

Bulletin



The **House**
of **Radiology**

SPECIAL SECTION

See NET imaging in a different light

The high **accuracy** and **accessibility** of Detectnet enable timely neuroendocrine tumor (NET) detection, diagnosis, and treatment¹

ACCURACY

- In a phase 3 study, Detectnet had over 98% accuracy, 100% sensitivity, and 96.8% specificity to confirm or exclude presence of disease^{1*}

ACCESS

- 12.7-hour half-life facilitates an **unrestricted number of doses** and allows **flexible scheduling** for you and your patients¹⁻³



Detectnet[™]
(copper Cu 64 dotatate injection)

Visit Detectnet.com to learn more.

INDICATIONS

Detectnet is indicated for use with positron emission tomography (PET) for localization of somatostatin receptor positive neuroendocrine tumors (NETs) in adult patients.

IMPORTANT RISK INFORMATION

WARNINGS AND PRECAUTIONS

Risk for Image Misinterpretation: The uptake of copper Cu 64 dotatate reflects the level of somatostatin receptor density in NETs, however, uptake can also be seen in a variety of other tumors that also express somatostatin receptors. Increased uptake might also be seen in other non-cancerous pathologic conditions that express somatostatin receptors including thyroid disease or in subacute inflammation, or might occur as a normal physiologic variant (e.g. uncinat process of the pancreas).

A negative scan after the administration of Detectnet in patients who do not have a history of NET disease does not rule out disease.

Please see **Brief Summary of Prescribing Information on the following page.**

***Study design¹:** An open-label, single-dose, single-arm, single-center prospective study to evaluate the sensitivity and specificity of Detectnet PET/computed tomography (CT) imaging in 63 subjects (42 with known or suspected NETs and 21 healthy volunteers) against an independent reader's standard of truth (SOT) for each subject. PET/CT scans were taken ~60 minutes after a single IV dose of 148 MBq ± 10% of Detectnet.

A limitation was 3 mistaken SOT determinations, but these were revised. The SOT reads for 3 subjects were incorrectly recorded as NET-positive instead of NET-negative. Because the objective of the study was to assess the performance of the PET/CT scan and not the SOT, the corrected values are shown.

References: 1. Delpassand ES, Ranganathan D, Wagh N, et al. *J Nucl Med.* 2020. doi:10.2967/jnumed.119.236091. 2. Pfeifer A, Knigge U, Mortensen J, et al. *J Nucl Med.* 2012;53(8):1207-1215. 3. Detectnet. Package insert. Curium US LLC; September 2020.

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Scan to learn more about Detectnet and place an order.



Detectnet[™] (copper Cu 64 dotatate injection), for intravenous use

BRIEF SUMMARY OF FULL PRESCRIBING INFORMATION

(For complete details, please see full Prescribing Information available at www.curiumpharma.com)

INDICATIONS AND USAGE

Detectnet is a radioactive diagnostic agent indicated for use with positron emission tomography (PET) for localization of somatostatin receptor positive neuroendocrine tumors (NETs) in adult patients.

CONTRAINDICATIONS

None.

WARNINGS AND PRECAUTIONS

Radiation Risk: Diagnostic radiopharmaceuticals, including Detectnet, contribute to a patient's overall long-term cumulative radiation exposure. Long-term cumulative radiation exposure is associated with an increased risk of cancer. Ensure safe handling and preparation procedures to protect patients and health care workers from unintentional radiation exposure. Advise patients to hydrate before and after administration and to void frequently after administration [see *Dosage and Administration (2.1, 2.3) in the full Prescribing Information*].

Risk for Image Misinterpretation: The uptake of copper Cu 64 dotatate reflects the level of somatostatin receptor density in NETs, however, uptake can also be seen in a variety of other tumors that also express somatostatin receptors. Increased uptake might also be seen in other non-cancerous pathologic conditions that express somatostatin receptors including thyroid disease or in subacute inflammation, or might occur as a normal physiologic variant (e.g. uncinat process of the pancreas) [see *Dosage and Administration (2.5) in the full Prescribing Information*].

A negative scan after the administration of Detectnet in patients who do not have a history of NET disease does not rule out disease [see *Clinical Studies (14) in the full Prescribing Information*].

ADVERSE REACTIONS

Clinical Trials Experience: Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In safety and efficacy trials, 71 subjects received a single dose of Detectnet. Of these 71 subjects, 21 were healthy volunteers and the remainder were patients with known or suspected NET.

The following adverse reactions occurred at a rate of < 2%:

- Gastrointestinal Disorders:** nausea, vomiting
- Vascular Disorders:** flushing

In published clinical experience, 126 patients with known history of NET received a single dose of copper Cu 64 dotatate injection. Four patients were reported to have experienced nausea immediately after injection.

DRUG INTERACTIONS

Somatostatin Analogs: Non-radioactive somatostatin analogs and copper Cu 64 dotatate competitively bind to somatostatin receptors (SSTR2). Image patients just prior to dosing with somatostatin analogs. For patients on long-acting somatostatin analogs,

a wash-out period of 28 days is recommended prior to imaging. For patients on short-acting somatostatin analogs, a washout period of 2 days is recommended prior to imaging [see *Dosage and Administration (2.3) in the full Prescribing Information*].

USE IN SPECIFIC POPULATIONS

Pregnancy

Risk Summary

All radiopharmaceuticals, including Detectnet, have the potential to cause fetal harm depending on the fetal stage of development and the magnitude of the radiation dose. Advise a pregnant woman of the potential risks of fetal exposure to radiation from administration of Detectnet.

There are no data on Detectnet use in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. No animal reproduction studies have been conducted with copper Cu 64 dotatate injection.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defects, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Lactation

Risk Summary

There are no data on the presence of copper Cu 64 dotatate in human milk, the effect on the breastfed infant, or the effect on milk production. Lactation studies have not been conducted in animals.

Advise a lactating woman to interrupt breastfeeding for 12 hours after Detectnet administration in order to minimize radiation exposure to a breastfed infant.

Pediatric use: The safety and effectiveness of Detectnet have not been established in pediatric patients.

Geriatric use: Clinical studies of Detectnet did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

OVERDOSAGE

In the event of a radiation overdose, the absorbed dose to the patient should be reduced where possible by increasing the elimination of the radionuclide from the body by reinforced hydration and frequent bladder voiding. A diuretic might also be considered. If possible, estimation of the radioactive dose given to the patient should be performed.

This Brief Summary is based on Detectnet Full Prescribing Information Revised: 9/2020

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Reducing Lung Cancer Deaths

The ACR is leading efforts to assist patients who need lung cancer screening during COVID-19.

We know that annual lung cancer screening (LCS) with low-dose computed tomography (LDCT) in high-risk patients significantly reduces lung cancer deaths.¹ This screening can identify cancers at an early, treatable, and curable stage. Given that the American Cancer Society predicts 135,720 lung cancer deaths this year, more-widespread screening could save 30,000 — 60,000 lives in the U.S. each year.²

Changes outlined in the new draft U.S. Preventive Services Task Force (USPSTF) LCS recommendations will greatly increase the number of Americans eligible for screening and help medical providers save thousands more lives each year. In addition to these new guidelines, the ACR is working to expand screening, particularly among minorities and women. The ACR recommends that to save more lives from lung cancer:

- The USPSTF should lower the starting age for screening from age 55 to age 50 and the smoking history requirements from 30 pack-years to 20 pack-years.
- The USPSTF should extend the quit-smoking requirement from 15 years to 20 years.
- Medical providers must become familiar with LCS guidelines and prescribe these exams for high-risk patients. Today, only a fraction of the recommended population is screened, in part because providers are not ordering appropriate studies.

