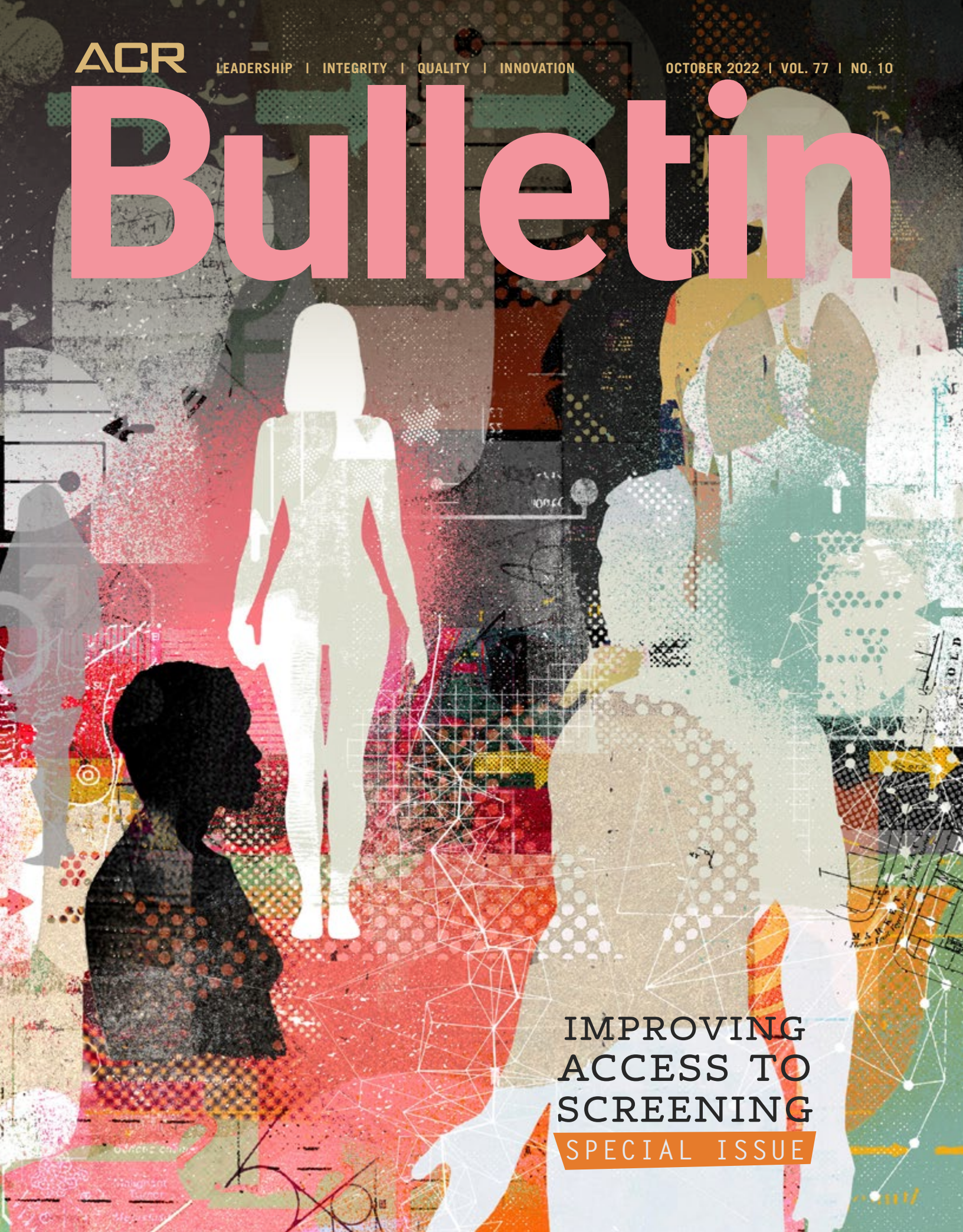


ACR

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OCTOBER 2022 | VOL. 77 | NO. 10

Bulletin



IMPROVING
ACCESS TO
SCREENING
SPECIAL ISSUE

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“I joined for the education and the clinical resources available for quality improvement in patient care.”

Tatum Simon Johnson, MD



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IMPROVING ACCESS TO SCREENING

SPECIAL ISSUE

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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.

QUESTIONS? COMMENTS?

Contact us at bulletin@acr.org. Digital edition and archives of past issues are available at ACR.ORG/BULLETIN.



Our Friend, the Other PCP

In supporting equitable cancer screening, the ACR is well-positioned to champion the work of the President's Cancer Panel.

With the National Cancer Act of 1971, the United States established an integrated system of organizational constituents to focus on the cancer burden in the country.¹ The legislation broadened the scope of the National Cancer Institute (NCI) and the authority of its leadership to design and implement a National Cancer Program, inclusive of other national research institutes and various federal and non-federal programs. In addition to funding 15 additional cancer research centers, local control programs, and an international cancer research data bank, the legislation also established the President's Cancer Panel (PCP).²

The PCP consists of three members appointed by the President to advise the Administration on the status of the National Cancer Program and identify barriers to further development. The PCP chair, John P. Williams, MD, FACS, a breast cancer surgeon practicing in northern Virginia, is focused on improving outcomes and addressing disparities in cancer care. A strong patient advocate for both education and screening, he founded the Breast Cancer School for Patients, a video-based cancer education platform. The ACR's leaders and members have benefited from his wise counsel and strong leadership by example, striving to achieve patient-focused, equitable healthcare in a transparent system (see sidebar).

The PCP works independently of the NCI, advocating for research support across all the National Institutes of Health, and promoting participation in clinical research that ought to be a part of the standard of care for cancer — culminating in cancer treatment guideline development by the National Comprehensive Cancer Network.^{3,4} The PCP's 2012 recommendation to increase states' access to HPV vaccination services through administration by pharmacists has been implemented in 39 states and the District of Columbia as of 2018.⁵ Their 2016 recommendation to the Federal Communications Commission to expand broadband Internet access for patients to access health information helped facilitate considerable improvement, decreasing the number of Americans without broadband Internet access by 45% as of 2019.⁶

In 2020, the PCP identified cancer screening as “an

essential issue that will need additional support and innovation,” citing early detection as a critical factor to positive outcomes. Given the delay and decline in cancer screening that resulted from the COVID-19 pandemic, up to 10,000 extra deaths from breast and colon cancer have been predicted.⁷

The economic impact of cancer is no less impressive. According to the National Center for Chronic Disease Prevention and Health Promotion, more than 1.7 million people in the United States are diagnosed with cancer and nearly 600,000 people die from cancer annually. The cost of cancer is projected to exceed \$240 billion by 2030.⁸ Research inclusive of historically marginalized populations and focused attention on improving access to prevention, screening, and treatment stand to improve patient outcomes and population health. In a recent online publication of *Radiology: Imaging Cancer*, five modalities were cited as game-changers in the war against cancer since the National Cancer Act legislation: CT, MRI, PET, optical imaging and microscopy, and ultrasound.⁹

Research inclusive of historically marginalized populations and focused attention on improving access to prevention, screening, and treatment stand to improve patient outcomes and population health.

Advocacy and economics remain the cornerstones of the ACR's member- and patient-focused efforts. Leveraging these strengths to benefit society, as well as our profession, is the lynchpin for establishing and preserving public trust — fundamental to the ACR's stated mission and vision (learn more at acr.org/About-ACR). In supporting equitable cancer screening and advocating for its sustainability across aging, under-represented, and marginalized populations, the ACR is well-positioned to champion this cause — not only in commemoration of the National Cancer Act's recent golden anniversary, but in proud recognition of our specialty's contributions as we prepare to celebrate the ACR's centennial (see page 18). **B**

ENDNOTES available in the digital edition at acr.org/bulletin



Breaking Imaging Barriers

Watch an on-demand Radiology Health Equity Coalition webinar at bit.ly/Breaking_Imaging_Barriers during which John P. Williams, MD, FACS, and other panelists deliver concrete steps that individual radiologic professionals, imaging practices, and healthcare institutions can take to improve imaging health equity through successful partnerships with community health organizations.

New Study: AI Recognition of Patient Race in Medical Imaging

A landmark study published in the *Lancet Digital Health* by a team led by Judy W. Gichoya, MD, MS, assistant professor in the department of radiology and imaging sciences at Emory University, underscored the ability of AI models to learn racial identities from medical imaging, even in situations where radiologists cannot. The study details the high performance of a deep learning model tasked with predicting racial identity across imaging modalities and anatomic locations.

Further analysis examined potential “proxies” for patient race to understand their algorithm’s high performance, including physical characteristics (i.e., body habitus), textural versus structural imaging features, image quality, and disease distribution. However, the assessment didn’t reveal evidence of bias deriving from these factors.

The study results assert the need to include self-reported race among other demographics within every dataset and to institute performance audits to ascertain the influence of demographic factors on deployed model output.

