned and operated nonprofit healthcare system — developed the Radiology Value-Added Matrix to share achievements and goals with not only the practice’s executive board but also with their hospital client’s CEO and other members of the C-suite.

During a recent interview with the *Bulletin*, Patel reflected on the nearly 10 years since fully implementing the matrix and the more than 100,000 hours of value-added work that he and his colleagues have been able to document — equating to around \$25 million in value.

## Can you describe what the Radiology Value-Added Matrix is and what it’s used for?

Radiologists perform so many activities unrelated to image interpretation, especially now compared to 10 years ago. So, how do you succinctly capture, synthesize, define, and categorize all the things that radiologists do? The Radiology Value-Added Matrix was developed to compile all of the services we provide beyond image interpretation in a way that helps clients understand the value we bring to the healthcare enterprise.

## What was the original impetus behind the matrix? What problem were you trying to solve?

Unfortunately, not only in medicine but in life, sometimes innovation is required during times of crisis. So, for us, even though our practice members have always engaged in a range of activities, back in 2010, the perception of hospital leadership and members of the

medical staff was that we’d simply come in, interpret images, and go home. This made us look like an easily replaceable commodity. The matrix was a way to demonstrate the value we were generating through activities of which our care partners were unaware.

When I shared the first matrix with hospital and medical leaders in 2012, they were taken aback because they didn’t realize we were doing so many things beyond image interpretation. Ever since then, we’ve showcased an annual report — including the matrix — to key C-suite members across all of our client hospitals. We’ve come a long way because the CEO of Beacon Health System has come to look forward to the report every year.

## How has the matrix helped you change referring physicians’ and administrators’ perceptions over time?

Continuous innovation is so important. This is where we fell short a decade ago. The annual meeting we schedule with key stakeholders to share the matrix is a way to gain access to members of the C-suite in ways that just weren’t open to us before. Trust is so hard to gain and is easily lost, and I believe we’ve gained the trust of our physician partners and hospital administrators primarily by building on our successes and documenting them in the matrix.

## How has the matrix evolved since you first introduced it, and what impact has it had on your practice?

Nothing ever stays the same. As the world changes, radiology will need to change, too. In keeping with this, over the past 10 years we’ve added a few new categories and cut others. For instance, we now have a category on physician well-being, along with others dedicated to diversity and population health. Furthermore, peer review has transitioned to peer learning. We decided to make this latter change because we wanted to foster a just culture in which errors and near-miss events are evaluated in a deliberately nonpunitive framework. This helps us avoid a culture of blame so that we can instead focus on error prevention and encourage a culture of continuous quality improvement. Peer learning is an expression of just culture for radiologists.

It’s also important to note that the matrix was never meant to be stagnant or a one-size-fits-all program. It can be tailored to each individual practice, but it should also reflect what is important in radiology at a particular point in time.

## Given the growing importance of value-based care in medicine, how do you anticipate the matrix will help you demonstrate value — particularly in relation to shared-risk reimbursement arrangements?

There is so much involved in imaging beyond interpretation — such as accreditation, follow-up, tracking adverse events, and utilization management. If done well, these activities can position

*continued on page 22*

# Providing Quality Care

Two new modules aim to educate the radiology profession on the myriad issues that surround patient gonadal and fetal shielding.

In April of 2019, the American Association of Physicists in Medicine (AAPM) released a position statement outlining reasons for limiting the routine use of fetal and gonadal shielding in medical imaging. Recognizing that removing patient shielding from routine use is a substantial shift in existing clinical practice, the AAPM formed a committee to bring together stakeholders to discuss potential changes in the use of patient shielding. The AAPM Communicating Advances in Radiation Education for Shielding (CARES) Committee includes members from over 14 professional organizations around the globe, representing medical and health physicists, RTs and organizations that oversee educational programs for RTs, radiologists, and state regulators.

The *Bulletin* spoke with two members of the CARES Committee about their efforts to support the radiology profession as the use of patient shielding in radiology evolves. Rebecca Milman, PhD, associate professor and medical physicist at the University of Colorado School of Medicine, and Darcy J. Wolfman, MD, clinical associate and clinical director of US at the Johns Hopkins School of Medicine, shared their journey to develop clear, consistent communication about patient shielding that will improve patient care.