Lung cancer kills more people each year than breast, colon, and prostate cancers combined.² Particularly with the new, more-sensible pack-year threshold, if implemented nationwide, LDCT would save more lives than any cancer-screening test in history.

In 2020, the CDC and the ACR recommendations and state/local government requirements caused most imaging facilities to delay non-urgent and elective imaging studies, such as LCS, during the initial phase of the COVID-19 pandemic.

A recent consensus paper acknowledges that postponement of LCS and follow-up CT exams is appropriate during the height of the COVID-19 pandemic.³ Unfortunately, cancer incidence does not stop with the pandemic. For some patients, decreased screening now will delay diagnosis and/or increase cancer burden and

worsen outcomes. In practice, the risk of potential complications from COVID-19 infection must be balanced with the patient's underlying health and lung cancer risk.

Over the summer, the ACR LCS 2.0 Steering Committee, led by Debra S. Dyer, MD, FACR, quickly collaborated to create the Resumption of Screening Toolkit, a dedicated resource to assist LCS centers return to screening during the pandemic ([learn more on page 18](#)). This toolkit (available at acr.org/lcs) includes:

- A guide informing patients and providers about the changes made to screening procedures/sites during the pandemic.
- A quick reference for telehealth guidelines and resources for shared decision-making.
- Template letters informing patients and referring providers of updated procedures and precautions due to COVID-19.

As we adjust to the changing state of the pandemic, we must reach out to our referring providers about the status of LCS at our facilities. We must encourage them to prioritize the return of those patients with a previous abnormal LCS result for their recommended short-term follow-up exam, followed by those with a previous negative LCS result who may be overdue for their annual exam. For those patients required by Medicare to undergo a shared decision-making visit prior to their initial LCS, that service can now be provided as a fully reimbursable telehealth visit for the duration of the pandemic.

Although LCS is classified as an elective service, it is also time-sensitive. We know that early detection saves lives. These times are unprecedented, but we are committed to the health and wellness of our patients always. **B**

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

Become an LCS Champion

The Colorado Learning Collaborative Lung Cancer Screening Webinar Series will take place every Friday through Nov. 20. The free eight-part webinar series is open to all who have an interest in building or expanding LCS at their institutions. Hosted by the ACR, the Colorado Cancer Coalition, the Colorado Radiological Society, the American Cancer Society, and National Jewish Health, each webinar in the series will address a different topic, including the benefits of LCS, barriers and opportunities, patient care, shared decision-making, smoking cessation, and other priority topics. The series provides up to 10.25 CME and 10.25 CNE. Learn more and register at acr.org/LCS-Webinar.

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The new executive director of the Harvey L. Neiman Health Policy Institute® discusses her vision for the think tank, the importance of funding research, and why different perspectives matter.

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The LCS 2.0 Steering Committee has created the Resumption of Screening Toolkit, a dedicated resource to assist centers restarting screening during the pandemic.

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SPECIAL SECTION

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COVID-19 has displayed the value of teamwork — from the front-desk staff to the nurses, and from the RTs to the radiologists.

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.

DISPATCHES

NEWS FROM THE ACR AND BEYOND

Empowering Practitioners to Improve Patient Care

The ACR's Center for Research and Innovation, in partnership with the ACR Data Science Institute and the Society of Thoracic Radiology, recently launched a COVID-19 Imaging Research Registry — aimed at empowering practitioners to improve patient care. The registry was created to advance the understanding, prevention, and treatment of COVID-19.

“This registry will support further COVID-19 research and data,” says ACR Chief Research Officer Etta D. Pisano, MD, FACR. “We are thrilled to work with our participating sites to empower our members and their radiology practices and help improve the quality of care for these patients.”

In addition to radiology, the registry will engage clinical experts and diagnostic modalities, including clinical medicine, genetics, biomarker discovery, laboratory sciences, and more. Participating sites will contribute demographic information, clinical data on signs and symptoms, imaging exams, laboratory test data, and outcomes for U.S. patients tested for COVID-19. Data collection for the registry will begin by the end of this year.

For more information and to access the registry, visit acr.org/COVID-Registry.

The Pathway to FACR

The next FACR application cycle will begin early next year for eligible members to apply to become a Fellow of the ACR. The BOC confers the honor to members who have excelled in significant contributions to radiology beyond the scope of employment. The minimum eligibility requirement is 10 post-training cumulative ACR membership years.

- Consider volunteering in your chapter or for a committee or commission to strengthen your eligibility with additional contributions to radiology.
- Reach out to current ACR Fellows for letters of endorsement reflecting your exemplary accomplishments and attesting to your professionalism.
- Begin networking with your chapter's fellowship chair (acr.org/chapters) for mentoring and guidance on when to submit the application.

For more information, visit acr.org/facr to confirm your eligibility to apply. For other FACR-related questions, contact FACR@acr.org.

Improving the Quality of Radiologic Care

The final two field reviews for the 2021 ACR Practice Parameters & Technical Standards are still open. Your feedback not only helps improve the quality of radiologic care for your patients, but also supports the ACR core values of leadership, integrity, quality and innovation.

Field review is an opportunity for all members to highlight both editorial and substantive concerns for consideration. All members are encouraged to review the documents and provide comments to ensure the drafts presented to the Council at ACR 2021 are as complete as possible.

Submit your comments at acr.org/Field-Review.

Influence the Future of the ACR

The 2020 call for nominations is now open. The 2020 College Nominating Committee must receive the following by Dec. 8:

- Completed applications, including the applicant's current CV
- Recent photograph for use in the election manual and printed annual meeting signage (Minimum size: 3" x 4" (head and shoulders). Resolution: 300 dpi high-resolution camera setting — no web images. Full Color; file format: TIF or JPEG)
- At least two letters of support from ACR members, due by Dec. 15 (please note that current members of the BOC may not be solicited for letters of support)

- Repeat candidates from prior years must complete the online Candidate Information Form, which can be found at acr.org/Call-for-Nominations. Candidate responses obtained from the application will be published in the ACR Election Manual. All candidates must be present at ACR 2021. The candidates in contested elections will make a two-minute presentation to the Council.

The CNC will make recommendations for the following elected and/or selected positions:

- President (elected 1-year term)
- Vice President (elected 1-year term)
- Council Speaker (elected 2-year term)

- Council Vice Speaker (elected 2-year term)
- BOC vacancies (elected 3-year term)
 - Chair, Commission on Leadership and Practice Development
 - Chair, Commission on Medical Physics
 - Chair, Commission on Pediatric Radiology
 - Member-at-Large
- CSC (elected 2-year term)
- CNC (elected 2-year term)
- Intersociety Summer Conference – Private Practice (selected 2-year term)

For more information and to apply, visit acr.org/Call-for-Nominations.

Examining National Trends in Oncologic Diagnostic Imaging

A new Harvey L. Neiman Health Policy Institute® (HPI) study, published in the *JACR*®, characterizes national trends in oncologic imaging utilization. The researchers found that oncologic imaging usage varied between practice settings. While the percentage of advanced oncologic imaging done in academic settings nearly doubled from 2004 to 2016, the majority remained in non-academic practices. In addition, at the state level, the utilization of advanced oncologic imaging was correlated with the state supply of radiologists in 2016, but not with states' cancer prevalence.

“These findings indicate that strategies are warranted to disseminate oncologic imaging expertise throughout the radiology community,” said Andrew B. Rosenkrantz, MD, MPA, lead study author, professor, and director of health policy in the department of radiology at NYU Grossman School of Medicine. “They also highlight a need for stricter application of evidence-based cancer imaging guidelines nationwide.”

To read the full study in the *JACR*, visit bit.ly/JACR_HPI_OI.