Read the study at bit.ly/Lancet-Study.

The Bulletin Wants to Hear from You

The *Bulletin* will soon be launching its 2022 Reader Survey. The goal of this survey is to make sure the Bulletin gets you the content you need in a quick, easy-to-read, and inviting manner. Keep an eye on your email to find out more on how you can participate and make your voice heard.



Apply for a Grant in Health Policy Research

The Harvey L. Neiman Health Policy Institute® (NHPI) is accepting applications in multiple award categories to fund innovative, empirical research that promotes the effective and efficient use of healthcare resources for improving patient care.

Apply for a grant by Nov. 8, 2022, at neimanhpi.org/grants-fellowships.



Protect Your Patient Data

Advancements in technology are transforming the delivery of patient care and the ways in which we connect. At the same time, advancements in technology are increasingly exploited by cyber criminals for malicious purposes. Protect your patient and organizational data from cyberattack with new resources from the ACR Cyber Security Resource Hub.

Explore the hub at bit.ly/Cyber_Security_ACR.



Many Women Under 50 Aren't Getting Their Yearly Mammograms

According to a study published in *Academic Radiology*, almost half of women between the ages of 40 to 49 don't get their annual mammograms. Radiologists hope to educate patients and providers to improve these numbers.

Researchers, led by Yasaswi Vengalasetti, MS, of Stanford University, reviewed survey data from nearly 2,000 women and found that the most common reasons for not getting a mammogram in that age range were not considering getting screenings or putting off breast cancer screening. Other reasons included the doctor not ordering it, women not thinking they needed it, and women feeling like they were too young.

“While deficits in shared decision-making in women younger than 50 years related to mammography utilization exist, radiologists may be key in educating ambulatory care providers and patients about the benefits and harms of screening between the ages of 40–49 years,” Vengalasetti and her team wrote.

Read the study at bit.ly/Academic-Radiology-Study.



RLI Power Hour: Leadership Stories

Don't miss the next free Radiology Leadership Institute® (RLI) Power Hour on Wednesday, Oct. 19, from 7 to 8:15 p.m. ET. Learn about the initiatives Vivek Masson, MD, and Andrew K. Moriarity, MD, led at their institutions, what impacts those initiatives have had, and the tools that helped them see their projects to fruition. After the webinar, attendees will be ready to tackle their next projects with as much confidence and leadership skills as these two 2022 RLI Impact in Leadership Award recipients.

Register for the webinar at acr.org/powerhour.

Those of us who are fortunate to be involved in the clinical implementation of screening for lung cancer are witnessing firsthand the success of low-dose CT in detecting lung cancer early.

— KIM L. SANDLER, MD



RLI Podcast: Taking the Lead

In a new Radiology Leadership Institute® (RLI) podcast episode, host Geoffrey D. Rubin, MD, MBA, FACR, talks with Cynthia S. Sherry, MD, FACR, founding chair and medical director of the RLI, about her diverse leadership positions within the hospital and hospital system, her radiology group, and at many local, state, and national physician organizations. Throughout her career, Sherry has been driven by the belief that, when supplemented by leadership training, physicians' clinical experiences uniquely equip them to approach healthcare problems with innovation and fiscal stewardship in ways that can benefit both patients and society.

Listen to the episode atacr.org/rli/podcast.



Update Your MyACR Profile

The best way the ACR can represent your needs and the needs of the patients and populations you serve is to get to know you better. The profile center in MyACR (acr.org/MyACR) allows you to self-report your specializations, your practice environment, and how you identify from a gender and ethnicity standpoint.

The ACR's goal is to take this demographic data, ensure it is de-identified and anonymized before it is analyzed, and work toward building the resources and tools that assist you in reaching your practice goals.

According to Johnson B. Lightfoote, MD, MBA, FACR, chair of the ACR Commission for Women and Diversity, "Our College is committed to excellence through diversity, and recognizes inclusiveness as a core component serving that mission. By sharing your diversity and demographic data when you renew your membership we can then measure, understand, and improve inclusivity and health equity in service to our patients and populations."

Update your profile, practice, and demographic data at acr.org/MyACR today.

ACR to Manage New Alzheimer's Network for Treatment and Diagnostics



The ACR Center for Research and Innovation™ (CRI) was announced as the operations center for the new Alzheimer's Network for Treatment and Diagnostics (ALZ-NET) at the 2022 Alzheimer's Association International Conference. ACR Neuroradiology Research Committee Chair Christopher T. Whitlow, MD, MHA, PhD, is a co-investigator for ALZ-NET, which will collect long-term clinical and safety data from

patients treated with FDA-approved Alzheimer's disease therapies.

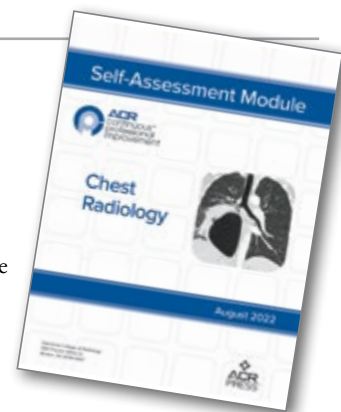
The plan is for the CRI to provide guidance, education, and best practices in imaging care for dementia and Alzheimer's disease therapy patients. Clinical dementia care sites will participate directly in ALZ-NET, and imaging facilities will provide optimal imaging care to patients and thorough reporting to treating clinicians.

Learn more about ALZ-NET at bit.ly/ALZ-NET.

New CPI Chest Self-Assessment Module

The CPI Chest Radiology Module 2022 has been released by the ACR Continuous Professional Improvement program. The self-assessment module includes casework from expert chest imagers, featuring more than 160 imaging examples using CT (including HRCT), radiography, and PET. Earn 8 SA-CME as you study challenging cases.

Access the module at bit.ly/CPI2022.



The 2023 MPFS

We need to redouble efforts to ensure that patient access to Medicare-participating physicians and imaging services is not threatened.

CMS released the 2023 Medicare Physician Fee Schedule (MPFS) and Quality Payment Program (QPP) Proposed Rule on July 7. In many ways, this article could be a copy-paste from last year's edition, as the theme of decreasing reimbursement rates and increasing difficulty of the Merit-Based Incentive Payment System (MIPS) seems to be stuck on repeat for policymakers.

For 2023, CMS estimates an overall impact of the MPFS changes to radiology to be a 3% reduction in reimbursement, while IR would see a decrease of 4%, nuclear medicine would see a 3% decrease, and radiation oncology and radiation therapy centers would see a 1% decrease if the provisions within the proposed rule are finalized. These reimbursement cuts result from continued implementation of clinical labor pricing updates and revisions to evaluation and management code families, including hospitals, emergency medicine, nursing facilities, and home visits. If Congress does not intervene to extend the \$3 billion infusion to the MPFS budget provided by the Protecting Medicare and American Farmers from Sequester Cuts Act, the percent decreases described above will be greater for 2023.

All is not lost, however. CMS is proposing to update the prices for several supply items, including “towel, paper (Bounty) (per sheet),” which is found in the practice expense of several radiology codes. In an act of what can only be considered goodwill to paper towel-wielding clinicians, CMS proposes to increase the price by 114%, from \$0.007 to \$0.015.

Paper product sarcasm aside, there were a few positive highlights for radiologists. No radiology codes were nominated by CMS or public stakeholders as potentially misvalued. Additionally, CMS accepted most of the recommended relative value unit (RVU) values for imaging codes brought before the AMA/Specialty Society RVS Update Committee (RUC) in this calendar year cycle. The ACR RUC team is currently working on a response to CMS defending the recommended values for the remaining codes in our comment letter to the proposed rule. In addition, the ACR and the AMA identified potential errors in CMS' calculation of professional liability insurance RVUs that adversely impacted radiology. We are hopeful that CMS will work with us to identify and correct the errors, which would result in

a smaller reimbursement decrease than projected.

CMS did not propose major changes to MIPS for 2023, instead focusing on further development of MIPS Value Pathways (MVPs) and advancing health equity across CMS programs and policies. Nonetheless, the impact of previous years' policies will likely be more palpable this performance year. Most notably, the removal of bonus points and further constriction of quality measures available to radiologists remain significant barriers for radiology practices. The performance threshold (below which clinicians are subject to a financial penalty) is proposed to remain at 75 points for 2023. The maximum penalty and bonus amounts remain at the statutorily mandated levels of +/-9% of Medicare Part B payments. There will no longer be an additional bonus for exceptional performance starting in 2023.

