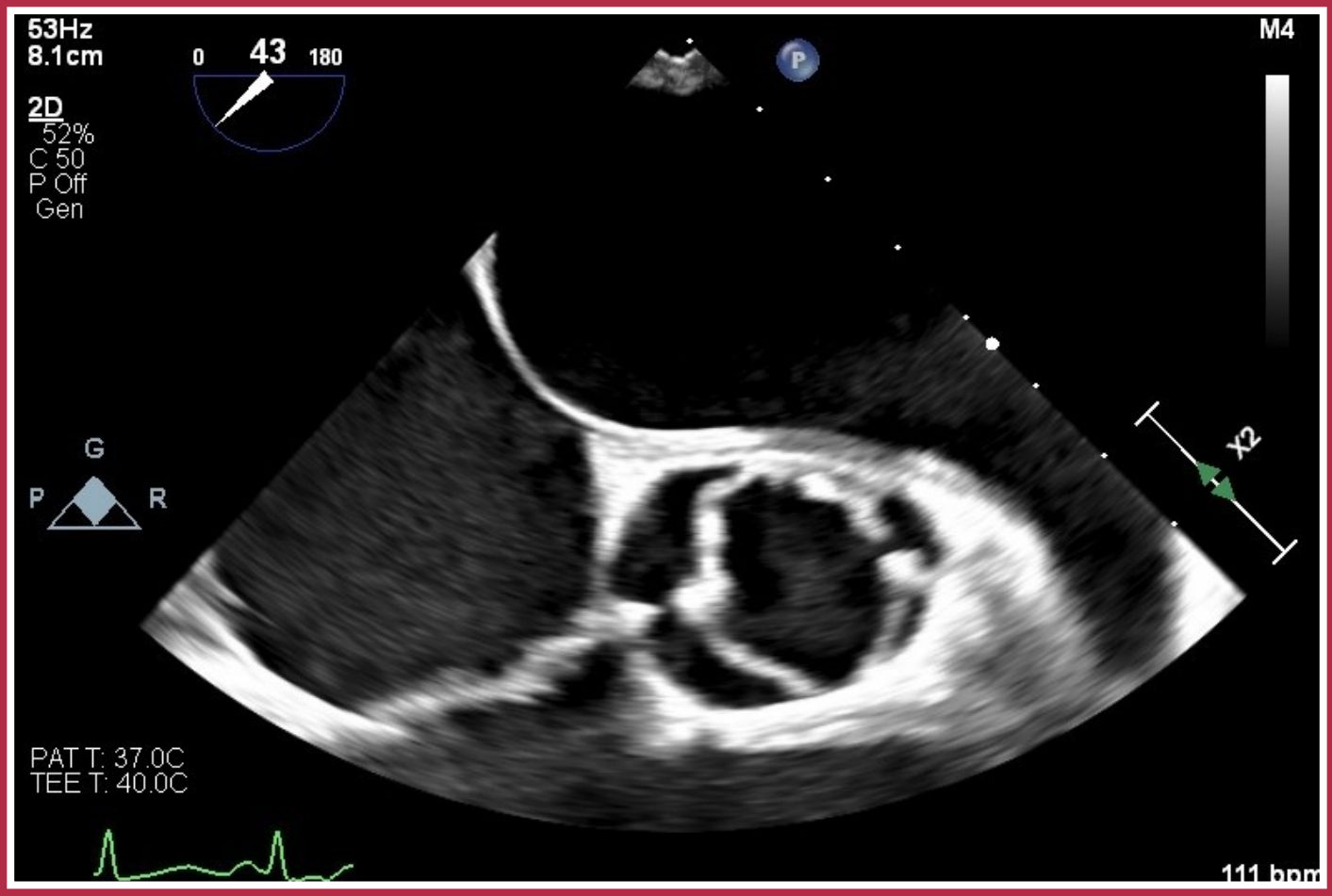
ECHO



2024/2025 EDUCATION CALENDAR

JANUARY 2025

34th Annual Echo Hawaii

January 20-24, 2025
Fairmont Orchid, Kohala Coast, Big Island, HI

Jointly provided by ASE and the ASE Foundation

FEBRUARY 2025

37th Annual State-of-the-Art Echocardiography

February 14-17, 2025
Westin Kierland Resort & Spa, Scottsdale, AZ

Jointly provided by ASE and the ASE Foundation

APRIL 2025

12th Annual Echo Florida

April 5-7, 2025
Disney's Yacht & Beach Club Resort Orlando, FL

Jointly provided by ASE and the ASE Foundation

MAY 2025

5th Annual Advanced Imaging Techniques for Sonographers

May 31-June 1, 2025
Virtual Experience

Jointly provided by ASE and the ASE Foundation

JUNE 2025

4th Annual Echo in Pediatric & Congenital Heart Disease

June 28-29, 2025
Virtual Experience

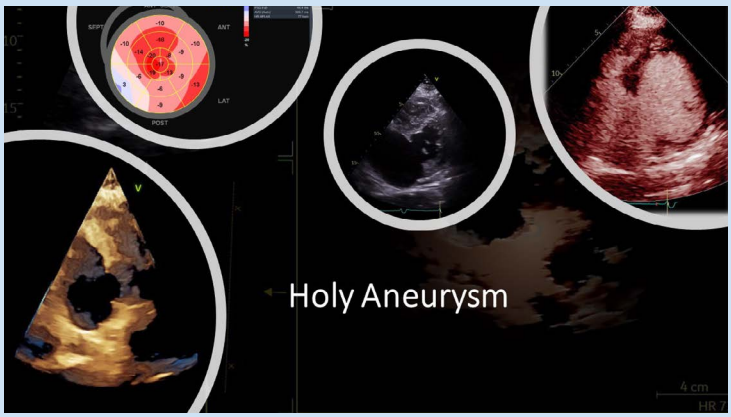
Jointly provided by ASE and the ASE Foundation

SEPTEMBER 2025

36th Annual Scientific Sessions

September 5-7, 2025
Music City Center (Downtown) Nashville, TN

Jointly provided by ASE and the ASE Foundation



"Holy Aneurysm" Cara Bergeron, BS, RDCS, RVT, FASE, DeBakey Heart & Vascular Center, Houston Methodist Hospital, Houston, TX

Discounted rates for ASE members. *To learn more and register, visit us at* ***ASEcho.org/Education****.*

This text also appears in the November/December JASE. ***OnlineJASE.com***