“For me, as a Black physician at UT Southwestern Medical Center who serves on the ACR Colon Cancer Committee, the best way I can personally honor Chadwick Boseman's legacy is by working to prevent losing more young Black men like him to colorectal cancer by encouraging screening.”

— Cecelia C. Brewington, MD, FACR

Is a New Job in Your Near Future?

The ACR Career Center, one of the most accessed member benefits, is actively responding to the evolving transition of employment among radiology professionals.

Post your resume online today to make sure you're noticed — whether you're supplementing income because of reduced hours or are seeking a brand new opportunity as communities reopen.

Creating an account will allow you to access resources, take advantage of the CV review service, and receive customized Job Alert emails applicable to your specialty and location interests. In addition, you can pursue career counseling that includes interview advice at your convenience.

Find a job today at acr.org/CareerCenter.

Heard on Social Media



Richard Strax, MD, FACR

@rstraxMD

“Radiology residents read 63% fewer images during the pandemic, with 1st year trainees hit hardest” 🙄 I've seen this firsthand. So sad. This gap needs to be filled by faculty providing extra attention to the resident's training as well as extra mentoring.



healthimaging.com

Oct 5, 2020



Justin T. Stowell, MD

@stowell_justin

Honored to be a part of such an open and supportive discipline with forward thinking leaders from the @RadiologyACR, @RSNA @ARRS_Radiology @MayoRadiology #radiology #diversity #inclusion #LGBTQ #transgender @ChudnallACR @FrancesGrimstad @EJFloresMD



Nicole Racadag

@NRacadag

Now online: #ACRBulletin article on how transgender patients deserve radiology's commitment to screening outreach & access. [https://acr.org/Practice-Management-Quality-Informatics/ACR-Bulletin/Articles/October-2020/SELDOM-SEEN... TY to @stowell_justin @FrancesGrimstad @EJFloresMD @atmammo & others for their collaboration!](https://acr.org/Practice-Management-Quality-Informatics/ACR-Bulletin/Articles/October-2020/SELDOM-SEEN...) @ChudnallACR @RadiologyACR



Oct 2, 2020

FROM THE CHAIR OF THE COMMISSION ON ECONOMICS

Gregory N. Nicola, MD, FACR



The Ties that Bind

The Commission on Economics is building relationships across the healthcare continuum — and teaming up to accomplish shared goals.

Advocating for patients and our profession takes a community. Everyone has to work together to build and maintain relationships founded on common interests. These interests run the gamut, but the patient is always front and center.

The ACR Commission on Economics is building relationships across the healthcare continuum as we advocate for our patients. At the RVS Update Committee (RUC) and Current Procedural Terminology (CPT®) levels, our team members are continuously partnering with other non-radiological medical societies to enact coding and payment for new technologies which will improve patient care. We use this community-based strategy when revaluing services so that reimbursement stays at a sustainable level. Both our RUC and CPT teams meet three times a year with the rest of the medical community, to learn about shared goals and opportunities to work together to improve patient care. Listening to their presentations is inspiring, as are the reactions from non-imaging healthcare providers who might not have had any insight into what a radiology practice looks like or what it takes to acquire high-quality images and provide accurate medical interpretations.

One of the most important communities we engage with is the coalition of 53 medical specialty societies requesting implementation of the reimbursement changes to outpatient office visits that occur outside of budget neutrality. These stakeholders all believe the draconian cuts to the conversion factor on overall reimbursement will have dire results if budget neutrality is not waived.

Other representative examples of community engagement include reaching out to stakeholders beyond our specialty to address issues such as point-of-service US, CPT coding of advanced post-processing analytics, reimbursement strategies for machine learning algorithms, and scope of practice encroachment. Each of these issues are of interest to other medical stakeholders. These are not one-goal strategies of maintaining reimbursement,

but multi-pronged discussions on safety, quality, and health equity.

The Commission on Economics also routinely works with other radiology specialty societies. For example, through our close collaboration with the American Association of Physicists in Medicine, our teams were successful in creating and receiving value — in the form of a new CPT code set to be implemented in the 2021 payment year, for medical physics dose calculation that exceeds institutional review when an exposure threshold is met. The Commission on Economics played a pivotal role in obtaining reimbursement for the hard work done daily by our medical physics colleagues, which was previously unrecognized by payers. For the Commission on Economics, community engagement is a necessity. We work closely with CPT and RUC advisors from the American Society of Neuroradiology, the American Roentgen Ray Society, RSNA, the Association of University Radiologists, and the Society of Interventional Radiology.

Economics Commission members also play a pivotal role working with the ACR Commission on Quality and Safety on activities that support value-based payment arrangements under the purview of the Economics Committee on MACRA. Our members provide valuable insight on measure development as advisors to the technical expert panel created under the Gordon and Betty Moore Foundation grant for development of quality measures pertaining to incidental radiographic findings. These measures will hopefully play a pivotal role in providing value-based payment options for members within the Merit-Based Incentive Payment System, as well as those in Alternative Payment Models and commercial payer arrangements. The expert panel is comprised of patients, ER physicians, primary care physicians, and radiologists — all exemplifying the concept of community. To piggyback on this initiative, a work group staffed by members of the Economics Commission is drafting a white paper — in conjunction with our broader community of ED physicians — detailing best practices for managing radiographic incidental findings on ED patients.

At the ACR, both volunteers and staff recognize the value of community — and we use it to accomplish our goals. In fact, much of our community relationships have been fostered and maintained by hard-working staff who are quick to engage a new volunteer or call a colleague at another medical specialty society to solve a shared problem. This concept of community is a common best practice when advocating for our members and our profession. **B**

A Sense of Community

As radiologists, we are just one part of a much larger and influential group charting the future and advancement of our profession.

As we examine our direction, advocacy, and new programs at the ACR, we reflect upon who we serve. Certainly, we serve our members. Zooming out, our patients are central to our strategic plan. Zooming out further, our profession is also a vital focus — as well as our society as a whole. Most importantly, we recognize that we not only serve, but are part of, the larger community of radiology.

While diagnostic radiologists are an important part of our community, many other groups are integral to our success as an organization. And we could not function without the skills and contributions of those who make up our larger radiology community.

RTs are key to the success of our profession, both at work and in the non-clinical activities of individuals and their societies. The list of their contributions to delivering medical imaging care to our patients would exhaust the remainder of this column. We simply could not function as physicians without their expertise. When it comes to advocacy for our patients, we have a synergistic relationship in our local and national efforts. On a practice level, the pathways of advancement for RTs include becoming directors and administrators in our practices, if not our institutions. We recognize and applaud their talents and commitment to the profession.

Although radiation oncologists make up a small membership percentage of the ACR, our interests remain aligned in many ways. We have common roots, which have diversified as technology has flourished. Promoting radiology and radiation therapy for medical advancement benefits patients throughout the world.

Medical physicists are vital to the imaging and therapy that we provide as radiologists. They are central to our commitment to ensuring quality and safety. They are talented scientists who allow us to explore and innovate.

IRs are at the forefront of innovation and minimally invasive



care for our practices. Despite the wide adoption by other specialties of techniques first developed by image-based interventionalists, IRs have continued to reimagine and innovate new therapies to maintain the subspecialty as core to our community.

Radiology-based administrators and practice managers are also key members of our community. They implement our commitment to delivering image-based medical care to our patients in safe, effective, and financially responsible environments.

Of course, and most importantly, the greater radiology community includes patients and all the family and friends of those who are part of, or who have been impacted by, the care that we provide. We dedicate ourselves to improving the quality of life of all those we serve. It is our commitment to providing quality care to those who are in need or vulnerable that sustains us as physicians.