CMS is maintaining the six-point small practice bonus included in the Quality Performance category and continues to award small practices three points for submitted quality measures that do not meet case minimum requirements or lack a benchmark. The agency proposes to raise the data completeness threshold to 75%, beginning with the 2024 performance year. Specific to radiology, CMS proposes an updated version of the 2021 MIPS Measure #145: Exposure Dose Indices or Exposure Time and Number of Images Reported for Procedures Using Fluoroscopy, in accordance with changes proposed by the ACR. To meet performance for this measure, exposure dose indices must be provided; exposure time and number of images will no longer be sufficient. If the proposed changes are finalized, we expect this measure to be removed from the list of topped-out measures capped at seven points.

CMS added five proposed MVPs for 2023, bringing the total MVPs available for voluntary reporting to 12. The ACR continues to engage CMS in discussions about the challenges of creating MVPs that are applicable to radiologists.

The 2023 proposed rule represents the continuation of a disconcerting trend — the confluence of Conversion Factor decreases, the statutory cuts on the horizon from sequestration and Pay-As-You-Go policies, and a 0% payment update that fails to account for significant inflation in practice costs creates long-term financial instability in the Medicare physician payment system. The increasing difficulty of MIPS and an ever-decreasing pool of available quality measures further disadvantages radiologists. Working with other medical societies, the ACR was able to preempt some of these cuts last year. The 2023 MPFS proposed rule makes clear the need to redouble our efforts to ensure that patient access to Medicare-participating physicians and imaging services is not threatened. **B**



Lauren P. Nicola, MD

Chair of the ACR
Committee on
Reimbursement

Guest Columnist



Improving Access to Screening

Radiologists can make a difference in eliminating disparities in routine screening examinations.

If there's one thing that we know, it's that cancer screening can save lives and cancer screening is not accessible for everyone who needs it. People of color, those of low wealth, and residents of rural areas tend to be most vulnerable to screening disparities for reasons that are complex and often interrelated. Cost and lack of access, health illiteracy, implicit bias, and both cultural and structural barriers all play a role, as do disparities in cancer risk and vast differences in how screenings are integrated into patient care. The result is that too many cancers are detected too late, leading to too many avoidable deaths.¹

We know that by detecting breast cancer at an early stage, when patients have more effective therapy options, regular screening mammograms can reduce breast cancer mortality by 40%. Although the ACR recommends annual mammography screening for most women starting at age 40, unfortunately, not all women have easy access to these lifesaving exams. For women dealing with limited income, insurance gaps, or even transportation issues, the process of pursuing and paying for screening exams can be challenging at best — and a barrier to care at worst. Additionally, many of these are women of color who, compared to White women, are 72% more likely to be diagnosed with invasive breast cancer, 58% more likely to be diagnosed with advance-stage disease, and 127% more likely to die from breast cancer — all before age 50.²

We can take on leadership roles in breast screening programs and outreach efforts. We can collaborate with local clinics, community health centers, and social service organizations in our areas to streamline the path for underserved patients to access breast healthcare. We can evaluate how our organizations are reaching and serving women who face socioeconomic barriers to accessing breast cancer and other types of screening, diagnosis, and treatment. We can employ dedicated patient navigators to guide patients through siloed health systems and social services by providing personalized support to bridge the gaps in care.³

Eliminating disparities in routine lung screening examinations will also require outreach, availability, and cultural consideration. We, as radiologists, can review state-level data surrounding lung cancer to assess current lung cancer screening (LCS) practices and smoking rates and gauge the need for mobile LCS programs in our communities.

We can engage community partners to encourage their patients to take advantage of this life-saving care, once available. We can recruit and train nurse navigators to guide LCS patients through next steps to ensure appropriate follow-up. We can explore funding opportunities so that uninsured and underinsured LCS candidates are never turned away from this potentially life-saving technology.⁴

We, as radiologists, can make a difference in improving access to screening for our patients. The pages of this special issue of the *Bulletin* take us through exactly how we can do that. **B**

By Rebecca L. Seidel, MD, associate professor of radiology and imaging Sciences at Emory University School of Medicine and chair of the *Bulletin* Advisory Group

ENDNOTES available in the digital edition at acr.org/bulletin

Improving Access for Women

To help overcome the socioeconomic barriers often found in underserved communities, the Promise Fund of Florida is building a network of local breast and cervical care providers and community resources for women. The nonprofit employs patient navigators in partnering clinics and community health centers to guide women through every step of their breast cancer journey, including mammography screening. Connecting women to patient navigators in these communities has shown improved outcomes in early screening and treatment while reducing healthcare costs.

Read the Imaging 3.0® case study at bit.ly/ImprovingAccess4Women.



Finding Patients

Mammography screening trial explores the nuances of different types of screening while boosting participation by underrepresented populations.

“The ultimate goal of the Tomosynthesis Mammographic Imaging Screening Trial (TMIST) is to individualize screening and bring the right tests to patients. We have had a one-size-fits-all strategy since screening came to being in the ‘60s and ‘70s. It has been mammography, versus nothing, for many women,” says Etta D. Pisano, MD, FACR, chief research officer for the ACR Center for Research and Innovation™ (CRI), adjunct professor of radiology at the University of Pennsylvania, and TMIST study chair.

TMIST is a large, National Cancer Institute-funded and ECOG-ACRIN-sponsored randomized phase III study that is evaluating the ability of 3D mammography to find more of the aggressive types of cancers likely to kill women, comparing it to digital mammography. TMIST will help determine how best to use both of these technologies in the future.¹

TMIST is a health equity bright spot — with around 21% of the American women enrolled in TMIST identifying as Black, which is more than double the average Black cohort in National Cancer Institute trials. ACR’s CRI has been working with the National Medical Association and other advocacy groups to help identify sites serving diverse populations and ask them to participate in the study. In addition, TMIST provides a fund to pay for screening mammograms for patients who qualify.

“We thank those new sites coming on board at a very exciting time in this landmark study,” says Pisano. “TMIST continues to be among the fastest-growing clinical trials of the COVID-19 era due to the dedication of site staff and local investigators — and we look forward to working together to further advance breast cancer screening.”

INDIVIDUALIZING PATIENTS

TMIST is the first randomized controlled trial with the goal of determining whether digital breast tomosynthesis (DBT) outperforms 2D digital mammography in reducing advanced breast cancers in the population being screened. “We have been really great about improving and individualizing therapies for breast cancer. With this trial, we are hoping to provide recommendations that individualize screening strategies — based on many factors, including the unique genetics of the women being screened,” Pisano says.

To do this, TMIST includes a biorepository, Pisano says, collecting blood and saliva from women to look at their DNA. “We are studying the relationship between developing tumors and women’s unique genetics. Participating sites are recruiting patients to help us answer important questions,” she says. “The findings not only impact women getting screened now, but also our daughters and granddaughters.”

The study overall has been successful, Pisano says, because participating sites are committed to it. “They care about learning more about mammography and about screening in general.”

“I think TMIST has the potential to enhance the participation of minority communities everywhere — we’re getting the word out and interested sites are flowing in.”

Edith P. Mitchell, MD

AMBITIOUS TRIAL

TMIST aims to create the world’s largest curated dataset of breast cancer screening clinical data, images, and bio-specimens to help researchers tailor future screening to a woman’s individual risk. TMIST will ultimately enroll 128,905 healthy women ages 45 to 74 at 130 sites throughout the world, with sites currently open in the U.S., Canada, Argentina, Peru, Italy, and South Korea.

Participating sites must have both DBT and digital mammography equipment. TMIST sites must also be a member of one of the National Clinical Trials Network’s groups, such as ECOG-ACRIN or the National Community Oncology Research Program.

“TMIST is the type of study that will add tremendously to the literature regarding mammography,” says Edith P. Mitchell, MD, a practicing medical oncologist at Thomas Jefferson University Hospital in Philadelphia and co-chair of the ECOG-ACRIN Health Equity Committee. “I think TMIST has the potential to enhance the participation of minority communities everywhere — we’re getting the word out and interested sites are flowing in.”

The study allows radiologists to help evaluate how to best implement breast cancer screening, Mitchell says. “It provides an opportunity for the utilization of mammography, but also will give information regarding the biological aspects of breast healthcare, and therefore will contribute in multiple ways to our understanding of breast healthcare — not only for cancer, but for breast health in general,” she says.

Because women of color are often underrepresented in breast cancer screening trials, TMIST leaders and clinical staff are working hard to ensure racial, ethnic, and geographic diversity among volunteers so that the trial results apply to all women. The TMIST recruitment and patient materials are available in English, Spanish, Simplified Chinese, Korean, and Vietnamese, at bit.ly/ECOG-ACRIN.

TEAM EFFORT

“We are all working together. It’s a team effort,” Mitchell says of ACR’s leadership around the TMIST study. “We are trying to reach as many individuals as possible through the ECOG-ACRIN mechanism by encouraging participation of radiologists.”