## How did the ACR get involved in the CARES Committee?

**WOLFMAN:** As the CARES Committee was being formed, the AAPM reached out to the ACR to have radiologist representation. I was approached by some of the ACR leadership to serve in that role. I've been involved with allied health organizations, so it was a good fit. As a radiology community, we're all intertwined — more so even than other specialties. And that's where the CARES Committee was so important. We have medical physicists, radiologists, RTs, healthcare administrators, and radiology healthcare administrators, all working together.

## What role does the CARES Committee play in enhancing quality and safety in radiology?

**MILMAN:** We felt it was important to have a space where everybody could work together to answer critical questions around shielding. What do we need to do to communicate this? What communication barriers might we face? We reached out to numerous medical imaging societies and asked them to participate in that discussion.

## How did the collaborative initiative unfold?

**MILMAN:** Over the last couple of years, we've had good, open, collaborative conversations about this topic, radiation risk, and communication with patients and parents. We've discussed how

RTs, radiologists, and physicists can work better together, rather than separately, within our own pillars and speaking only among our immediate colleagues. We haven't always communicated effectively with people outside of our subspecialties, but the CARES Committee gave us a forum to do so.

**WOLFMAN:** Now, the entire spectrum of radiology is working collaboratively together to inform the community as a whole. It's important that the message is consistent because, while everyone in radiology plays their own role, everyone needs to work together to deliver quality care to patients. And that's where we came up with this idea of creating educational modules that weren't just for radiologists, RTs, or medical physicists, but something with a unified message across radiology.

## What are the patient shielding education modules and how were they developed?

**MILMAN:** The set of six education modules were developed by the CARES Committee. The modules — hosted by the ACR, the AAPM, and the Association of Educators in Imaging and Radiologic Sciences (AEIRS) — give you the information you need to either learn about the recent changes in patient shielding for the first time or bolster the knowledge you already have.



**“We quickly realized it would be helpful to develop educational modules so that we could use our collective expertise and experience to provide useful guidance to people involved in medical imaging.”**

—REBECCA MILMAN, PHD

## What will people learn from these courses and how will that impact quality and safety?

**WOLFMAN:** One of the modules focuses on the background of how we got to this point with the new recommendations about patient shielding. There has been a longstanding belief in the radiology community that any sort of radiation causes harm, especially to the developing fetus and to the gonads, and that shielding patients is an essential component of patient safety. It was ingrained even in radiology residency. But as the AAPM pointed out, the science actually doesn't back that up.

**MILMAN:** The modules begin with the historic background and establish a framework for objectively considering long-held beliefs about patient gonadal and fetal shielding. They move through what the science is and why we're doing this — and how to communicate with patients. The last module takes a broader look at patient radiation safety, including all of the ways in which we can optimize the use of radiation during medical imaging, like proper



**“This can serve as a model for the entire radiology community to demonstrate how we can better serve our patients when we collaborate.”**

—DARCY J. WOLFMAN, MD

patient positioning and collimation. There is so much we can do to ensure that we are obtaining quality images safely, so that last module is key.

### What are the goals of the education modules and how did you come together to speak with one voice?

**WOLFMAN:** When we first started having these conversations, it became apparent that concerns and barriers differed among subspecialties. People were also concerned about how patients and parents would react. There was a scientific basis for this practice change, but there was also a strong emotional reaction that is inherent to anything safety related. So, we had to address that aspect as well — both in terms of how to communicate with patients, parents, and caregivers and how to communicate within our own medical imaging communities. A key goal was to ensure everybody has the same information.

**MILMAN:** One of the things that the CARES Committee has helped with was to recognize that everybody involved wants to do what’s best for patients. It’s a lot easier to overcome those feelings when you have everybody in the same “room” (because of COVID-19, this was a virtual room). That was part of breaking down some of those silos and acknowledging that we’re all on the same team. We talked about the barriers to implementing this change in clinical practice and the importance of communicating consistently with parents or patients who are concerned. We quickly realized it would be helpful to develop educational modules so that we could use our collective expertise and experience to provide useful guidance to people involved in medical imaging.

### What was the process to develop the modules?

**WOLFMAN:** We had collaborative discussions and worked through the topics for the modules. We divided it up so that everyone on the committee was involved. It was all very collaborative, every step of the way. And then we moved forward with getting CME and CE credits and ensuring easy access through the various specialties.

**MILMAN:** Everybody on the committee agreed about the value of having CE credits available through various platforms. The staffs of the ACR, the AEIRS, and the AAPM all deserve significant credit for making that happen. This is truly a multi-organizational initiative that is representative of the collaborative nature of the committee.