Our community need not recognize borders. A more global perspective is appropriate when we consider our influence and impact. As the profile of radiology expands across the world, everyone in our community benefits. The ACR has a central role in this community of radiology. However, we recognize that we, as radiologists, are just one part of a much larger and influential group. We will have the most impact on the future and advancement of our profession as a unified collective. Acknowledging this role and the vast potential of our community is the goal of this special issue of the *Bulletin*.

By Howard B. Fleishon, MD, MMM, FACR, chair of the ACR BOC

The House of Radiology

Important work has been done to provide the highest quality care for patients and families through intersociety collaboration, but there is still a lot of ground to cover.

In 1925, only four radiology societies existed in the U.S. — the American Roentgen Ray Society (ARRS), the RSNA, the American Radium Society, and the ACR. Today, that number has grown exponentially. More than 50 radiology societies represent every facet of the specialty.¹ Having many voices can be a challenge, as different groups may have vastly different needs and goals. However, a spectrum of societies also provides a chance at valuable collaborations that not only improve radiology for patients and radiologists, but for healthcare altogether.

“We overlap with nuclear medicine, with our imagers, with IR,” says William Small Jr., MD, FACR, FACRO, FASTRO, chair of the ACR Commission on Radiation Oncology and the American Society for Radiation Oncology’s representative to the ACR BOC. “We all have our niches, but we’re all one house of radiology.”

One of the most prominent ways that radiological societies work together is to advance quality of care and information, notes John E. Jordan, MD, MPP, FACR, chair of the ACR Commission on Neuroradiology, a member-at-large for the American Society of Neuroradiology (ASNR) and a member of the ASNR board of directors. “Collaborative efforts between the ACR and societies like the ASNR have existed for decades and are only growing in importance,” he says. “We and others work very closely together to develop the ACR Practice Parameters, as well as projects like white papers that reduce variability in clinical decision-making and patient care.” To be truly effective, these guidelines require voices from around the specialty, says Jordan. “This highly specialized clinical or evidence-based experience wouldn’t be readily achievable or validated without close collaboration,” he explains. And this work goes beyond the boundaries of radiology. Guidelines such as the ACR Practice Parameters and the Appropriateness Criteria® are often used by physicians outside of radiology, Jordan says.

Collaborating in a Crisis

During the pandemic, radiology organizations quickly swung into action to share information as they learned more about COVID-19. A key multi-society initiative is the Medical Imaging and Data Resource Center. Created by RSNA, ACR, and the American Association of Physicists in Medicine (AAPM), the open-source database contains thousands of COVID-19 images and helps physicians better understand, diagnose, and treat patients with this new disease. Furthering the collaboration, the resource is hosted by the University of Chicago and funded by the National Institute of Biomedical Imaging and Bioengineering. Mary C. Mahoney, MD, FACR, chair of the RSNA’s board of directors and a member of the ACR’s BOC, says, “Group efforts like this, which leverage the strengths of each of the partnering organizations, will also prove valuable to advancing the specialty post-pandemic.”

Collaborative meetings like the annual summer conference of the Intersociety Committee — a freestanding committee of the ACR,

established to promote collegiality within the field of radiology — give societies a chance to come together, collaborate, and share ideas. These meetings have resulted in expanding residencies to meet impending shortages resulting from the rapid increase of CT and MRI, shaping the future of the ABR examination, and more.²

“Between COVID-19, reimbursement changes, and other difficulties facing the specialty, it’s more important than ever to bring associations together to speak to what unites us and what we need to work on further,” says Angelisa M. Paladin, MD, MS, president-elect of the Association of Program Directors in Radiology and the ARRS Executive Council’s instructional courses committee chair. “We need to gather rigorous scientific data and provide evidence to demonstrate the value of our work,” says Michael D. Dake, MD, FSIR, president of the Society of Interventional Radiology. “This will become increasingly necessary as healthcare systems, private payers, and CMS continue to prioritize cost savings.”

Paladin agrees that collaboration has never been more important. “Radiology is at a crossroads right now. Our budgets have decreased, volume has increased, and many of us are lacking the resources to go to different society meetings. When societies work together on meetings such as the Intersociety Summer Conference, there is a greater chance of having an agenda that reaches a larger audience. We are able to get more out of the few meetings we’re able to attend,” Paladin explains.

“Between COVID-19, reimbursement changes, and other difficulties facing the specialty, it’s more important than ever to bring associations together to speak to what unites us and what we need to work on further.” — ANGELISA M. PALADIN, MD, MS

Using One Voice

Advocacy is another area where society collaboration excels. “Radiology groups have allied with each other to tackle all sorts of issues affecting the specialty — from giving opinions on payment policies to providing subject matter experts that help inform public policy at all levels of government,” says Jordan. Paladin adds, “Without working together to check our voices and goals in advocacy, many societies would be replicating efforts that would be much stronger when done in partnership.” She explains how recently, the specialty was concerned about the upcoming ABR Core Exam dates — as well as the possibility of making tests virtual to protect residents during the COVID-19 pandemic. “At first, a lot of different people were communicating various concerns ad hoc to the ABR,” says Paladin. “There were lots of different constituents

with different concerns. Therefore, society leadership worked together to have one meeting with the ABR that resulted in a policy that covered the ABR's concerns as well as residents' and radiologists' concerns." That outcome wouldn't have been possible without established good relations between the various parties, she says.

Although important work has been done through intersociety collaboration, Jordan believes that there is still a lot of ground to cover. "COVID-19 has highlighted many of the unjust structural inefficiencies of our healthcare system when it comes to vulnerable groups," says Jordan. "We have to solve this problem. However, to be most effective, we need to be united in our voice."

Mahadevappa Mahesh, PhD, FACR, chair of the ACR Commission on Medical Physics, agrees. According to Mahesh, social media is acting as a bridge to help physicians learn more about the marginalized communities they serve — as well as opening up possibilities for interspecialty and intersociety collaboration. "Prior to the pandemic, I wasn't even aware that some of my colleagues were members of the LGBTQIA+ community," says Mahesh. "I know it now because of our professional interactions on social media — probably because these colleagues feel safer speaking about this part of their identity online, rather than in physical professional spaces. A lot of conversations that my physics colleagues would normally have in private, pre-pandemic, are now taking place publicly on Twitter. This has resulted in physicians from other specialties taking notice and inviting us to collaborate on care issues that intersect all of our specialties."

Paladin is hopeful that despite the profession facing new adversities, the different radiology societies will continue to work together to provide the highest quality care for patients and families. "Rather than silo ourselves based on our different subspecialties or affiliations, we need to draw on the unique strengths that our different societies offer," she says. "That way we will be stronger together." **B**

By Meghan Edwards and Laura Sirtonski, freelance writers, ACR Press

ENDNOTES

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Collaborating in a Crisis

A silver lining to the challenges of the COVID-19 pandemic are radiology collaborations that have emerged as a response to the crisis. Organizations taking on distinct roles for a singular purpose has resulted in valuable initiatives, such as the Medical Imaging and Data Resource Center. The open-source database contains thousands of COVID-19 images and helps physicians better understand, diagnose, and treat patients with this new disease. This is a multi-organization effort, created by the ACR, RSNA, and the American Association of Physicists in Medicine, hosted by the University of Chicago, and funded by the National Institute of Biomedical Imaging and Bioengineering. Learn more at bit.ly/MIDRC.

Linked Together

RBMA's executive director reflects on the last half-century of close collaboration with the ACR.