“We also have patient advocates in the study — very intensely involved in contributing ideas — ensuring that the patient is incorporated into the TMIST strategy,” Mitchell says. “That means we are interested in all women, but especially those in communities where there has not been active participation in clinical trials.”²

LOCAL STRIDES

“We need more sites to take part, particularly those in underserved areas,” says Pisano. “We want to reach more women in local communities, especially women of color, to gain a study population so that the data we collect in the study are representative of all the types of women who seek screening services so that our results can move breast cancer screening and health equity forward.”

“I would love to have more sites that can recruit more Asian American and Pacific Islander women, for example,” Pisano says. “We also need sites that are serving Native American women.”

“The main reason we have been so successful at recruiting Black women for the study is because we are working with sites that are serving these women and their healthcare needs every day,” Pisano adds. “I think the secret of recruiting diverse populations is to open new sites that already work with and care for those women. Those women have to have trust in the site where they will be getting care.” **B**

By Chad E. Hudnall, senior writer, ACR Press

ENDNOTES available in the digital edition at acr.org/bulletin

GETTING INVOLVED WITH TMIST

TMIST will create the world’s largest curated dataset of breast cancer screening clinical data, images, and bio-specimens to help researchers tailor future screening to a woman’s individual risk. Here are some additional details on getting involved:

- ▶ The lead radiologist should plan to provide 1 to 2 hours per week to oversee compliance with the study protocol. Interpreting radiologists at each site will follow their normal clinical reporting processes during TMIST — but should be aware of the involvement of patients under their care in the trial.
- ▶ Mammography technologists participate by assuring that trial subjects are imaged according to their randomization assignment.
- ▶ A quality control mammography technologist should set aside at least 30 minutes per month to perform TMIST quality control imaging on mammography units to be used to perform screening on TMIST participants.
- ▶ On site research assistants (RAs) recruit subjects to TMIST, collect background information from them, enter all study data into a form connected to study headquarters, and maintain documents required to assure centralized study oversight. Ideally, at least one full-time equivalent should be budgeted for the RA, and but a second position may be needed at high-recruiting sites.

For more information on participation, contact TMIST@acr.org. Additional information about contracting and payment structure for TMIST participating sites can be found at acr.org/Research/Clinical-Research/TMIST.

CHEST SCREENING



Closing the Gaps

Small actions can make a big difference in reducing screening disparities among transgender, nonbinary, and gender-nonconforming patients.

Nearly 1.6% of adults in the United States identify as transgender, nonbinary, or gender nonconforming.¹ Although these populations are growing, especially among younger generations — 5% of young adults report they do not identify with the sex assigned to them at birth¹ — they remain increasingly affected by cancer screening disparities. Eligible transgender patients at one hospital were 70% less likely than cisgender patients to be screened for breast cancer, 60% less likely to be screened for cervical cancer, and 50% less likely to be screened for colorectal cancer.²

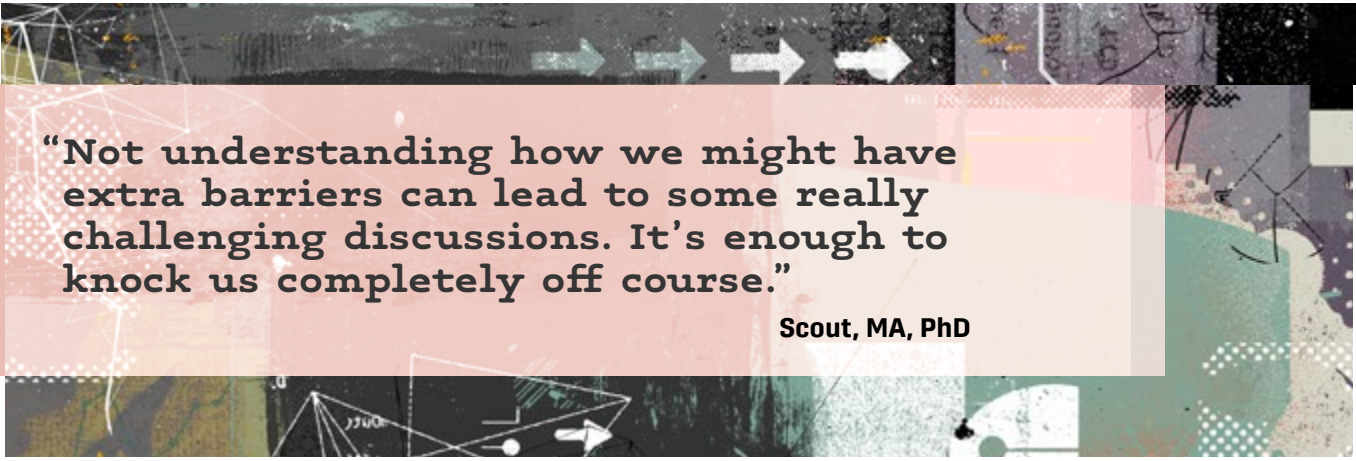
These low numbers are due to many factors, including physician bias, lack of education regarding risk factors, and the failure of many insurance plans to cover the cost of gender-affirming care and mental health resources.² “A significant number of these patients report postponing medical care because of previously experienced discrimination,” says Stamatia V. Destounis, MD, FACR, chair of the ACR Commission on Breast Imaging.

“There’s a large body of evidence showing transgender and gender-nonconforming people have a life filled with systemic

discrimination — first fired, last hired. We’re also more likely to be in the lowest socioeconomic classes and lack proper supports,” explains Scout, MA, PhD, executive director of the National LGBT Cancer Network. “Whenever these patients need to find a new provider, they’re not sure it will be a safe space, so they’re risking exposing themselves to new trauma on top of what they already face. It’s pretty easy to imagine how they may not feel up to that burden and put it off.”

UNDERSTAND THE ISSUE

One reason transgender patients may not feel welcome in an imaging suite may be a lack of understanding on the physician’s part, according to a recently published *JACR*[®] article. Although a majority of surveyed breast radiologists felt comfortable speaking to their patients regarding sex or gender identity in the context of cancer screening, nearly 70% were either unsure or had no LGBTQ competency training for staff or physicians.³ Only a third of respondents stated they followed breast cancer screening guidelines for transgender women using hormone treatment, and most respondents did not provide or were unsure of screening recommendations regarding transgender men who had not undergone chest contouring or breast removal surgery (these individuals should follow the same screening recommendations as cisgender women).³ “Although diagnostic imaging protocols for transgender patients can be similar to those of cisgender



“Not understanding how we might have extra barriers can lead to some really challenging discussions. It’s enough to knock us completely off course.”

Scout, MA, PhD

patients, screening guidelines can be much more variable depending on risk status, hormonal treatment, or surgical treatment. We need a clear understanding of the guidelines ourselves to diagnose and treat patients appropriately and to provide educational outreach to these populations,” says Destounis, also one of the authors of the paper.

Lack of proper knowledge can also lead to everyday verbal, nonverbal, and environmental slights, snubs, or insults that communicate hostile, derogatory, or negative messages. This can be both intentional and unintentional. “Not understanding how we might have extra barriers can lead to some really challenging discussions. It’s enough to knock us completely off course,” says Scout. Many resources exist to help radiologists and radiology staff understand the needs particular to this patient population. The College has published its ACR Appropriateness Criteria® for breast imaging of transgender patients (available at bit.ly/ACR-AC). The National LGBT Cancer Network has released a training series called “Welcoming Spaces,” which is aimed at all levels of staff and covers topics such as barriers to care and proper terminology (available at bit.ly/Welcoming_Spaces).

MAKE YOUR PRACTICE WELCOMING

Beyond seeking education, one of the first and easiest ways to improve imaging for transgender individuals is to determine whether your practice or department is welcoming for LGBTQ people overall, says Scout. “Physicians need to demonstrate visually that their spaces are LGBTQ-friendly, then follow up with real attempts to make that space welcoming,” he adds. This starts with visual cues, such as rainbow flags or signs indicating your practice is a safe space. Radiologists should also look at their practice or department websites to ensure visual cues are in place. “That’s where a lot of patients will go first to see if you’re the right place for them,” says Scout. Scout advises to ensure the language and images on the website and in signage and brochures is gender neutral. “A transgender man isn’t going to look at a pink mammography van or see a sign for women’s health and think that’s for him,” Scout says.

Destounis also urges radiologists to look beyond the waiting room for ways to actively signal acceptance. “Find ways to make your practice more inclusive such as providing gender-neutral bathrooms or gowns — ones that aren’t pink,” she says. Both

Destounis and Scout encourage posting non-discrimination signs or other policies that relate directly to gender identity.

USE INCLUSIVE LANGUAGE

The language used around imaging, particularly ones that are commonly associated with a specific gender like breast imaging, can also make a world of difference to transgender and gender-nonconforming. Scout notes that many clinical guidelines that would be experienced by nearly all assigned female at birth are often only directed at and mention cisgender women. Not only is the language not inclusive, but not including others can also cause confusion for the patient.