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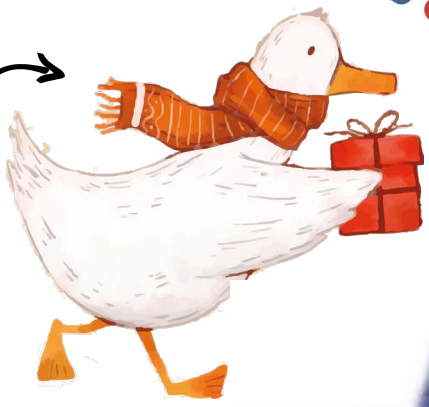

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Cover art: “Hut Hut” Madeline Schiminger, MPH, RDCS (AE, PE), FASE, and Karan Desai, MD, MPH, MS, The Johns Hopkins Hospital, Baltimore, MD

EDITORS’ NOTE

ASE is very grateful to our members who contribute to *Echo* magazine and values their willingness to share personal insights and experiences with the ASE community, even if they may not be in total alignment with ASE’s viewpoint.

President's Message for ***November***

WATCHING THE REIMBURSEMENT TIDE ROLL IN (AND OUT) – ASE, ADVOCACY, AND THE ECONOMICS OF CV ULTRASOUND

Contributed by Dermot Phelan, MD, PhD, FASE; Susan Mayer, MD, FASE; Denise Garris; and Katherine Stark




Most of the time our membership and leadership are fully engrossed in establishing clinical excellence, best practice, and research in cardiovascular ultrasound. However, another important and critical role of ASE is to monitor, inform, and respond to the economic pressures relating to cardiovascular ultrasound. Accordingly, I am delighted to invite, and extremely thankful to, Drs. Phelan and Mayer (current and immediate-past chairs of the ASE Advocacy committee), Katherine Stark, our new ASE Director of Advocacy, and Denise Garris, our ASE Advocacy consultant to author this month's President's Page to highlight advocacy topics that are important to share with our membership.