### Who should access this training and why?

**WOLFMAN:** From a radiologist’s perspective, we’re not on the front lines — but in the department, the buck stops with me. If a patient, parent, or RT has a concern, I’m the one they come to for answers or information. So, it’s really important that radiologists know this training is available. Without these modules, many radiologists might have peripherally heard about the AAPM shielding statement but might not know much about it. They can use these modules to help explain to RTs, administrators, and patients what the science is, why we’re doing this, and why imaging is still very safe. Everyone needs to understand where we are in this process. We owe it to our patients to use consistent language to better engage them in their healthcare decisions.

**MILMAN:** The CARES Committee has been explicit in saying that if a patient wants to be shielded, it’s okay. But we also strongly believe that patients deserve to have access to accurate information that is shared via a common language, regardless of who they speak with in the healthcare community.

### What’s next for the CARES Committee and the shielding education program?

**MILMAN:** We have another education module in the works that discusses practical implementation of shielding programs and patient communication. We’re looking for input from people who have changed their patient shielding practices, so we can learn about the challenges and successes they’ve faced and what support we may be able to provide. I’m sure unanticipated issues will arise, so we want to pull from the community’s collective experiences and try to provide the appropriate resources. We’re also getting requests for patient-facing materials and translations of FAQs into other languages. We highly encourage people to reach out to us. We’re trying to keep that dialogue open and constructive.

**WOLFMAN:** The CARES Committee isn’t going anywhere, and we’re still working collaboratively within the various radiology communities. This can serve as a model for the entire radiology community to demonstrate how we can better serve our patients when we collaborate. **B**

Interviews by Linda Sowers, freelance writer, ACR Press

### Have questions about patient gonadal and fetal shielding?

The Patient Gonadal and Fetal Shielding Education Modules give you all the information you need to learn about the recent changes in patient shielding (or bolster the knowledge you already have). CME is available for all the modules and *AMA PRA Category 1 Credit™* is available for all physicians. The modules are free and easily accessed through the websites of the ACR, the AEIRS, and the AAPM.

Learn more at [acr.org/patientshielding](http://acr.org/patientshielding).

# Improving Care for Patients Living With Disabilities

After engaging patients who are living with physical limitations, a radiology practice adapts processes to improve the patient experience and expand health equity.

**L**isa Panzica, MHA, has lived with the neurodegenerative disorder spinal muscular atrophy since she was a child. Unable to walk and reliant on a wheelchair, Panzica has come to expect daily obstacles and persists with positivity to overcome them. But, when she was denied a screening mammogram due to her disability, Panzica was stunned. Still, she managed to turn her disappointment into action — partnering with the radiology team to improve care for patients living with physical limitations.

In 2019, Panzica, ambulatory health information manager at Northwell Health in New York, went to the system's largest breast imaging center for her first screening mammogram. When she arrived for the appointment, Panzica was bewildered when the RT instructed her to transfer from her wheelchair to an armless high-back chair for her mammogram. When Panzica was unable to complete the maneuver, the RT told her that she couldn't perform the mammogram and sent Panzica home without receiving the potentially life-saving screening exam.

## Understanding the Situation

Panzica reached out to Nina S. Vincoff, MD, chief of breast imaging and radiology vice chair for patient experience, directly to explain what happened during the appointment. During the conversation, Panzica shared both her positive and negative impressions of her mammogram visit. For example, Panzica said that while the check-in process was seamless, it became moot when the RT was unable to adapt the transfer and positioning measures to accommodate her physical limitations. “Not only could I not get myself into the chair that was provided, but I wouldn't have been able to hold myself up without armrests,” Panzica explains.

As Panzica recounted her experience, Vincoff immediately recognized the urgency of the issue and acknowledged that the RT should have brainstormed a solution rather than denying Panzica care. “The problem wasn't about the specific disability. The problem was that the RT wasn't thinking outside of the box,” Vincoff says. “While you can't prepare your staff for every possible situation, you can prepare them to have an open mind, a patient-centered attitude, and the willingness to find the optimal solution.”

Panzica notes that her ability to reach out to Vincoff was enabled by her employment at Northwell and that most patients don't experience the benefits of direct access. “Many patients face more of a battle, and often opt not to share feedback and pursue care simply because it is too much of a burden or they believe they just cannot because of their disability,” Panzica says. “As healthcare providers, patients place their full trust in us to ensure they receive

the highest-quality care. This is our responsibility, so I view the experiences that I've faced as opportunities to exceed our patients' expectations, every day.”