The Radiology Business Management Association (RBMA) has had a symbiotic relationship with the ACR since its founding. The two organizations have collaborated on a range of salient issues related to the business of radiology for over 50 years — the results of which have benefited not only the larger radiology community, but patients as well. The *Bulletin* spoke with Robert T. Still, FRBMA, executive director of the RBMA, about the long-standing partnership between the RBMA and the College — and how that relationship has been a boon to all involved.

How did the relationship between ACR and the RBMA originate?

RBMA began after Medicare started in 1965 as a loose-knit group of practice managers (also called business managers at the time) — many of whom were female and functioned as executive secretaries for radiology groups. They would gather and ask questions like, "Well, how do you bill? What do you bill for? How do you code this?"

About this same time, independent physician billing passed through Congress. This meant that physician practices could bill and be independent of hospitals. However, it also meant that they faced a new challenge — they essentially had to teach each other how to bill for procedures. A collaboration between the practice managers of RBMA and the radiologists of ACR to address this challenge seemed a natural fit.

This is how the relationship originated and now, goes back 52 years to our founding. In fact, in RBMA's bylaws there is a stipulation that our board of directors always has a voting representative from the ACR on it, so the collaboration continues strong today. Our current representative is Elaine R. Lewis, MD, FACR, section chief of radiology at Tower Health Partners in Reading, Pa.

What are some ways in which the ACR and RBMA have worked together over the years?

Our relationship has grown over the years. We try to work hand in hand with the College so that we can be complementary on our advocacy efforts. For instance, we have a leadership call with RBMA and ACR leaders once a month to discuss the issues that both organizations are working on. These calls usually revolve around federal regulatory payment issues, but can also extend into relationships with commercial insurance payers or other payment policy matters.



Beginning in January 2021, there are proposed cuts to radiology of 11% for Medicare reimbursements. We're working very closely with the College and a lot of other physician organizations to fight these cuts. The College's lobbying on Capitol Hill is strong, and they have long-standing connections with other professional medical societies. RBMA is going to support that with a robust grassroots approach, by going out into specific congressional districts with our members. RBMA also has the ability to survey our members quickly and produce valid data on the effects of federal reimbursement regulatory issues. Often times, this data is used by the College when they go to Capitol Hill to say, "This is what's going to happen in the radiology practices."

Finally, RBMA and the ACR partner every January to host the Practice Leaders Forum, which offers practical management strategies, tailored for a radiology environment. However, due to the ongoing pandemic, the 2021 ACR-RBMA Practice Leaders Forum will be a virtual event, rather than an in-person gathering (see sidebar).

How is problem-solving as a community more effective than working in silos?

I managed a radiology practice for 22 years. As a practice administrator, you're often the only businessperson in the practice. My job was to make sure that when the radiologist sits in that chair to read, they can focus on their clinical work and not worry about the billing, vacation policy, or insurance payment.

I look at the running of the RBMA the same way. Our

organization's role is to provide education and policy advice to complement the College's strong role in clinical research and advocacy. We don't comment on clinical issues; that's the College's role. But we do provide strong coding guidance, management advice, training, and education. We're mutually beneficial.

How does this mutually beneficial relationship build patient trust?

You can have the greatest radiologist in the world read an MRI, but if it's not communicated in a timely fashion, or not coded or billed accurately, that leads to a negative patient experience. Both the administrative and clinical sides have to work together to make sure that the imaging experience for the patient is second to none, because that's why we're all here — to serve our patients. **B**

Interview by Cary Coryell, publications specialist, ACR Press

The ACR-RBMA Practice Leaders Forum, taking place online Jan. 22–23, 2021, will offer solution-building tools that will boost your practice performance, align your business operations with new healthcare models, and promote a value-based mindset within your team. Register for the meeting at acr.org/practiceleadersforum.



Teaming Up for Patients

Almost overnight, COVID-19 dissolved longstanding barriers between radiologists and members of their support team.

Michael Odgren, BS, RPA, RRA, RT(R)(CT), a registered radiologist assistant for Diversified Radiology of Colorado, P.C., a U.S. radiology practice in Lakewood, began his X-ray training two weeks after his high school graduation. “I’ve been in radiology for a long time, even though I’m pretty young,” says Odgren. “I’ve been an RT for 25 years. That’s more than half my lifetime.”

Odgren, who serves as president of the American Society of Radiologic Technologists’ (ASRT) and is a member of the Society’s eight-member board of directors, has witnessed a lot of change in those 25 years. “I remember back in the day when there was always a radiologist available right there,” says Odgren. “Now, with teleradiology and all of these remote reading models that we have, there’s this sort of barrier to the radiologist being able to get to know the RTs. It’s not as easy as the radiologist getting out of the reading room and going around the corner to speak to the RTs. They might be at another site or even in another state.”

Coming Together in Crisis

Chrystal Barnes, director of imaging services at Emory University Hospital Midtown, has also been a witness to the RT-radiologist disconnect that Odgren describes. “The improvements in technology have definitely created a sort of barrier — the RT and radiologist don’t always understand exactly what the other

is doing or what the other’s challenges are,” says Barnes. “I see that type of disconnect as one that leads to the onset of potential errors and not the optimal quality of care patients are looking for and deserve.”

However, Barnes saw this disconnect vanish almost overnight when COVID-19 struck in March. “The pandemic showcased a lot of different players within radiology having to work more closely together,” says Barnes. “COVID-19 is terrible, but one of the positive things it has shown us is the teamwork — from the front-desk staff to the nurses, from the RTs to the radiologists. Everyone has had to work together, and it’s something that probably ought to have happened a long time ago but started happening very suddenly because of the pandemic.”

Odgren agrees. At his practice in Colorado, the radiologists were very involved with the RTs in the discussions about COVID-19 processes and procedures. “There was so much more communication,” says Odgren. “We talked about how we were going to keep our patients and staff safe. Yes, we need to take care of our patients, because that’s why we’re all here, but if the RTs get sick, then who’s going to take the films? As RTs, we’re very much on the front lines. There’s not a patient who comes in with a COVID-19 symptom who doesn’t get at least one chest X-ray.”

Barnes, who saw similar discussions at her institution, notes that during these types of conversations, her radiology department chair was heavily engaged with the RTs and a great relationship developed from it. “The RTs could go to her with their concerns, and then the chair would bring those directly to the top — and she would take it to hospital administration. If there was one positive during COVID-19, it was, and is, the value of teamwork.”

Making a Group Effort

Dan Loch, CEO of Imaging Healthcare Specialists (IHC) — an outpatient imaging provider with centers throughout San Diego — was already working toward teamwork that Odgren and Barnes

“This crisis showed us how critical it is to have every aspect of the radiology business working together. It has only reinforced our commitment to these principles.” – DAN LOCH

saw long before COVID-19 struck. Loch, who joined IHS in 2016, immediately began aligning the RTs, radiologists, and the administrative team that support them through the adoption of Lean management — with the goal of improving value, quality, and the patient experience.

“We started by bringing all areas of expertise within the organization — including doctors, clinical staff, support associates, IT, and HR — in weekly working sessions, supplemented with daily progress reporting. We dove into eliminating non-value-added activities throughout the entire value stream,” says Loch. “It was a way for everyone to see how their work affects the patient, and then work together to continuously improve care delivery.”

William C. Snyder, MD, of IHS, adds that when COVID-19 hit, their company was prepared to meet the challenge. “Because we had removed silos in the workplace and already were working together in areas such as quality and safety, it was much easier to quickly create and empower a rapid response infection control team. In a few days, we had a screening matrix of how to handle COVID-19 at our centers, and how that would be communicated to employees, patients, partners, and the referral community.”

Creating Lasting Change

Odgren, Barnes, Snyder, and Loch are confident this type of teamwork will continue long after the pandemic is over and will be vital in solving new challenges as they arise. They believe organizations like the ACR will take a lead in making sure the conversations and collaborations continue for the betterment of patient care.