> "Another important and critical role of ASE is to monitor, inform, and respond to the economic pressures relating to cardiovascular ultrasound."

Over to them:

Legislative and regulatory advocacy play a crucial role in ensuring fair reimbursement for physicians' practices, directly impacting the sustainability of healthcare delivery. As the healthcare landscape evolves, policies governing reimbursement models often lag behind, leading to financial strain on medical practices and limited access to care for patients. By actively engaging with legislators and regulatory bodies, ASE's Advocacy team aim to influence the creation of equitable payment structures, ensure that reimbursement rates reflect the cost and complexity of care provided, and promote policies that support the financial viability of their practices. This advocacy helps maintain high-quality healthcare, fosters innovation, and ensures fair compensation for the medical professionals dedicated to patient care.

CONTINUED CUTS TO PHYSICIAN PAYMENTS: A GROWING CRISIS

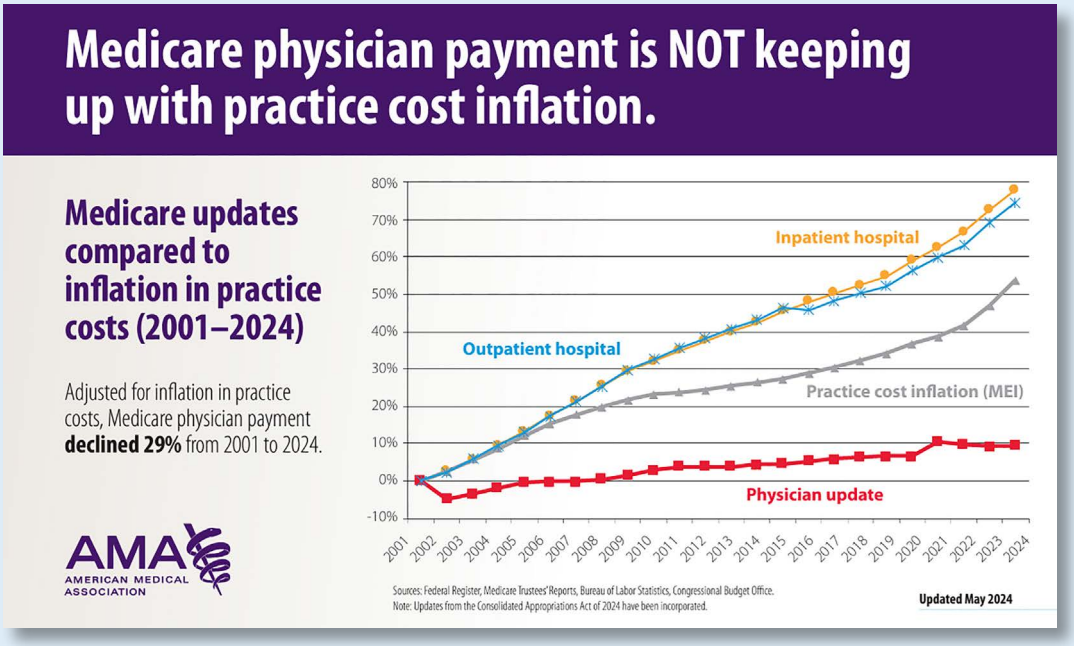
On July 10, the Centers for Medicare and Medicaid Services (CMS) released the proposed rule for the Calendar Year (CY) 2025 Medicare Physician Fee Schedule (PFS), which included a 2.8% reduction in physician payments—marking the fifth consecutive year of cuts. This decrease, coupled with the absence of an inflationary update, places significant strain on medical practices. Rising operational costs, without appropriate adjustments in reimbursement, threaten the financial viability of private practices and has changed the landscape of care delivery. For example, in 2008, only 10% of cardiologists were employed by hospitals or health systems; by 2022, this number had surged to 90%.1

Unlike physician payments (Figure 1), most other Medicare CY 2025 rates have seen substantial increases, including inpatient hospitals (2.9%), inpatient rehabilitation facilities (3.0%), hospice care (2.9%), and Medicare Advantage plans (3.7%). The continued reduction of the PFS conversion factor further widens the gap between facility and physician reimbursements, leaving those who provide direct patient care—such as diagnosing, treating, and managing Medicare beneficiaries—at a growing disadvantage. In a recent letter to CMS, ASE advocated for Congress and CMS to collaborate on solutions that prevent further reductions, proposing an annual inflation adjustment to the conversion factor based on the Medicare Economic Index (MEI) to ensure practices can keep pace with rising healthcare costs.