Other inclusive language involves using proper terminology and preferred pronouns. “One easy way to educate the world around you is to put pronouns next to your name. Adding your own preferred pronouns doesn’t necessarily mean you’re queer, but it does signal that you understand there’s a disparity here and are normalizing the practice. It’s a powerful way to say you’re trying to be part of the solution and that if a patient would like to share their preferred pronouns, the floor is open,” explains Scout. From there, radiologists can also add the option of including those pronouns in the patient’s record to ensure they are used by all staff, adds Destounis.

MAKE A DIFFERENCE

Although actions such as putting up flags and safe space signs may seem small, they make a huge difference to the entire LGBTQ community and can help stop the growing screening disparity. “Radiologists need to help patients understand they’re coming to a space that is more welcoming than the general world right now,” says Scout. “Every effort counts.” **B**

By Meghan Edwards, freelance writer, ACR Press

ENDNOTES

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Partnering Up

A campaign in Tennessee is increasing lung cancer awareness by combining efforts with breast cancer screening programs.

Some things just go together: peanut butter and jelly, salt and pepper, and now — breast and lung cancer awareness. The Tennessee Pink and Pearl Campaign (pink representing breast cancer and pearl representing lung cancer, which is often signified by a white ribbon) aims to bring awareness to both health issues by combining efforts to encourage patients to get their recommended cancer screenings. “Breast cancer awareness is so successful — in October, you can’t watch football or go to the mall without seeing pink. We’re hoping to use that success to advocate for lung cancer screening (LCS), which is not as visible and tends to have a stigma attached to it,” says Kim L. Sandler, MD, co-director of the Vanderbilt Lung Screening Program and associate professor of radiology at Vanderbilt University.

“Lung cancer is really a women’s health crisis,” says Sandler. “It kills more women than breast and ovarian cancer combined, but we don’t talk about it as really being a women’s issue.¹ We can decrease deaths with screening and early detection. But that’s only half of the equation: you also need patients coming in for regular screenings.”

The idea for the Pink and Pearl Campaign began when members of the Tennessee Department of Health attended the Vanderbilt University Medical Center’s Rural Health Consortium,

where Sandler presented a study she authored, “Women Screened for Breast Cancer are Dying From Lung Cancer: An Opportunity to Improve LCS in A Mammography Population.” In the study, researchers identified 251 women undergoing screening mammography at the medical center who were also eligible for LCS in 2016. By 2019, 63 of those women had enrolled in lung screening. Three were diagnosed with lung cancer via screening, and zero deaths had occurred. Of the remaining 188 who were not screened, seven were diagnosed with lung cancer, resulting in five deaths. The study concluded that women who followed health recommendations and were screened for breast cancer were still dying from lung cancer, which is also detected easily by screening.²

“We saw an opportunity,” explains Rochelle Roberts, MOL, chronic disease program director with the Tennessee Department of Health. “Because October is Breast Cancer Awareness Month and November is Lung Cancer Awareness Month, we could combine the two into one campaign, capitalizing on the notoriety of breast cancer awareness to bring more awareness to lung cancer.”

GETTING THE WORD OUT

The Pink and Pearl Campaign is currently in its third year and has developed a wide variety of resources and outreach programs, including a toolkit that provides sample social media posts for the campaign, as well as strategies for awareness and educational

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The Fight for CTC Coverage

Although many payers cover CT colonography for colorectal cancer screening, CMS continues to deny coverage for Medicare beneficiaries.

CMS has denied the College's most recent request to re-open consideration for national Medicare coverage for CT colonography (CTC) as a screening study for colorectal cancer (CRC). The response comes after several prior denials and despite endorsements from the U.S. Preventive Services Task Force (USPSTF) and the American Cancer Society (ACS). ACR Colon Cancer Committee Chair Judy Yee, MD, FACR, who led the ACR's request for approval, is understandably baffled. "CTC has been rigorously validated for many years," says Yee. "It makes no sense that all other validated CRC screening tests are approved by CMS except CTC."

Beginning in 2009, the ACR has repeatedly requested that the CMS Coverage and Analysis Group include CTC as a covered exam for colorectal cancer screening for Medicare beneficiaries. "At that time, CMS conducted a national policy analysis on CTC for screening and concluded that the evidence was insufficient to support coverage," says Kathryn Keysor, ACR's senior director of economics policy. "The group determined that the data were not

generalizable to the Medicare population. In addition, there have been concerns with radiation dose and extracolonic findings." Since then, several studies have been published on CTC in the Medicare population, including an analysis of the ACR Imaging Network (ACRIN) trial data, as well as studies on radiation dose and extracolonic findings. And yet, CMS has rejected the College's requests to re-review the non-coverage decision.

"Each time coverage is denied, CMS tells us that the evidence presented is insufficient to change the coverage decision," says Yee. "Initially, they wanted more data on the implications of extracolonic findings, radiation dose, and the performance of CTC in senior cohorts. We feel we have addressed these issues with peer-reviewed publications; in fact, there is more evidence validating CTC compared to other CMS-reimbursed CRC tests."

CMS often sets the standard for coverage; once procedures are approved, insurance companies frequently follow suit. Not so for CTC. "In this case, the largest private payers already reimburse for screening CTC, which is unknown to a lot of people," says Yee. "The fact that a federally funded organization like CMS does not support a valid, endorsed option from another federal body like the USPSTF as well as the ACS is really damaging to people in this country."

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PARTNERING UP

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resources. They've also developed promotional cards that explain the U.S. Preventive Services Taskforce (USPSTF) screening guidelines and screening reminder cards for practices to use. These cards are also available in Spanish, Arabic, and Vietnamese to connect with multiple populations in Tennessee.

The Pink and Pearl Campaign also includes an educational event called "Pearls of Knowledge." Created in partnership with the Tennessee Cancer Coalition, this annual event invites panelists such as smoking cessation hotline personnel, oncologists, radiologists, and others to answer questions about lung and breast cancer.

Their outreach has paid off. The governor of Tennessee designated Nov. 5, 2021, as "Pink and Pearl Lung and Breast Cancer Screening Awareness Day," and the state capitol building was lit pink throughout the week. "We're really pushing for Pink and Pearl Lung and Breast Cancer Screening Awareness Day to be an annual event. We'd like the first Friday of every November to be Pink and Pearl Day," says Roberts.

Much of the success of the campaign is due to working closely with other organizations, Roberts notes. The Pink and Pearl Campaign works with organizations across the spectrum, such as the Tennessee Comprehensive Cancer Program, the Tennessee Breast and Cervical Screening Program, the Tennessee Cancer Registry, and departments across the Tennessee Department of Health, such as Health Promotion and the Division of Minority Health and Disparities Elimination. "No single organization sector or department can change the course of health of Tennesseans without collaboration," adds Roberts.

JOINING THE CAUSE

"In the same vein, no screening campaign would be complete without the participation of radiologists," says Sandler. "We're at the center of screening. It makes sense for radiologists to take ownership of LCS and to be having important conversations with providers, organizations, and patients to improve rates and save more lives." Roberts encourages radiologists who would like to be involved in or create similar campaigns to join their state's cancer coalition, which exists to help address the cancer burden in each state.

Both Roberts and Sandler say that radiologists can help lung cancer outreach by talking about it with their patients. "If physicians have these conversations with their patients, the patients could bring it up with their family and friends. We could normalize it and reduce the stigma," says Roberts.

Adds Sandler, "There are millions of Americans who qualify for lung screening; we have a lot of work to do to provide education, eliminate the stigma, and increase screening. My hope is that radiologists will be at the center of that conversation." **B**

By Taylor Brokesh, publications intern, ACR Press

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FIGHT FOR CTC

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Like colonoscopy, CTC can detect both the precursor polyp and the cancer itself in the whole colon. However, several studies show that CTC is more accepted by people of color, notes Yee.¹ "CTC can be used in underserved populations to help improve healthcare disparities," she says. Unfortunately, continued denials also mean delayed care for some patients due to backlogs in colonoscopy availability that existed before the COVID-19 pandemic and were subsequently worsened by the crisis. This delay in screening is associated with increased colorectal cancer rates and increased morbidity and mortality, Yee adds.

Yee and her colleagues on the ACR Colon Cancer Committee have published landmark papers on the topic and continue to provide data to justify coverage for screening CTC. "We have met with CMS and USPSTF several times," says Yee. "We provided a Congressional briefing in 2018 to advocate for and educate members of Congress and staff about CTC. We develop all responses to these organizations addressing any questions and concerns regarding CTC. We also lead webinars to educate radiologists, referrers, and others."

Fellow radiologists can share their support for CTC coverage by advocating at state and federal levels. All of the ACR's colon cancer screening resources, including webinars and articles, are available at acr.org/colorectal. "At the ACR meeting several years ago we had great participation during Hill Day," Yee says. "Additionally, we strongly encourage all sites performing CTC to register their location on the ACR My CT Colonography locator website at bit.ly/my-CTC. Registration is simple, quick, and at no cost and will help patients and referrers to easily find your site."