During their discussion, Vincoff assured Panzica that she could get her mammogram and rescheduled her appointment. Vincoff also invited Panzica to join the patient-family advisory council that she was forming in the imaging department and asked if she would be willing to tour the imaging center with Aimee Botsch, RT(R)(M), who leads the mammography team at Northwell, to help identify specific challenges that patients with disabilities face in the department. “Right away, when I voiced the reality of access and inclusion challenges for disabled patients, Dr. Vincoff was extremely interested in learning more,” Panzica recalls. “I knew it would be a productive partnership.”

**“We were very intentional about ensuring diversity and representation so that our council would reflect the diversity of the patients and communities we serve.”**

— NINA S. VINCOFF, MD

## Touring the Imaging Center

During the imaging center tour, Panzica, Vincoff, and Botsch walked through an entire patient visit from entry through departure. At each step in the process, Panzica offered ideas for improving the experience for patients who experience physical limitations. For instance, she suggested creating a waiting room that is more accessible for wheelchairs and minimizing wait times for patients who have disabilities and often rely on hired drivers for transportation.

Panzica also recommended providing digital forms on devices that include a stylus for patients who struggle to use touchscreens. And she suggested giving patients the opportunity to share challenges or concerns ahead of their appointments so that staff can be adequately prepared when they arrive. These could include anything from physical limitations and language barriers to mental disabilities and anxiety about the exam.

Panzica's fresh lens provided valuable insight into what it's like to be a patient — and, more specifically, a patient with disabilities — in radiology, Botsch says. “Lisa's feedback about the patient experience was enlightening because it wasn't just the exam that was difficult. It was other things — right down to where we placed the hand sanitizer,” Botsch says. “It helped us understand the patient experience in a way that we wouldn't have been able to if we hadn't taken the time to walk through the facility with her.”



## Implementing Changes

With Panzica's input, Vincoff and her team began initiating numerous patient-centric changes to improve the imaging environment for patients who use wheelchairs. For instance, the team rearranged the waiting room to improve access, and the imaging center greeter moved from a standing to a seated position to be at eye level with patients who use wheelchairs. What's more, Vincoff and Botsch are working with Northwell's linen service to offer shorter, poncho-style capes that make it easier for patients to change while seated.

Based on Panzica's feedback about gauging patients' challenges and concerns ahead of time, the radiology team added a question to their digital intake form that asks patients about their limitations and needs. This allows the team to proactively respond to patients' concerns and provide enough support for every patient to have the same access to care. "It's important to listen to every patient because each has an individual situation. They know what they're capable of, so we let them take the lead," Botsch says.

Along these same lines, Botsch also makes a point to reinforce the "always grab a coworker" refrain to all mammographers and other RTs during departmental meetings and informal staff huddles. She doesn't want any other patients turned away from care when the RTs can make accommodations. "If you need an extra set of hands, get them," Botsch advises.

Botsch followed her own advice in January of 2020 when Panzica returned for her mammogram. Recognizing that Panzica would require additional assistance, Botsch asked another RT to help her perform the exam. Together, with the support of pillows for propping and adjustments to her wheelchair, the RT team successfully acquired Panzica's breast images.

## Soliciting Additional Feedback

While Northwell's radiology team has implemented improvement measures based on Panzica's input, it hasn't stopped there. Vincoff has also taken several steps to solicit feedback from additional patients with physical limitations. For starters, she worked with Panzica to create a survey that the team recently conducted with an existing Northwell patient advisory group that comprises patients living with disabilities.

Vincoff wanted to survey the group to gain greater perspective about individuals' experiences in Northwell's imaging department, and Panzica helped hone the survey questions to optimize the feedback. For example, the survey included questions such as: "Were you offered assistance navigating onto and/or off of the exam table?" "Was your comfort level assessed periodically throughout your exam?", and "Were you offered assistive positioning pillows to aid in your comfort during the exam/procedure?" When compiled, Panzica plans to share the survey results with the patient-family advisory council and the imaging department for future improvements.

In addition to surveying the patient group, as part of her role as vice chair of patient experience, Vincoff has begun sending thank-you text messages to every imaging patient following their ambulatory care visits. The message offers a simple, open-ended



Nina S. Vincoff, MD, and Lisa Panzica, MHA, partnered to improve the patient imaging experience at Northwell Health. Photo courtesy: Vaccine Labs

opportunity to provide feedback on the experience, thanking patients for choosing Northwell Health Imaging and affirming, "Your safety and comfort are our top priorities, and we care about your experience."