THE LOOMING PHYSICIAN SHORTAGE: A NATIONAL HEALTHCARE CHALLENGE

In addition to reimbursement challenges, practices face a looming physician shortage. The Association of American Medical Colleges projects an overall shortage of up to 124,000 physicians by 2034, including 77,100 specialty care doctors. 2 Contributing factors include declining pay rates, an aging population driving higher demand, and burnout driving early physician retirement. Specialty physicians, in particular, require extensive post-graduate training—up to seven years or longer if pursuing a fellowship. ASE supports the bipartisan Resident Physician Shortage Reduction Act (S. 1302), which aims to expand the nation's graduate medical education (GME) system by adding 14,000 Medicare supported residency slots over the next seven years. The bill also sets priorities for distributing these new slots, such as states with new medical schools, and calls for strategies to increase workforce diversity.

FIGURE 1 The chart is from the AMA – Medicare Physician and Hospital Updates Compared to Inflation in Practice Costs 2001-2024 Chart



ARTIFICIAL INTELLIGENCE IN HEALTHCARE: POTENTIAL AND LIMITATIONS

Emerging technologies like artificial intelligence (AI) are being explored as potential solutions to alleviate workforce shortages and burnout, especially in healthcare imaging. AI systems can guide image acquisition, extract measurements, and guide potential diagnosis, offering valuable support across various applications. However, while AI can enhance workflow, it cannot replace the clinical expertise and judgment that physicians and sonographers bring. ASE recognizes the enormous potential of AI (ASE Policy), but continues to advocate for distinct payment pathways based on the nature of AI services— whether assistive or augmentative—used in cardiac ultrasound.

EXCITING ADVANCES IN ECHOCARDIOGRAPHY

On a positive note, there have been exciting developments in echocardiography advocacy. NIH funding has steadily increased each year from 2013 to 2024, reflecting a growing commitment to cardiovascular research. Additionally, thanks to the strong efforts of ASE Advocacy, the CAROL Act, passed in late 2022, will play a pivotal role in advancing research, education, and investments in valvular heart disease. This legislation is expected to drive innovation in diagnostics and treatments, ultimately improving patient outcomes.

KEY PRIORITIES FOR ASE ADVOCACY

On Capitol Hill, ASE actively advocates for its members on key legislative issues (Figure 2), including Medicare physician payment reform and reducing provider burdens like prior authorization. ASE also supports increasing GME slots, ensuring a stronger future for physicians and patients alike. A central priority is securing fair compensation for echocardiography services by establishing new codes and defending existing ones through our representatives on the AMA RUC and CPT panels. Additionally, ASE remains committed to educating its members on critical legislative and regulatory issues that affect cardiac ultrasound.

If you would like to become more involved in ASE's advocacy activities, log in to the ASE Member Portal then click here and request to join ASE's Advocacy Network and be kept abreast of the Society's work. Picking back up here; many thanks to Dr. Phelan, Dr. Mayer, Ms. Stark, Ms. Garris, and our hardworking Advocacy committee for all the efforts in protecting our specialty. I would strongly encourage those interested to volunteer to participate either at the ASE committee or focus volunteer level but also in responding to calls to write your local political leaders to support policies that will allow us to serve our patients best.

FIGURE 2 ASE RUC representative Geoffrey Rose, MD, FASE (top left) and ASE CEO Robin Wiegerink (second from right) advocate to increase physician reimbursement and alleviate provider burden with their colleagues from the Alliance of Specialty Medicine! Also pictured: Lynn Damitz, MD representative of ASPS; Eileen Raynor, MD representative of AAO- HNS; and Alan Skipper from NC Medical Assn.