“This crisis showed us how critical it is to have every aspect of the radiology business working together,” says Loch. “It has only reinforced our commitment to these principles.”

Barnes recommends radiologists partner with clinicians, other medical professionals, and patients to make the transition from a focus on the volume of scans read to the value of care provided — principles already being put into practice through the College’s Imaging 3.0[®] initiative (learn more at [acr.org/Imaging3](https://www.acr.org/Imaging3)). “Radiologists need to get out of their reading rooms and walk around or pick up their phones and ask questions of their team members, such as, ‘Are you running into any problems or challenges today? Is there something we can do differently to make your job easier?’” says Barnes. “I think it’s a form of mentorship. It’s finding out how you can help someone else work better.”

Ultimately, says Odgren, it’s all about delivering better patient care. “Chat with your RTs or invite them into your reading rooms,” he urges. “It’s all about providing high-quality care together. That’s why we’re all here. We just want to take care of people.” **B**

By Nicole B. Racadag, MSJ, managing editor, *ACR Bulletin*, and Chad Hudnall, senior writer, ACR Press

Uniting for Patients

Radiology becomes more unified through shared commitments to patients and strong relationships with colleagues outside radiology. To that end, [RadiologyInfo.org](https://www.radiologyinfo.org), which provides information to the general public, is co-sponsored by the RSNA and ACR. The website averages 2 million visits per month and includes patient-facing information about X-ray, CT, MRI, US, radiation therapy, and other imaging procedures. Mary C. Mahoney, MD, FACP, also credits Image Wisely[®], a joint initiative of the ACR, RSNA, ASRT, and AAPM, with increasing patient trust. “With thousands of radiologists from various specialties taking the pledge to image wisely, patients know their safety is a top priority,” she says. Learn more at [imagewisely.org](https://www.imagewisely.org).



NHPI Executive Director
Elizabeth Y. Rula, PhD

Research that Drives Impact

The new leader of the NHPI discusses the value of radiology research that supports health policy congruent with the best patient care.

Health policy research must adapt quickly to the changing dynamics of radiology — from a lingering pandemic to AI to an emphasis on diversity. The Harvey L. Neiman Health Policy Institute® (NHPI) is uniquely positioned to meet those challenges, focusing on radiological policy research and with a strong history of evidence-based publications, data tools, and resources for researchers. The *Bulletin* talked with Elizabeth Y. Rula, PhD, who took over as executive director of NHPI in August (replacing Danny R. Hughes, PhD, who led the group for eight years) about her vision for the think tank, the importance of funding research, and why different perspectives matter.

What has been your primary focus to ensure the future value of the NHPI?

We want a collection of studies that clearly articulate the value of radiology that supports health policy congruent with the best patient care. By involving a lot of stakeholders upfront — talking to commission chairs in economics and research, quality and safety, and government relations leaders — we are ensuring a broad view of opportunities and concerns to inform our strategy. I am grateful to have our advisory board, through which we will share proposals and get valuable feedback.

What is at the heart of your strategic plan?

My goal is to have a framework of the critical topics we need to address. That means having a diverse research portfolio built from key issues and research questions that call for specific studies. I don't want us to get narrowed into one specific area of research, but to move the needle on the most important topics in radiology with a policy and economics focus. You always need to build in some flexibility so that if something like COVID-19 pops up, we are able to pivot to support urgent study needs — still always aligned with the ACR's goals.

Although the plan is not finalized yet, we have narrowed in on a number of exciting areas, including bolstering the value proposition for imaging, helping radiology practices navigate the evaluation and management reimbursement changes, modeling the value of different breast cancer screening modalities, understanding factors that drive hiring practices, and digging into health equity.

How much emphasis will you put on diversity and inclusion moving forward?

I think a big way NHPI can promote diversity is through our mentorship offerings — partnering with institutions to provide training to radiologists from a variety of backgrounds who aspire to be researchers. From a personal perspective, I have benefited from strong female mentors, and I appreciate that the ACR has many strong women in leadership positions. I'm grateful to be part of that pack and will continue to be an advocate for diversity and a mentor for others.

How challenging is it to attract donors who have taken a financial hit during COVID-19?

The support of the ACR Foundation (ACRF) has been critical to ensuring we have adequate resources to maintain the current scope of research and respond to new policy issues. Due to COVID-19, the ACRF is not launching large fundraising campaigns, but every donation helps the NHPI more quickly achieve our goals and have a bigger impact on health policy. In the future, I look forward to sharing our strategy so that potential donors can clearly see what we can accomplish with their support. We are also expanding our advisory board to include a seat for a representative nominated by the ACRF. I see this as an opportunity to bring a new perspective to the table as we fine-tune our strategy.

What are some long-term goals to advance your vision?

We are pushing forward with all the projects already in the pipeline and building on relationships with our existing research partners, including the Health Economics and Analytics Lab (HEAL) at Georgia Institute of Technology, Feinstein Institutes at Northwell Health, and the Imaging Policy Analytics for Clinical Transformation (IMPACT) Center at Emory University. Longer-term, I plan to elevate the NHPI brand — growing our recognition broadly as a thought leader in health policy and radiology research. We've made great headway, but we are working now to identify more channels to communicate our research to enable radiologists, academic institutions, and policymakers to readily integrate our findings into their work and to ensure that our research informs key decisions in health policy and radiology practice. **B**

Interview by Chad Hudnall, senior writer, ACR Press

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Resumed Screening

A new ACR toolkit prepares practices to resume lung cancer screening amidst COVID-19.

In almost every industry, COVID-19 provoked temporary changes to what type of work could be done safely. For the radiology community, many hospitals halted non-urgent or elective imaging studies during the early phases of the virus. This notably included preventive cancer screening.

Unfortunately, cancer doesn't wait for COVID-19 — and the delay in care may result in negative outcomes, delayed diagnosis, or increased cancer burden on hospitals. With November being Lung Cancer Awareness Month, many imagers hope to boost screening back to pre-pandemic momentum. To resume lung cancer screening (LCS) at hospitals where it's possible, the ACR LCS 2.0 Steering Committee prepared a new toolkit ([available at acr.org/lcs](https://acr.org/lcs)), containing vital information and template documents for both referring clinicians and patients.

Debra S. Dyer, MD, FACR, chair of the ACR LCS 2.0 Steering Committee, says that in January, screening at her practice at National Jewish Health in Denver was on the upswing. “And then of course, in March came the pandemic,” she says. “The Steering Committee advised that all LCS programs follow the CDC and the ACR's recommendations to not do elective or non-emergent imaging.”

As a result, patient navigators and schedulers reached out to patients to postpone screening, without a clear idea of when this imaging would be rescheduled. “None of us has lived through a pandemic, so we were all kind of unsure about what to expect,” says Denise Wojcik, RN, BSN, patient care coordinator for lung CT screening at Northwestern Memorial Hospital in Chicago, who contributed to the ACR toolkit.

In addition to the logistical questions in the early days, Dyer knew practices, physicians, and patients would need additional guidance as the pandemic wore on. She reached out to Eric M. Hart, MD, associate professor of radiology at Northwestern University Feinberg School of Medicine (who works with Wojcik) about forming a new ACR subcommittee to provide this guidance. The subcommittee was made up of seven member volunteers, including one patient advocate.

The subcommittee began drafting essential materials to help ACR members with resumption of LCS — and how to clearly and effectively communicate with other

stakeholders, like patients and clinicians, about when to return for these services. “It fell into place pretty easily because everybody was on the same page,” says Dyer. “We all agreed that we need to make sure that whatever we do is safe for patients, and also that facilities can take this toolkit and apply it to their settings. We know that a private practice in a rural setting is quite different from a big metropolitan academic center.”