What's more, Vincoff has made health equity and accessibility a priority through the creation of radiology's 15-member patient-family advisory council. The council comprises imaging staff, a director of nursing, and patients of various ages, ethnicities, gender identities, and physical capabilities. Many of these patients had previously provided constructive feedback on patient surveys or sent letters, revealing an opportunity for effective partnership in both identifying problems and determining solutions, Vincoff explains. "We were very intentional about ensuring diversity and representation so that our council would reflect the diversity of the patients and communities we serve."

## Taking the Lead

For other radiologists wanting to improve the care experience, Vincoff recommends making a commitment to ensuring that all patients have access to high-quality care in an environment that serves them with respect and dignity. Achieving this requires radiologists to get out of the reading room to talk with other members of the radiology team and with patients. It can't be left to the staff alone, Vincoff says.

Vincoff is collaborating with ACR staff to develop a toolkit that radiologists can use to start their own patient-family advisory councils. She is also working to help educate radiologists about effectiveness in patient-centered care as chair of the ACR Commission on Patient- and Family-Centered Care Patient Engagement Committee.

"It's important that radiologists partner with patients to enhance their experience by listening, in every single interaction, with the goal to understand how to improve and how to be the best caregivers possible," Panzica says. "Always put yourself in the shoes of the patient and be proactive — not only addressing expressed needs, but unexpressed needs, too. That's how to raise the bar in healthcare." **B**

By Kerri Reeves, freelance writer, ACR Press

# State Talk

The past president of the Florida Radiological Society discusses how important chapter involvement is to the radiology community.

Jeffrey A. Stone, MD, FACR, is a big advocate of involvement at the state chapter level. In fact, he attributes his success in radiology to it. “When I moved to Florida in 2007, one of my colleagues there who’s very active in the Florida Radiological Society (FRS) encouraged me to get involved early on — so I hit the ground running in the FRS,” says Stone. “I love doing state chapter work because I really enjoy the mechanism of building better societies; it’s just been so rewarding.”

Stone was recently named the recipient of the Gold Medal Award from the FRS, the organization’s highest honor. Stone, an associate professor of diagnostic and interventional neuroradiology specializing in spinal disorders/intervention and pain management at Mayo Clinic Florida, served as president of the FRS from 2015–2016 and currently serves on six FRS committees. Additionally, he has participated in numerous capacities for the American Society of Neuroradiology (ASNR), the North American Spine Society (NASS), the ACR, and the American Society of Spine Radiology (ASSR). The *Bulletin* caught up with Stone to discuss his state chapter efforts, his work with the ACR, and his commitment to mentoring the next generation of radiologists.

## How did you get involved in your chapter?

I was first involved with the ACR a lot through the ASSR, where I started out as a society representative to the ACR’s Council. When I moved to Florida, I was still a representative for ASSR but became involved in the FRS through a colleague and quickly assumed state-related duties, including as councilor for the FRS after my ASSR term finished in 2010. I then ascended leadership, eventually holding the positions of secretary, treasurer, vice president, and president.

## Tell us more about your work with the ACR.

I have been on the ACR Economics Committee on Coding and Nomenclature since 2006, primarily addressing coding questions from our membership regarding IR/interventional neuroradiology, as well as diagnostic neuroradiology. My work and ongoing learning in this committee led me to educate and speak on coding to professional coders through the American Academy of Professional Coders and subsequently to become a member of the Coding Committee for the NASS in 2014. My work with the Economics Committee also led to a brief stint as an alternative representative to the AMA/Specialty Society RVS Update Committee for the ASNR from 2008 to 2010.

The Task Force for Clinical Practice of IR and Interventional Neuroradiology was formed in 2012 to evaluate barriers and solutions to clinical practice within the areas of IR. My practice



Jeffrey A. Stone, MD, FACR

was unique as I was one of only a rare few with an active practice within the department of pain medicine, so I was appointed as chair of the section on spine, MSK, and pain medicine. The efforts of this Task Force led to publications on ways that members could enhance their clinical practices as well as the identification of a wide range of practice models (learn more in this Imaging 3.0® case study at [bit.ly/I3\\_PainPrevention](http://bit.ly/I3_PainPrevention)).