This text also appears in the November issue of JASE (OnlineJASE.com)

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President's Message for ***December***

REMEMBER TO PUT YOURSELF ON THE HOLIDAY LIST

Contributed by ***Theodore P. Abraham, MD, FASE****, Meyer Friedman Distinguished Professor of Medicine and Director of Echocardiography at the University of California San Francisco, San Francisco, CA*

IT is that time of the year when we have several important matters on our mind – the holiday gift list, the holiday dinner menu, finalizing travel plans and, of course, making sure the lab has coverage over the holidays. While you are finalizing your list, it is also a good time to make sure you do not forget yourself this special upcoming year. Your professional home, and the *Society with a Soul*, is celebrating its noteworthy 50th anniversary, and you want to be there. In the holiday spirit, I will keep this article short, light, and to the point.

"While you are finalizing your list, it is also a good time to make sure you do not forget yourself this special upcoming year."

At the time of the writing of this article, there are 320 days to September 5, 2025, which means if you switched out your usual, favorite high-priced caffeinated indulgence for an espresso double shot or iced tea/coffee or hot chocolate or Caffe Latte (Disclaimer: I do not drink caffeine so recommendations are not based on any personal experience so all substitutions are at your own risk), you would skip several hundreds of calories and save enough money to get to Nashville for ASE2025, in great shape. Also, at this time, round trip airfares to Nashville are mid-$200s from the East Coast, $300s from the Midwest/Southwest, and in the $400s from the West. All ASE Nashville meeting hotels are across the street or a block away from the convention center so you can save your walking for after the sessions end each day.

Speaking of the convention center, the Nashville Music City Center is a 2.1 million square foot modern facility in the heart of downtown Nashville. You are a few blocks away from food, entertainment, and several local attractions. Fall is just a great time to be in Nashville. The weather is perfect. Sunny and warm, not hot and sweaty. While ASE2025 will keep your days busy, there is just so much to enjoy after a day of learning, networking, and brainstorming. All kinds of great food, several fall music festivals, and fall events for families. Here are a few music options that rang out to me – **Nashville Sunday Night** (national, regional, and local artists), the **Grand Ole Opry** – star-studded performances every Tuesday, Friday, and Saturday night, and **Music in the Vines** – free live jazz and Bluegrass music every Saturday and Sunday. For the free-spirited souls, you and your friends can rent out the Honky Tonk (open top) party bus or the Pedal Tavern (6-15 people riding a bike bus with a bar in the center), and hit all the right spots in town. None of these activities are fun doing alone so make sure you bring your gang along.

ASE is a world-wide Society, and we are all committed to being good citizens of the world. In the spirit of ensuring our Future 50 and looking forward to ASE 100, we are launching our **ASE Goes Green** campaign at ASE2025 starting with our choice of the Nashville Music City Center as our venue. An often-cited Native American Proverb wisely states, "We do not inherit the earth from our ancestors, we borrow it from our children." The Music City Center is a **LEED Gold Certified facility**. Here are some additional factoids that the Program Committee and I learned during our site visit: 1) A **4-acre green roof** that is home to **4 bee hives that produce >100 lbs. of honey a year**, which is used in food preparation by their culinary services, 2) An array of ~**900 solar panels that provide over 343,000 kWh** of renewable energy every year, 3) > **360,000 gallons of stormwater** runoff used in the restrooms and for landscaping and green roof irrigation, and lastly, 4) Focus on **waste reduction** through food donations to local shelters and composting. Furthermore, I was surprised to learn that the Music City Center Sustainability Coordinator's name is *Devin Green* – well, you cannot get more *green* than that. Beyond all this, **ASE will go paperless**. There will be no printed programs at ASE2025 (limited printed agendas will be available on request at the registration desk) and **reusable water bottles** will be available and complement several water stations around the Center.

Most importantly, there are several scientifically great reasons to be there for ASE's 50th Anniversary

bash – a new content delivery platform; a flipped classroom – more discussion, less lectures; a multi-specialty, multi-society clinical vignette series that tracks a patient journey from Emergency Room to discharge (Episodes of Care) and spans POCUS to promising innovations, presented in partnership with the Cardiovascular Research Foundation (CRF) of the TCT/TVT fame. An ASE Shark Tank featuring innovation, and a re-imagined series of original research at ASE– the bedrock of our sustainability as a forward-thinking Society. Finally, to cap off our Sessions, a Sunday night birthday bash for ASE that all are welcome at (registration required) with anniversary cake, music, dancing, and an international karaoke contest interspersed with tall tales of the last 50 years.