Hart addresses many of these initial setting concerns in the toolkit's “Resumption of Screening Quick Reference Guide.” The document contains general guidance for reopening phases, with sections on patient and staff safety and patient prioritization using lung cancer risk. The subcommittee also created a “Telehealth Quick Reference Guide,” which provides at-a-glance telehealth guidelines and resources for shared decision-making. The toolkit additionally includes an infographic for patients, outlining the low risk of COVID-19 exposure for radiology patients and precautions being taken at imaging centers.

Another key piece of the resources were draft letters to patients, which Hart and Wojcik collaborated to create. There are several different template letters, including letters for patients whose screening has been postponed, as well as draft communications to share with referring provider letters. “I think the letters acknowledged, people are fearful,” says Wojcik. “It's been stressful for everybody, but we want to acknowledge that we care about patients' health and prevention.”

In terms of resumed LCS, as of the time of writing, Dyer says screening at her practice is back up to approximately 75% of where it was before the pandemic. However, she remains optimistic that Lung Cancer Awareness Month can help generate renewed interest and commitment. “Most of our patients wanted to come back,” she says. “They were ready.” And there's another glimmer of hope: the U.S. Preventive Services Task Force's LCS recommendations dropped the minimum screening age to 50 and pack-years to 20. “That can really inject new energy because we are going to have new patients to include,” Dyer says.

Hart hopes the toolkit will assist LCS centers with the return to screening during the COVID-19 pandemic and reassure patients of updated procedures and precautions. “Lung cancer remains the leading cause of cancer death for both men and women,” he says.¹ “Even if only one patient comes in because of the toolkit, it will have made all the work and effort worth it.” **B**

By Nicole B. Racadag, MSJ, managing editor, *ACR Bulletin*, and Alyssa Staniar, freelance writer, ACR Press

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

Under Fire

A radiologist-in-training shares his experience working in a New York City hospital during the early days of the pandemic.

As New York's COVID-19 caseload ballooned into the thousands during the first wave of the outbreak, Jesse Chen, MD, then chief radiology resident at Staten Island University Hospital, found himself suddenly scrambling to get shifts covered while fellow residents tested positive for the coronavirus. In a recent interview with the *Bulletin*, Chen, past chair of the New York State Radiological Society's RFS, discusses his experience working in a New York City hospital at the start of the pandemic, the effects of COVID-19 on radiology training, and his views on the future of the profession.

When the pandemic started in March, how did it affect your day-to-day work as a resident?

On March 13, the day after I returned from my honeymoon, a fellow resident told me he wasn't feeling well. Within the week, two more residents reported not feeling well. In one week, we went from business as usual to skeleton crew schedules, spacing out patients in the hospital and changing schedules accordingly. We had about 50% of the residents working in-house on any given day to minimize in-person contact and the rest of the residents were at home, working on assignments, lectures, and research. The pandemic came at us fast, and we had to address clinical needs within the department and hospital more quickly than we ever anticipated.

How has COVID-19 affected radiologists in training?

There is an ongoing concern about the adequacy of training because of the lower volume of patients. Patient volume is only at about 70–80%, probably due to people leaving New York City, not wanting to travel into the city, and hesitating to come in for medical care. We're racing to get as much training in as possible, in case there's a resurgence. We only have a finite amount of time as trainees and we need to learn as much as we can.

What lessons have you learned from the crisis?

I've learned that radiology departments will have to have a backup system for staffing and designating who's going to be in charge in the event of a crisis. We had a call schedule, but during the height of the pandemic,

many residents weren't able to come in. During that time, I remember thinking, “What if I get sick?” As chief resident, there were times when I found out an hour before someone's shift that they were too sick to come in, and then had to scramble to find coverage. It was like suddenly working under fire. A positive change, though, has been in the scheduling of patients and procedures.

We had schedulers prior to the pandemic, but more staff have been dedicated to this purpose, with a greater emphasis on making sure patients have the appropriate labs or have stopped certain medications, and that they remain plugged into our system. This, as well as the heightened level of sanitization, has made the return to care much more streamlined and organized. There is much more attention being paid to safety, for both patients and staff.

I've also learned to be an effective leader. You have to lead like an economist. You have to figure out the biggest problems that affect everyone, tackle them first, and leave smaller problems for later. I also learned the importance of being a team player. Although I'm not in a leadership position now as an IR fellow at Weill Cornell Medicine, I will still be able to apply the managerial skills that I learned as chief resident to other situations.

What challenges lie ahead for radiology as a result of the current health and economic crisis?

Fewer physicians seem to be retiring, and there are still hiring freezes across the country. While things are not as bad as they were this spring, the job market is still struggling. I started contacting practices last May and was fortunate to secure a job starting next summer. I keep hearing from other fellows, though, who are having to work harder for interviews.

I'm also concerned about our ability to attract new talent and trainees. A lot of medical students don't have primary exposure to radiology, as not all schools have a rotation in it. There has also been a real paradigm shift in the way that interviews are conducted. Even now, interviews for some residency programs are virtual, and the interview process makes it difficult for applicants to make decisions.

Why do you value your ACR membership?

The ACR is the underlying force that has everyone's back. The College delves into legislation and billing issues that affect our lives. We remain in uncertain times in radiology, especially during this pandemic, but we have the ACR to support us. To be engaged with the ACR is to be enlightened, recognizing that there are bigger issues affecting our vitality. The ACR is our safety net and works hard to ensure the continuation of our livelihoods as radiologists. **B**

Interview by Lisa Berretta, ACR Membership Services



Myth-Busting Lung Cancer Screening

The ACR Population Health Management Committee and Lung Cancer Screening (LCS) 2.0 Subcommittee are collaborating with the National Lung Cancer Roundtable on a new *Bulletin* podcast series that will feature Debra S. Dyer, MD, FACR, in conversation with key members of the LCS team: the referring clinician, the pulmonologist, and the radiologist. Listen to the series at acr.org/bulletin.

Who Are ACR Members?

We need your input to get a better sense of who our members are and what environments they work in. This confidentially-kept information will assist the College in better understanding members' needs and ensuring we're meeting them with appropriate resources and services. To update your info, please complete the fields in the My Profile tab when you log into [My ACR on acr.org](https://acr.org).

A New Era

What could add-on payment for Viz AI's stroke detection software mean for other AI products?



The question of how AI will be reimbursed in healthcare is a much speculated on — but as yet mysterious — conundrum. A recent decision by CMS highlights a new and somewhat unexpected option. On Sept. 3, 2020, CMS granted a new technology add-on payment (NTAP) for Viz AI's large vessel occlusion (LVO) stroke detection and notification software, the first NTAP granted for AI software. With the ruling, providers who use Viz LVO to triage suspected stroke patients can bill Medicare for up to \$1,040 per use.

The significance of an AI company securing an NTAP is more than just press release hype. Until now, the business case for most imaging AI companies relied on increased efficiencies and optimistic estimates of clinical benefit. The lack of adequate reimbursement has long been a barrier to widespread AI adoption, and the potential for AI applications to be considered revenue generators would indeed be groundbreaking.

What is the NTAP and what potential opportunities does this pathway present for AI reimbursement?

In 2000, Congress enacted the Medicare, Medicaid, and State Children's Health Insurance Program Benefits Improvement and Protection Act, which included a provision mandating an additional payment to "recognize the costs of new medical services and technologies under the [inpatient] payment system." Lawmakers wanted to ensure that Medicare beneficiaries would have timely access to breakthrough technologies that, absent any additional payments, would be inadequately reimbursed under the

existing Diagnosis Related Groups (DRG) payment. Under the ruling, the NTAP reimbursement would continue until CMS had sufficient inpatient claims data to set DRG rates that reflected the added costs of the new technology. In 2001, CMS issued regulations specifying a process and criteria for granting NTAPs.