In addition to the Committee's work, patient advocacy groups have backed the ACR's request to CMS to review its decision. The Black Women's Health Imperative, the Colorectal Cancer Alliance, the Colon Cancer Coalition, the Prevent Cancer Foundation, and the Blue Hat Foundation all co-signed the ACR's most recent request to CMS ([read more at bit.ly/CMS_CTC](https://bit.ly/CMS_CTC)). "Patient advocacy groups are extremely important," says Yee. "After all, their constituents are the patients we are advocating for, and they are the ones who have experienced first-hand the terrible consequences of having colorectal cancer." **B**

By Raina Keefer, contributing writer, ACR Press

EDITOR'S NOTE: At publication, a call with CMS had been scheduled for late summer to understand the reasoning behind the latest denial.

ENDNOTE available in the digital edition at acr.org/bulletin



Reducing Scanxiety

“Scanxiety” is a new term for a longstanding challenge patients face when interacting with imaging care. How are patients and radiologists working together to alleviate stress and improve care?

Waiting for test results can be stressful — especially when the news could have a huge impact on your health. Patients often experience anxiety as they schedule imaging, undergo a procedure, await results, and then receive news about their health — leading to the term “scanxiety.”

“Scanxiety is actually something that patients with cancer first started talking about not too long ago and it’s now something that we all talk about with each other all the time. It’s the anxiety, worry, and stress related to particular imaging studies that patients get,” says Amanda C. Itliong, a patient with cancer for 14 years and co-chair of the Quality Experience Committee of the ACR Commission on Patient- and Family-Centered Care. “It’s usually related to the build-up to having to go get your scans, the nervousness of the process, the waiting period for results, and how that’s going to maybe change your whole life.”

Understanding Scanxiety

While the term is gaining notoriety, knowledge, and education about scanxiety still has a long way to go. The Quality Experience Committee formed the Scanxiety Workgroup to spread awareness of scanxiety and the effect it can have on patients’ lives. The Workgroup consists of both patients and radiologists, with the

goal of bridging the relationship between radiologist and patient to help ease scanxiety.

According to Vani Vijayakumar, MD, FACR, member of the member of the Quality Experience Committee and chief of nuclear medicine in department of radiology at the University of Mississippi Medical Center, scanxiety can be related to the act of getting the scan itself. “There are various reasons why patients get scared,” Vijayakumar says. “It could be fear of the machine, for instance, if you get an MRI. They now have open MRIs, but originally, we used to have closed MRIs. That’s a very long time in a closed machine, so a patient can get claustrophobic.”

Scanxiety Workgroup member and patient adviser Christine Abbott agrees. “A lot of times I’m going to have a scan, and I don’t really have a lot of information about what it’s going to be,” she says. “I can’t visualize what they’re going to do, which adds to the anxiety before and during the procedure.”

Abbott also brought up another point that plays a big factor into scanxiety: misunderstanding the result of the scan. She recalls an experience she had roughly eight years ago. “The first time my MRI for my multiple sclerosis came back, it said there were significant areas of brain death,” Abbott says. “To me, significant is a quantity amount. How much of my brain is now gone and dead? Should I be driving? Should I be working?” Abbott then got her radiologist on the phone to discover the results were not as bad as they initially sounded and that a portion of her brain had been attacked over and over again to the point that it couldn’t heal. However, no significant life changes were expected. According to Abbott, it was at this moment that she realized that there was a disconnect between the clinical language in the radiology report and what the patient perceived.

“There are various reasons why patients get scared, it could be fear of the machine, for instance, if you get an MRI. They now have open MRIs, but originally, we used to have closed MRIs. That’s a very long time in a closed machine, so a patient can get claustrophobic.”

VANI VIJAYAKUMAR, MD, FACR

Raising Awareness

Sabiha Raouf, MD, FACR, co-chair of the Quality Experience Committee and chair of the department of radiology at Jamaica and Flushing Hospitals, has experienced both sides of scanxiety, as a radiologist and as a breast cancer survivor. Finding the right way to raise awareness is an important topic for the Scanxiety Workgroup, Raouf says. “We’ve tried to brainstorm and find out what we have learned from our own experience or from our patients and how we need to get not just more information out to the patient, but also educate radiologists that scanxiety is a real thing,” she says.

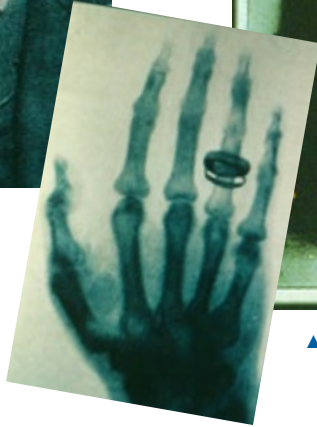
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PHOTOS: RADIOLOGY CENTENNIAL INCORPORATED



▲ Wilhelm Conrad Roentgen, discoverer of the X-ray, is pictured in 1901.

▶ Pictured is an X-ray of Roentgen's wife Anna Bertha Ludwig's hand., 1895



▲ Pictured is Mihran Kassabian at Medico-Chirurgical College and Hospital, Philadelphia, in his radiography laboratory. The large static machine, seen to the left of the image, was used to power X-ray tubes.

A Centennial Celebration: X Marks the Start

The invention of the X-ray kickstarted the field that would be known as radiology. But in its early years, many treated a scientific breakthrough as a public spectacle.

With the ACR's centennial year fast approaching, the *Bulletin* is looking back at the history of radiology and the people who shaped the specialty. To appreciate how far the specialty has come, we travel back to 1895 when physicist Wilhelm Conrad Roentgen's invention of the X-ray changed everything. His discovery made waves in the scientific community. Ernest Kraft, MD, one of the ACR's earliest members and fellows, studied under and assisted Roentgen in Germany and documented his experiences in his personal journal. His daughter, Edith Kraft, was able to find a passage in her late father's journal talking about his time with Roentgen. "Listening to Roentgen proved to be an inspiring experience," wrote Ernest Kraft. "Unforgettable was a tumultuous applause when he demonstrated the fluorescent effect of the X-ray in the darkened hall. No teacher has made a more lasting impression on me. Roentgen has endeavored to guide his students toward a solid foundation, as he considered half-knowledge inferior to no knowledge at all."

The discovery of the X-ray sparked a lot of interest in the scientific community. "In the beginning, no one really understood what was going on," says Harry C. Knipp, MD, FACR, one of the

founding members of Advanced Radiology, PA. "The medical uses of the X-ray were picked up pretty quickly, but it was still a curiosity. Back then there were X-ray machines in arcades and there were X-ray clubs. Until people started getting illnesses, they didn't realize that there might be some danger to this new discovery."

The discovery made its way to the German press and eventually appeared in newspapers in America. Initial photographs in the press showed X-rays of a child's hand, a frog, and a fish. From there, the X-ray quickly caught the attention and imagination of the public, according to Edward I. Bluth, MD, FACR, chair emeritus of the department of radiology at Ochsner Clinic Foundation. "As a result of all this general interest, there began to be public displays around the whole world," says Bluth. "People were interested in seeing the first radiograph."

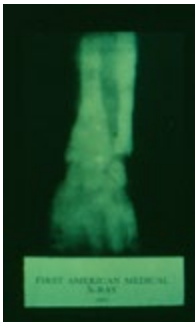
By 1910, the X-ray was being used within the medical field. However, much was still unknown about the new technology. According to Bluth, the first X-rays took anywhere from 20 minutes to an hour to complete, leaving the patient exposed to radiation for a long period of time. Further complicating its use, the X-ray was advertised to do and fix more than it was actually capable of. Bluth also mentioned how people advertised the X-ray to solve problems such as erectile dysfunction, further attracting people to the X-ray. In addition, many who operated the X-ray machines weren't properly trained — there were no requirements to enroll in courses to operate the machine. Something needed to be done. "People didn't realize right away that playing with these X-ray tubes, taking random pictures of things and body parts might have some unwanted effects," Knipp says. "And after a



◀ Ernest Kraft, MD, is pictured in this photograph taken in 1928. It was taken around the time that Kraft became a Fellow of ACR.



▶ Pictured is an issue of the journal *American Electro-Therapeutic and X-Ray Era* from July 15, 1901.



◀ The first radiograph done in the United States by Edwin Brant Frost at Dartmouth on Feb. 3, 1896

couple of years, people who were playing with X-rays or even those using the technology in a practical way began to realize that skin lesions were developing from being exposed to radiation.”

As the exciting opportunities and potential dangers of X-rays emerged, it became clear that the field needed organization, leadership, and a vision for the future of medicine — something Edith Kraft believes her father Ernest understood. “As a professional, he was aware of the need for standardization, and for providing safe care for patients,” she says. “He approved of the founding ideals of the ACR to protect the integrity and to safeguard the patients. In those years, radiology was still in the making.”