## Why did you decide to work with residents?

I joined the board of the FRS Educational Foundation in 2013. One core mission of the Foundation is to promote and advance the medical practice and science of radiology and radiation oncology through scholarships and grants to individuals in practice or training. Through the Foundation, we raise money to send our residents to the ACR’s annual meeting as well as to a legislative session here in Tallahassee. We also support any resident or fellow in the state of Florida who submits a poster or wants to come to the FRS state chapter meeting.

In 2017, I became the president of the Foundation, and I started a special scholarship to honor the memory and legacy of Martin Northup, MD, FACR, a long-term member and past president of the FRS and tremendous advocate for resident education and participation. The scholarship is given to one resident per year and is meant to foster promising leadership abilities for future involvement in the ACR and the FRS. As part of the scholarship, the resident essentially “shadows” the past FRS president — and this way they have a mentor to teach them about everything that goes on within the FRS and how it pertains to the ACR.

## What has your work in PFCC meant to you?

Of all the work I’ve done, it’s the patient care that has meant the most to me — whether it’s curing cerebrovascular disease, working with patients after a stroke, or hearing from patients experiencing pain relief. We get a lot of complicated patients, and my work with patients experiencing severe pain is very meaningful. These patients are often physically limited or disabled, with associated emotional and psychological dysfunction secondary to their suffering — and then following a very short procedure, they’re doing their normal activities and feeling so thankful. I think most of us go into medicine to help patients — and when a patient thanks you and says, “I really appreciate your care,” that means more than anything. **B**

Interview by Cary Coryell, publications specialist, ACR Press

# The Future of Health Equity

The January special issue of the *JACR*<sup>®</sup> connects radiology with the global conversation about access to affordable, quality healthcare.

No other year centered equity in quite the way 2020 did. Between a pandemic, a wave of nationwide protests, and a growing public awareness of social disparities, last year opened many eyes to the ways inequity has long influenced all aspects of life, including access to affordable healthcare. In the wake of this reckoning, the January *JACR*<sup>®</sup> mails with a bonus issue that explores the topic through a radiology lens. “This *JACR* special issue on health equity brings together a diversity of topics and authors that will serve as a foundational pillar that showcases the equity work being done across the specialty,” explain editors Melissa A. Davis, MD, MBA, assistant professor at Emory University School of Medicine; Efrén J. Flores, MD, officer of radiology community health improvement and equity at Massachusetts General Hospital; and Ruth C. Carlos, MD, MS, FACR, professor of radiology and assistant chair for clinical research at the University of Michigan and editor-in-chief of the *JACR*. Here’s a sneak peek at what you’ll find in the issue.



## Read Highlights From the Issue

According to the editors, “In this special issue, we have collated a series of manuscripts by our colleagues across radiology that discuss the spectrum of health disparities,

shed light on issues specific to our specialty, and open the discussion for closing the gaps in our health system.” Highlights from the issue include:

- “The Impact of Social Determinants of Health on Lung Cancer Screening Utilization”
- “Demographic Reporting in Publicly Available Chest Radiograph Datasets: Opportunities for Mitigating Sex and Racial Disparities in Deep Learning Models”
- “Student Perspective of Pipeline Programs, an Essential Tool in Diversifying Radiology”
- “Scanning the Planet: Radiology’s Grand Opportunity to Address Climate Change”

**If there is a silver lining from the pandemic, it is that it has shone a bright spotlight on the long-discussed health disparities that our vulnerable populations face, the direct impact of social determinants of health on clinical outcomes, and the gaps that we must work as a healthcare community to close.**

— MELISSA A. DAVIS, MD, MBA;  
EFRÉN J. FLORES, MD; AND  
RUTH C. CARLOS, MD, MS, FACR



## Get Involved With the Radiology Health Equity Coalition



The vision and missions of radiology societies focus on continually improving patient care. Medical imaging impacts most patients at some point in their care journey, and radiology professionals have the potential to be unifying change agents across an inequitable healthcare system.

The Radiology Health Equity Coalition is focusing on concrete steps that individual radiologic professionals, imaging practices, and healthcare institutions can take to improve imaging health equity. The Coalition is actively seeking input from the radiology community and other groups in organized medicine as it establishes goals, focused on best practices for health equity initiatives, as well as volunteer member engagement in health-equity-related work in their communities.

To commit to act, visit [acr.org/Health-Equity](https://acr.org/Health-Equity).

For more information, email the Radiology Health Equity Coalition at [rhec@acr.org](mailto:rhec@acr.org).