You will get none of this sitting at home... or the coveted ASE 50th memorabilia or the pictures at the ASE 50th 3-D backdrop. So don't miss out on the **ASE 50th Anniversary Celebration** next September. You will take home memories of friends and fun coupled with the fundamentals and future of cardiovascular ultrasound.

Here is something I borrowed from Earthman Adam who joked, "I left Santa gluten-free cookies and organic soy milk, and he put a solar panel in my stocking." As mentioned earlier, we've got the solar panels covered. So, as you sit back in your recliner after a soporific holiday meal and ponder life, love and late studies, don't forget to put ASE2025 on your holiday list. Happy Holidays to all and wishing you and your loved (or holiday hated) ones, the blessings of health, happiness, and fulfillment in the New Year.

This text also appears in the December issue of JASE OnlineJASE.com

Theodore P. Abraham,
MD, FASE
ASE President

IAC Modification to the SRU Consensus Criteria:

Are Sonographers Ready for It?

Contributed by ***Melissa Warren, MHSc, RVT, RVS, RPhS,*** *Emory Saint Joseph's Hospital, Atlanta, GA and* ***Brandi Mize, MD****, Emory University School of Medicine, Atlanta, GA*

Effective August 2024, laboratories accredited in Extracranial Cerebrovascular Testing were encouraged to adopt and utilize the IAC modification.

IN FEBRUARY 2024, a key revision was introduced to the Intersocietal Accreditation Commission (IAC) Standards and Guidelines for Vascular Testing Accreditation.[1] Effective August 2024, laboratories accredited in Extracranial Cerebrovascular Testing were encouraged to adopt and utilize the IAC modification to the Society of Radiologists in Ultrasound (SRU) Consensus Criteria for Interpretation of Internal Carotid Artery (ICA) Stenosis.[2] While this revision presents as an exciting opportunity to improve accuracy in *interpreting* clinically significant ICA stenoses within accredited facilities, the question remains; as sonographers performing the examination, are we "*technically*" ready for it?

In reviewing the methodology for collecting and analyzing duplex information, this question became more apparent. The peak systolic velocity (PSV) and end-diastolic velocity (EDV) measurements were collected from images of the following: (1) proximal common carotid artery (CCA), mid *and/or* distal CCA; (2) proximal, mid, and distal ICA. ICA/CCA PSV ratio calculations were made by dividing the highest PSV obtained from

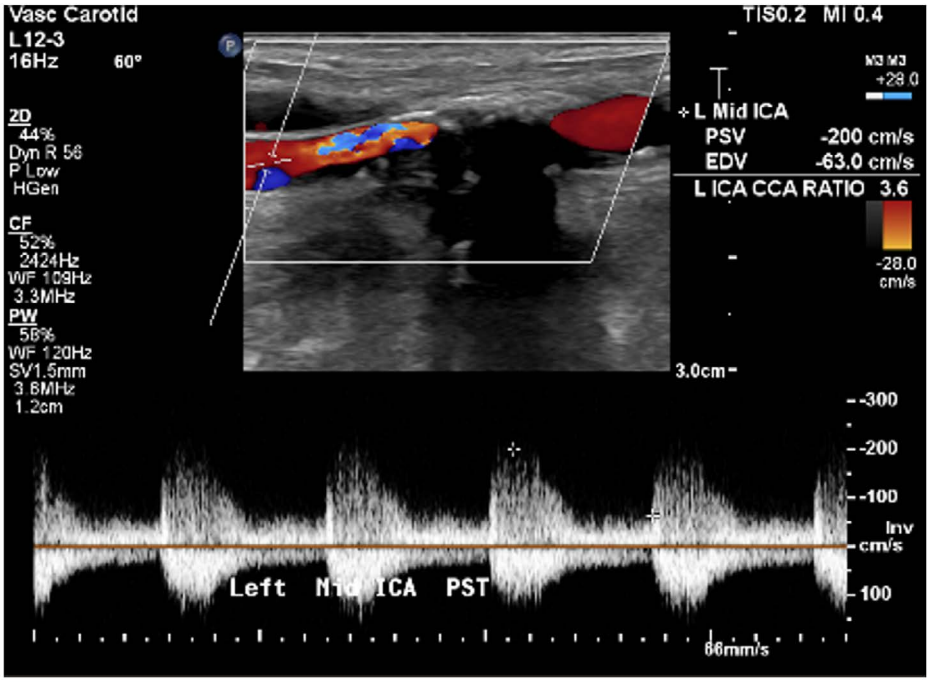

FIGURE 1

Longitudinal spectral Doppler image of the left mid internal carotid artery on a patient with atherosclerotic plaque.