Knipp agrees, understanding the importance of what the ACR meant to radiology. “It was the first time that there was some recognition that we needed a body that could speak for radiology, not just scientifically, but politically and economically. One that would dignify the profession, develop organized residency programs and of course, help to support the creation of a specialty board.” **B**

By Alexander Utano, editorial assistant, ACR Press

SCANXIETY

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Raof believes that an increase in educational material on scanxiety will go a long way in achieving the Workgroup’s goal of raising awareness. “At my two departments here in Queens, New York, we have ‘Speak Up’ posters (learn more at bit.ly/JC-Speak-Up) from the Joint Commission,” Raof says. “The posters describe what an MRI is, what a CT is, and what an X-ray is in plain simple English. We have the posters in our patient waiting areas and photographs of our radiologists with their subspecialties listed so if patients have any questions for a particular radiologist, they can ask. We also put the radiologist’s name, email address, and phone number at the bottom of the report.”

Along with educating people on what scanxiety is, the Workgroup is also seeking solutions to help calm patients’ minds as they head into and await results of scans. This requires looking into the best practices when it comes to scanxiety from across the country. Itliong, the first patient to co-chair a committee for the ACR, has seen many ways practices have helped with scanxiety — from articles by patients talking about what they went through to social media hashtags that help patients connect with each other to share experiences. “One of the best practices that I’ve seen as a patient was at Michigan Medicine. While you’re waiting, the room has a blank binder with paper in it sitting on the table next to the magazines. They invite patients to write notes to other patients about what they’re experiencing. It is so simple and so powerful,” says Itliong.

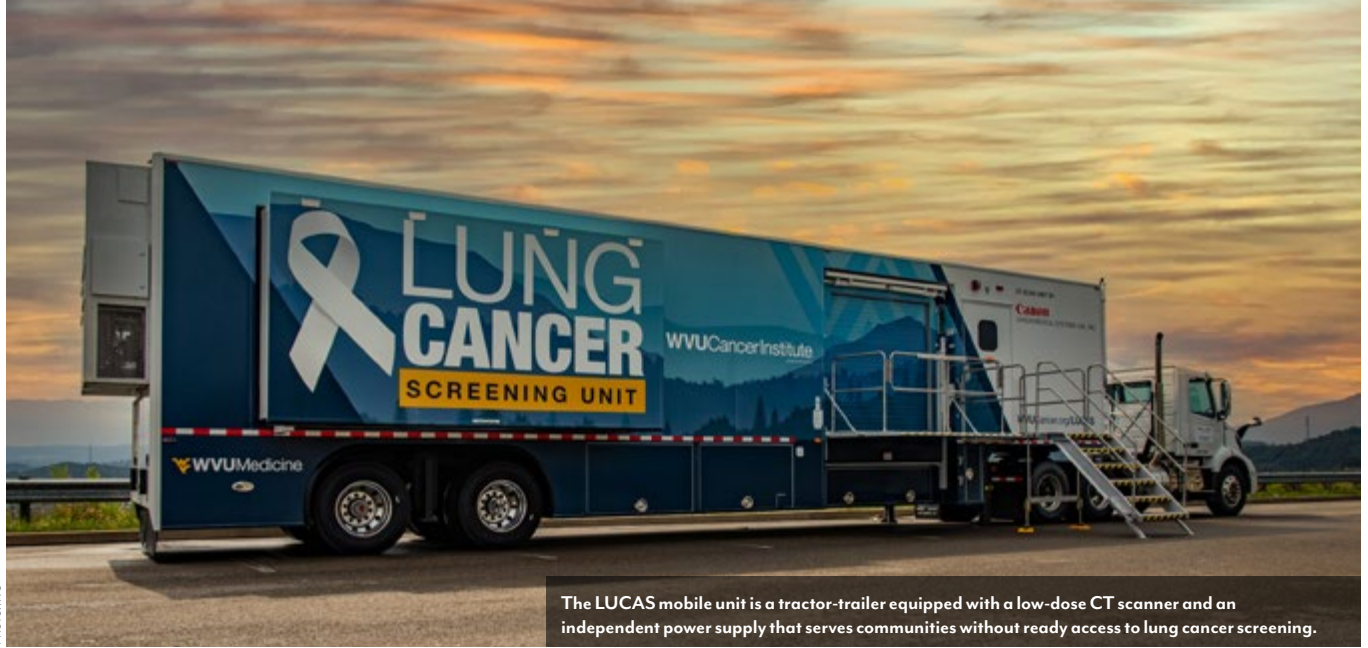
There is still a lot of work to be done to address scanxiety in radiology. The Workgroup feels that the more members of the ACR begin to talk and learn about it, the sooner radiologists can come together to improve the patient experience. “We hope by raising awareness about scanxiety, we can make patients feel less anxious,” says Vijayakumar. “We want to create a good experience for patients. That’s our main goal of doing this.” **B**

By Alexander Utano, editorial assistant, ACR Press

Come Celebrate With Us

Plan now to join the ACR at its Centennial Gala Celebration on Saturday, May 6, 2023, at the Washington D.C. Hilton, with dinner, entertainment, and fun. More details will be available in January. Learn more about the ACR Centennial at acr.org/About-ACR/Centennial.

The ACR Patient- and Family- Centered Care Commission (PFCC) has released its new PFCC Web Hub to help you improve your patient experience. At the hub, you can find practice-specific resources and patient-friendly info about why a specific test or procedure was ordered. Links are available to case studies, webinars, and podcasts about improving patient-centered care. Featured content will be updated regularly. View the new PFCC Web Hub at acr.org/pfcc.



The LUCAS mobile unit is a tractor-trailer equipped with a low-dose CT scanner and an independent power supply that serves communities without ready access to lung cancer screening.

Screening in Underserved Communities

A mobile unit brings lung cancer screening to remote areas of West Virginia.

More West Virginians die of lung cancer each year than colorectal, prostate, and breast cancer combined.¹ One reason for this is the population's high smoking rate.² Another contributing factor is that residents who live in the state's rural areas lack convenient healthcare options. Recognizing that early detection is critical to treating lung cancer and increasing survival, leaders within the West Virginia University (WVU) Health System are providing an accessible, affordable lung cancer screening (LCS) service to reduce cancer outcome disparities among rural communities.

Their approach is ambitious: Instead of expecting patients to come to them, the team has instituted a mobile LCS unit that travels statewide to screen as many eligible patients as possible regardless of their insurance status. Known as LUCAS, the LCS program is bringing much-needed care to regions in which geography and socioeconomic factors often limit access.

"We know West Virginia has the highest rate of smoking in the United States and the second-highest rate of lung cancer diagnosed each year," says Hannah W. Hazard-Jenkins, MD, director of the WVU Cancer Institute (WVUCI) and a breast oncologist.² Despite this, and even with updated expert guidance widening eligibility to more people, less than 4% of those eligible for low-dose CT (LDCT) screening in the state make it to a stationary site.³ "Knowing the needs of our communities and state, we initiated work on our mobile

screening program in 2017 to make screening more accessible and save lives. This came to fruition in 2021," she says.

The LUCAS mobile unit — a tractor-trailer equipped with an LDCT scanner and an independent power supply — serves communities without ready access to this life-saving screening modality. In the first few months of operation the unit has screened more than 165 West Virginians, and the team found two potentially life-threatening lung cancers in that time.

Laying the Foundation

When the WVUCI started exploring options for a mobile LCS unit in 2017, screening for lung cancer was a relatively new concept. With the expanded guidelines in 2021, nearly twice as many patients are now eligible for LCS; however, at the time the team was developing the LUCAS program in 2017, USPSTF guidelines around LCS were more stringent and most counties in West Virginia did not have LCS programs. Consequently, at the time, fewer than 2% of eligible patients in the state were being screened.

Another headwind facing the group was the perception that people who smoke bring lung cancer on themselves. "Unfortunately, as a society, we have tried to convince people who smoke to stop smoking through scare tactics and shame," notes Hazard-Jenkins. "In reality, nicotine is one of the most addictive substances, and it also happens to be legal. Early on, our concern was that patients and/or providers would be less eager to adopt a screening program to address a cancer that was a result of what is viewed as a choice people make."

Cognizant of the challenges confronting them, Hazard-Jenkins and her colleagues first reviewed research from the WVU Cancer Prevention and Control (CPC) Program and the Patient Advocate Foundation (PAF), which jointly received funding in 2015 to investigate and address low LCS rates in West Virginia. The partnership with the PAF was centered around promoting LCS guidelines to the general public and developing provider educational opportunities around screening for lung cancer. Community and provider surveys associated with the project demonstrated an overall lack of awareness about LCS. Dubbed the "West Virginia Lung Cancer Screening Project," the initiative laid some of the groundwork that helped prepare the state for LUCAS.