Currently, a technology must meet three criteria to be eligible for an NTAP:

The technology must be new, which CMS generally defines as within two to three years of FDA approval or market introduction. As part of the newness criteria, the technology cannot be "substantially similar" to existing technologies.

The existing DRG payment for the service must be inadequate: that means the average standardized charge for inpatient cases receiving the technology must be shown to exceed the cost thresholds calculated annually by CMS.

The new technology must be a substantial clinical improvement over existing services.

How is reimbursement determined?

For technologies that meet the eligibility criteria and receive CMS approval, the amount of the NTAP is based on the cost to hospitals to provide the new technology. The NTAP amount is calculated individually for each eligible patient discharge that includes the technology, and NTAPs are only made when the estimated cost of the case exceeds the payment the hospital would otherwise receive. The NTAP amount is equal to the lesser of 65% of the amount by which the total covered costs of the case exceed the DRG payment, or 65% of the costs of the new technology.

This formula requires Medicare and hospitals to share in the financial risk of providing costly new technologies. The maximum NTAP amount is linked to the price of the technology as reported by manufacturers in their application and published by CMS in the Inpatient Prospective Payment System annual final rule.

What does the future hold for AI reimbursement?

Many questions remain as the landscape of AI reimbursement evolves. NTAPs are self-limited by definition and expire after a maximum of three years. In the past, CMS has steeply reduced the NTAP amounts within the first few years, returning vendors back to the reimbursement starting line. The extent to which the NTAP pathway would be applicable to other AI products is unknown, especially given the criteria to prove there is no "substantially similar" technology. Nonetheless, this decision by CMS to reimburse providers for Viz's LVO AI technology will no doubt be cited as precedent. **B**

By Gregory N. Nicola, MD, FACR, chair of the ACR Commission on Economics

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Solving Big Problems

A military radiologist looks to AI to fix some of the issues that exist in radiology — and in the overall healthcare system.

"AI has the ability to revolutionize medical imaging, but we're just scratching the surface of what AI can do," says Navy Commander Roger Boodoo, MD, an assistant professor of radiology at the Uniformed Services University of the Health Sciences. "Radiology has yet to fully embrace the promises of AI, in part due to a lack of large datasets."

Boodoo recently completed a clinical informatics fellowship at the University of Illinois Hospital and Health Sciences System in Chicago where he sought to address that very issue. During his fellowship, Boodoo developed "Diagnosis Protocol — Using Blockchain to Accelerate AI in Medical Imaging," a project that earned him the People's Choice Award from the Society for Imaging Informatics in Medicine, beating out nearly 30 other submissions. The *Bulletin* caught up with Boodoo to discuss the future of AI in radiology and his new role in the ACR military radiology subcommittee.

What was the goal of your Diagnosis Protocol project?

During my fellowship I became fascinated by Blockchain, following the ONC competition, and thought it could solve some of the pain points in medicine. My cofounder (a pathologist) and I were trying to solve the problem with AI and why it hasn't taken off in radiology and pathology — partly because we're lacking large, curated datasets. We wanted to build a platform to incentivize residents to label images that could feed into an AI algorithm. What was unique is that we were trying to tokenize the work with Blockchain. Radiologists and pathologists would be rewarded with a token for the amount of work they did, and if that large dataset ever sold to one of the bigger AI companies, the user would be compensated.

How will AI eventually be like having a second set of eyes on every diagnostic image?

There's a saying, "If you never miss anything, you're not reading enough," because we all miss things. As a human being, sometimes you get distracted and you just miss something and you don't realize. AI can review the study and either flag things before you read the study, so you know where to look initially, or after you've read the study, giving you a second chance to look at something.

That second set of eyes will lead to fewer missed cases.

Occasionally, a radiologist will miss something that looks very obvious to someone else, but it's not because they're a bad radiologist. They could have been distracted or had a bad day because human beings are emotional creatures. To have another set of eyes that is never tired, never distracted, and never emotional is always beneficial.

How have your experiences in the military influenced your current work?

Because I've had the opportunity to work with the three military services at the Defense Health Agency (a joint, integrated combat support agency that enables the Army, Navy, and Air Force medical services), I can see the larger picture of how the Department of Defense (DOD) healthcare is comprised. The DOD operates service-specific hospitals and many things are done in triplicate with many vendors; things aren't tightly integrated. I'm always looking for ways to make things more efficient.

At the Defense Health Agency we're working with Veterans Affairs (VA) because we're about to be on the same EHR system. My boss often says, "We can't innovate unless we standardize." We're trying to figure out how to align on other things and create more standardization instead of the divergence that existed before.

Why did you become involved with the ACR military subcommittee?

My philosophical belief is that collectively, as military radiologists, we should try to use our knowledge to help the public because the DOD and the VA are funded by American tax dollars. Especially during the ongoing pandemic response, we can help civilian communities by educating them on the best way to set up a CT machine in unusual environments such as a gymnasium or a tent.

We also work on helping active duty doctors with the transition to civilian life. It can be challenging to join an outside practice when you're already a seasoned, specialized radiologist, because most new hires at these practices come straight from a residency. We're trying to make that transition as smooth as possible. We want to take care of our military members who have a lot to offer. **B**

Interview by Meredith Lidard Kleeman, freelance writer, ACR Press

The views expressed in this article do not necessarily reflect the official policy or position of the U.S. Navy, Defense Health Agency, or Department of Defense.

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How can radiologists continue to screen for lung cancer, while also keeping patients safe?



"We, as members of the radiology community, must work together to implement protocols that mitigate risk of infection during this pandemic. We must also communicate our efforts to our patients and referring providers, assuring them that we are aware of the unique challenges posed to the high-risk population that is eligible for lung cancer screening. Our patients' health and well-being is our mission, which is why we continue to screen for lung cancer with the goal of diagnosing early-stage, curable disease, while also doing everything in our power to keep our patients safe."

Kim L. Sandler, MD, assistant professor in the department of radiology at Vanderbilt University Medical Center



"The radiology community must work together to ensure high-risk patients do not fall through the cracks by putting in place effective infection control measures to prevent the spread of COVID-19 at facilities and boost patients' willingness to participate in screening. Patients who missed their previously scheduled LDCT need to be identified and efforts must also be focused on encouraging eligible high-risk persons who have not been screened in the past to start now. Successful LCS, both pre- and post-COVID-19, requires a team approach involving schedulers, RTs, nurses, coordinators, and radiologists."

Carol C. Wu, MD, thoracic radiologist in the division of diagnostic imaging at MD Anderson Cancer Center

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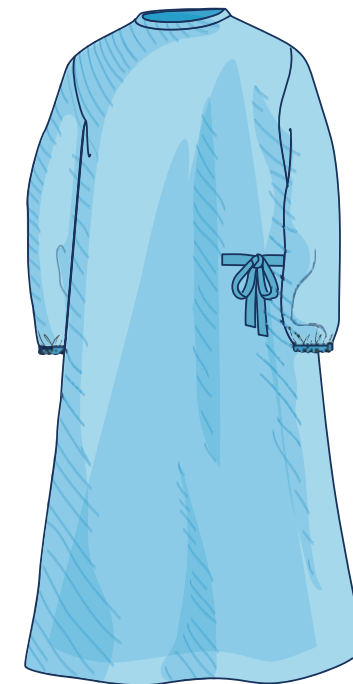
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Kambiz Motamedi, MD, FACR

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