## Read One, Share One

Did you know the articles in this special issue are freely available and not behind the paywall? Head to [jacr.org](https://jacr.org) to get the latest on effecting change in your health system. Then share with a colleague outside of radiology. Who do you know looking for ways to spark change? **B**

# Radiology, AI, and PHM

By employing machine learning algorithms, radiologists can lead the way on population health management efforts.



As the steady march toward population health management (PHM) in medicine continues, the critical role of radiology should not be overlooked. Radiologists touch a range of patients and, as such, can occupy a central role in patient care management. The key role that radiology plays in acute settings is well known; however, the untapped potential of radiologists in facilitating healthcare from a PHM perspective is arguably even greater. The increasing sophistication of AI algorithms, and their potential integration into the radiologist's workflow, further foregrounds the specialty's importance.

One key space in which radiology can lead is in the management of incidental findings. Heterogenous strategies around incidental findings management have led to uneven results. Part of the difficulty in creating a robust solution is the lack of control that radiologists exercise in ordering follow-up studies due to existing legislation. As Gregory N. Nicola, MD, FACR, chair of the ACR Commission on Economics, notes, as diagnostic radiologists, we are not considered treating physicians and as such not allowed to manage patients, which includes ordering follow-up studies.<sup>1</sup> In addition, the manual nature of how incidental findings are traditionally managed is not conducive to a systematic workflow. Leveraging the central role of radiologists in using AI to manage incidental findings, in collaboration with our clinical colleagues, has the potential to transform healthcare delivery—both from a diagnostic and a workflow perspective.

**The key role that radiology plays in acute settings is well known; however, the untapped potential of radiologists in facilitating healthcare from a PHM perspective is arguably even greater.**

As a diagnostic aid to radiologists, machine learning algorithms can help in the assessment of coronary artery calcifications, bone mineral density, abdominal aortic aneurysms, and numerous other applications.<sup>2</sup> In other words, these algorithms are increasingly becoming part of the radiologist's arsenal. In addition, these algorithms can be configured to alert the radiologist as well as populate findings into the imaging report directly.

Imagine integrating these diagnostic algorithms with natural language processing (NLP) and the EHR. Such a scenario could facilitate consultations with an appropriate specialist in a timelier manner. For example, consider the assessment of coronary artery

calcification by an algorithm. In a typical workflow, this incidental finding would not be acted upon until the primary care provider requests a consultation. However, what if the coronary artery calcification score identified by the AI algorithm and included in the radiologist report could be automatically routed to a cardiovascular team for management? There would be more timely proactive health management with fewer patients lost to follow-up. Using these types of algorithms, scenarios such as aortic aneurysms or lung nodules could also be similarly managed. Indeed, similar workflows could be implemented for many incidentalomas.

Successfully managing incidental findings is critically dependent on collaborations with our referring providers. As experts in the assessment of radiological findings, it is our responsibility to direct patients on the next best steps in their care pathway. This mindset can include identifying and even scheduling the specialist visit that is most appropriate in managing the issue. Developing these workflows in conjunction with our clinical colleagues will help us move away from the current siloed nature of healthcare delivery. Radiologists are poised to lead in this transformation. In addition to making diagnoses and communicating findings, radiologists should be active participants in directing the most appropriate next steps.

In a PHM setting in which accountable care organizations are responsible for overall patient health, the emphasis is on proactive health maintenance. Directing at-risk patients to appropriate care so they are less likely to present in the ED is the type of forward-thinking healthcare for which we should be striving. With the aid of machine learning and by tightly coordinating care with our provider colleagues, radiologists can help establish better healthcare for our patients. **B**

By Syed F. Zaidi, MD, MBA, chair of the ACR PHM Committee of the ACR Commission on Patient- and Family-Centered Care and associate chief medical officer of operations and integration with Radiology Partners; and Ryan K. Lee, MD, MBA, co-chair of the ACR PHM Committee and chair of the department of radiology at Einstein Healthcare in Philadelphia

ENDNOTE available in the digital edition at [acr.org/bulletin](http://acr.org/bulletin)

To learn more about how radiologists can lead the way on population health management efforts, watch a recent PHM Committee webinar at [acr.org/screening-webinar](http://acr.org/screening-webinar) featuring Cecelia C. Brewington, MD, FACR; Lauren P. Golding, MD; Debra S. Dyer, MD, FACR; Ryan K. Lee, MD, MBA; and Syed F. Zaidi, MD, MBA. During the webinar, the panelists dive deeper into how radiology's central role in patient screening is one of the key foundations of successful PHM.