Making the Case

Next, to establish evidence of a persistent care gap, Hazard-Jenkins and her team conducted a statewide community needs assessment in 2017. As part of this effort, the CPC reviewed the state's smoking rates, census data by age, and other measures to calculate the number of people eligible for LCS. As a result, they estimated that 120,000 West Virginians were eligible for LCS, pointing to a significant shortfall in the number of established LCS programs. "We looked at where facility-based LCS programs were being established, and our research showed that residents in 42 of our state's 55 counties did not have immediate access to this service," Hazard-Jenkins says.

The team also found that those residents who are eligible for the service generally reside in more rural counties, which are less likely to have free-standing hospitals, and those who do have access to healthcare often receive that care from outpatient clinics or critical access emergency rooms. Hazard-Jenkins explains, "The current U.S. healthcare model is convenient to those who live near hospitals and major healthcare facilities. For those who don't, however, getting to healthcare in general — and screening in particular — is very difficult."

Based on the strength of the needs assessment, which was sponsored by the West Virginia Department of Health and Human Resources, the WVU Cancer Institute's CPC sought input from WVU Health System leaders to assemble a team of experts to bring the mobile LCS program into existence.

Building on Past Success

Instead of conceptualizing a mobile LCS program from scratch, the team decided to iterate on an already-existing mobile screening program called Bonnie's Bus.⁴ A collaboration of the WVU Medicine system and the CPC, Bonnie's Bus rolled into the field in 2009, delivering mobile breast cancer screening across West Virginia. In the years since, the mobile mammography unit has traveled over 199,000 miles, providing more than 25,000 screening mammograms and detecting more than 125 cases of breast cancer. Building on this expertise, Hazard-Jenkins and her colleagues developed a mobile LCS unit to reach patients in rural areas of the state.

As a first step, the WVUCI assembled a team that included its director, a radiologist, mobile team experts, the CPC director, and financial experts who prepared a business plan to demonstrate the existing need to health system leadership. "With the alarming statistics of lung cancer incidence and mortality in our state, there was no denying an innovative approach to adoption of this life-saving screening modality was essential," says Hazard-Jenkins. "That said, it was important to gauge the interest of our community partners — the providers who would identify and schedule eligible patients — before engaging senior-level administrators. We were fortunate that everyone we approached was eager to support this project."

Procuring Funds

Once Hazard-Jenkins and her colleagues successfully aligned health system and physician stakeholders, the next step involved securing financing. "We wanted to stand up the program to be as financially independent as possible," notes Hazard-Jenkins. "So we had to secure donor support." To that end, the WVUCI's philanthropy

office sought individual donors and established relationships with foundations in the local community. In addition, to help defray costs, the team secured a corporate partnership from a company that had a developing interest in the mobile screening space.

To get the unit on the road, Hazard-Jenkins says that the team raised about \$2.3 million. "We had donors at all levels, be it small amounts to commitments of \$500,000," she states. "The constant among all donors was a desire to elevate the health and wellness of the state." In addition to the donors, the corporate partner committed to providing funds to help cover the operational expenses involved in the lead-up to deployment of the truck.

One of the most critical costs that team leaders knew the funding needed to cover was the imaging-related expenses of those who are either uninsured or underinsured. For eligible patients with Medicare, Medicaid, or private insurance, most costs related to the scan would be covered, but for those lacking insurance, alternative funding would be necessary. "We knew we needed to secure enough money, either through grants or donations, to cover under-insured West Virginia residents who meet screening guidelines," Hazard-Jenkins says. "For our mobile program, we had to ensure that no screening-eligible West Virginia resident is ever turned away."

Assembling the Unit

With funds now in place, the team undertook a search for the vendor best suited to build out the mobile unit. "Finding the right vendor that understands the intricacies of a mobile program and the terrain you will be traveling is a significant challenge," Hazard-Jenkins says.

Because it would need to haul equipment of considerable size and weight, the team decided to purchase a tractor-trailer to convey the mobile LCS unit across the state. In their formulation, the trailer would house the CT unit, while the tractor truck would haul the trailer. Once the team chose a vendor and bought the vehicle, work commenced on the truck.

In addition to covering operational expenses and the cost of providing care to the uninsured, raising money to equip the truck with its own power supply became another major goal. "We go into the smallest of clinics through the windy roads of West Virginia," Hazard-Jenkins explains. "When we realized that most of the community partner sites would not have sufficient power, we had to build a generator sufficient to power the mobile unit in these more remote locations."

Organizing the Workflow

As construction began on the mobile LCS unit, LUCAS program leaders turned to designing a workflow that would ensure timely delivery of imaging results to the ordering physician. Program facilitators followed the same playbook that was used to establish Bonnie's Bus: The WVUCI Mobile Cancer Screening Program would partner with more than 150 community clinics, health systems, small and large businesses, federally qualified health clinics, and other entities throughout the state to offer the service.

To facilitate patient flow, clinics would identify eligible LCS candidates and order the imaging. Once scans were run, radiologists located in Morgantown would read the images and the

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SCREENING IN UNDERSERVED COMMUNITIES

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results would then be conveyed back to the ordering provider with the option of doing further work-up in either Morgantown or at a facility closer to the patient's home.

As with the mobile mammography program, LUCAS team leaders planned for a navigator to work with the ordering provider to follow up on abnormal imaging, when necessary. In addition, the team agreed to monitor those patients requiring follow-up imaging for as long as medically necessary. To promote the service among potential imaging candidates, WVUCI staff in partnership with WVU Medicine marketing staff created patient-oriented marketing materials.

To bring the program one step closer to reality, Hazard-Jenkins and her team decided to create a detailed list of what was needed for the LUCAS program to run at optimal levels. To this end, they sought input from every relevant department to review the plans and talk through scenarios the mobile team might encounter. To ensure maximum compliance, the team designed the interior of the LUCAS unit to be as inviting and non-threatening as possible.

Benefiting from their experience with Bonnie's Bus, program leaders knew they'd only need to recruit a couple of staff members to run the field operation: the person driving the mobile unit would perform the intake of patients, which would involve explaining the process and answering any questions, while a CT technologist would perform the scan and calm any potential fears patients may have. The CT technologist would also be certified to discuss tobacco cessation strategies with those patients interested in quitting smoking.

Rolling Into the Field

With these plans in place, the LUCAS program began with a soft launch, screening 168 patients at 26 sites during September through December 2021. For the remainder of 2022, the team has 96 site visits scheduled as of this printing.

Constructing a convenient care pathway has been key to the program's effectiveness. To this end, staff work to coordinate follow-up care with hospitals throughout the state, many of which are part of WVU Medicine. On those occasions when the most appropriate specialist is not available near a patient's home, patients visit a primary campus in Morgantown. "As the data matures," observes Hazard-Jenkins, "we might be better able to target those areas not just with increased screening, but augmented prevention education and interventions." **B**

By Chris Hobson, senior communications manager, ACR Press

ENDNOTES available in the digital edition at acr.org/bulletin

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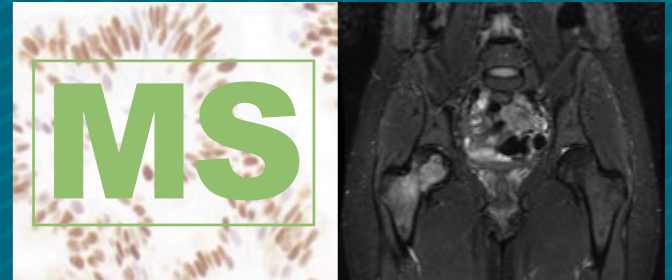
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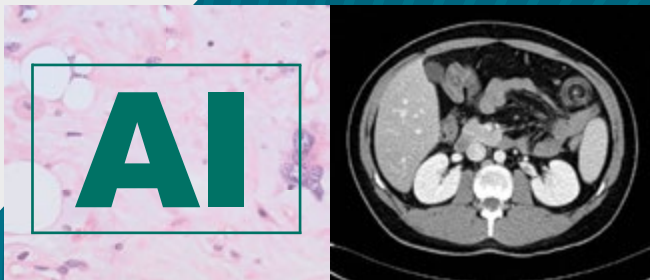
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Did you know?

- Life expectancy is three years shorter, and heart disease, cancer and stroke death rates are significantly higher in rural areas (**23% of the U.S. population**) vs. metropolitan areas.
- U.S. Latinos are more likely to die from Colorectal Cancer (CRC) than those in many Central and South American nations. The CRC death rate for U.S. Latinos has **dropped more slowly** than for whites.
- **Black women are 42%** more likely to die from breast cancer than white women.
- Asian Americans are twice as likely to die from stomach cancers, eight times more likely to die from hepatitis and have a tuberculosis rate more than **30 times higher** than white Americans.

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