## What's the biggest lesson you've learned in 2021?

“I've learned that regardless of where you are in your radiology career, it is never too late to expand your professional skills. After the onset of the pandemic, 2021 was the year I decided to pursue what was most important to me professionally. It was time to actively complement my breast imaging practice with the advancement of patient-centered care — both within radiology and the healthcare system in general. Armed with strong institutional support and guidance from the Academy of Communication in Healthcare, I have begun teaching patient-centered health communication to medical students. With the help of the ACR's Radiology Communication Skills Training Module, I plan to lead workshops in patient-centered care for radiology residents.”

Rachel A. Hitt, MD, associate professor of breast imaging at the University of North Carolina at Chapel Hill and member of the ACR Commission on Patient- and Family-Centered Care Outreach Committee



“I've learned to always be ready for change, or even better, be part of the change. In 2021, individual and collective efforts influenced historical changes in radiology — including the first ABR virtual board exams, the Radiology Health Equity Coalition, and challenging national conversations on parental leave, climate change, and the MARCA legislation. Looking back, each of those changes probably started as an idea in someone's mind, and the only difference was deliberate action and a willingness to transform.”

Florence X. Doo, MD, chief resident at the Icahn School of Medicine at Mount Sinai West



## ZEROING IN ON VALUE

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radiology to become a valuable partner in risk-sharing arrangements. On the output side, being able to collect data related to how imaging is impacting patient outcomes through the lens of population health or utilization management can be equally important when entering into shared-risk arrangements. Collecting all of this information in one place — like a Radiology Value-Added Matrix — can help a practice when it comes time for these kinds of negotiations.

### What is the first step someone should take if they want to develop a Radiology Value-Added Matrix?

Because radiology is involved in so many touchpoints in the healthcare ecosystem, our specialty is ideally suited to adopting and iterating on this concept. When considering whether to develop their own matrix, radiologists or practices should start by listing the most common activities they're involved in that aren't related to a billable CPT® code. Time spent attending meetings and conferences are two such categories. Most practices utilize scheduling software, which can be used to extract this kind of data. If this works well, try to add one new non-image-interpreting task every two to three months and track it.

While you're doing this, also consider how to quantify these activities in a way that the C-suite will easily understand, i.e., in terms of dollars (read the case study at [bit.ly/Non-RVU](https://bit.ly/Non-RVU) to learn how a practice converts these activities into dollar amounts). Following these steps will allow you to demonstrate your value without necessarily asking practice members to do much more work than they're already doing — thereby gaining their buy-in.

### What is the future of your Radiology Value-Added Matrix?

If the last two years have shown us anything, it's that no one knows what the future holds. While I don't have a crystal ball, I can definitely say that it's important to stay nimble. The matrix helps us do just that. We will continue building in time to periodically reflect on our non-interpretive RVU activities to evaluate whether or not we need to change anything. And we'll continue to think of it not as written in stone but as a living, working, breathing document. **B**

Interview by Chris Hobson, senior communications manager, ACR Press

## ACR BOC MEETING

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day, we held breakout sessions with physician volunteers and staff about how to operationalize the objectives and realize the goals of the new plan. This work is far from complete. Now comes the task of not only operationalizing the plan but developing metrics and routinely measuring our success. The new plan can be viewed at [acr.org/strategicplan](https://acr.org/strategicplan).

Finally, we spent a session at the meeting talking about the importance of communication. The BOC stressed the critical need to have bidirectional communication between the ACR and members. Some of the action items from this portion included revitalizing the Communications Committee of the Commission on Membership and Communications and looking at best practices to help us improve our communication efforts. The College's communication efforts will remain an ongoing item on the Executive Committee's monthly agenda and I will be reserving additional time for this topic at our next BOC meeting in January.

The leaders and members of the ACR are dedicated to the profession and to our patients. We are all working to pay it forward for the next generation of radiologists. The BOC and its commissions play a critical role in the governance of the College, the operationalization of the College's policies, and the fostering of innovation to advance medical imaging's role in our patients' healthcare. **B**

### ENDNOTE

1. Weiss J, Hoffmann U, Aerts H. Artificial intelligence-derived imaging biomarkers to improve population health. *The Lancet Digital Health*. 2020;2(4):E154–E155.

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To contact a member of the *ACR Bulletin* staff, email [bulletin@acr.org](mailto:bulletin@acr.org).

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