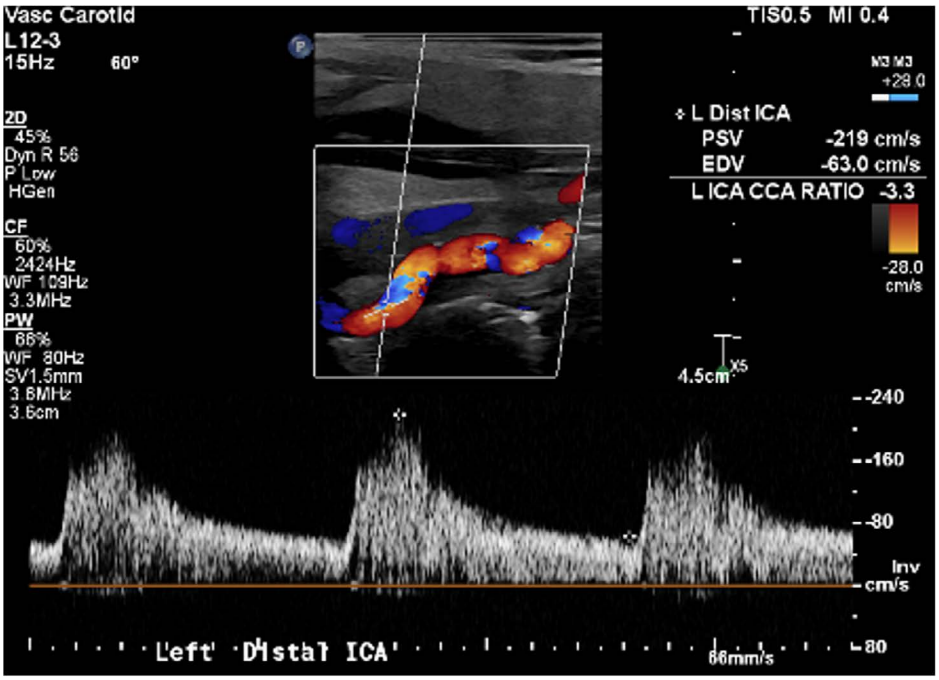

FIGURE 2

Longitudinal spectral Doppler image of the left distal internal carotid artery on a patient with fibromuscular dysplasia (FMD).

the proximal or mid ICA by the distal CCA. Vessel site selection for the calculation of the ICA/CCA PSV ratio was determined for two reasons: (1) to align with IAC recommendations listed under extracranial cerebrovascular testing and (2) because most vascular laboratories included within the retrospective review reported or submitted images of the distal CCA rather than the mid CCA. A key limitation, as identified by the Committee, was that this study was not performed prospectively. Duplex images submitted for analysis were not collected by sonographers using a standardized approach or prespecified study protocol.[2]

It is understood that extracranial cerebrovascular disease can be categorized as being either atherosclerotic or non-atherosclerotic in nature. It is estimated that atherosclerotic disease accounts for 90% of disease within the extracranial system, while the remaining 10% is attributed to non-atherosclerotic disease. Atherosclerotic plaques have been found to predominantly develop near vessel bifurcations, with approximately 50% of plaques being located at the common carotid bifurcation and the proximal internal carotid artery near the external and posterior walls.[4] In contrast, non-atherosclerotic lesions, such as fibromuscular dysplasia (FMD), typically present more distally within the ICA and are often identified in long stretches although the exact distance from the carotid bifurcation remains unknown.[3]

The challenge most sonographers face when performing extracranial duplex testing is the ability to distinguish atherosclerotic versus non-atherosclerotic disease. Both disease states often produce post-stenotic turbulence along with focal elevations in PSV and EDV, as visualized in ***Figures 1 and 2***. B-mode, color Doppler and power Doppler settings are useful applications for supplementing velocity and ratio measurements. However, there are limitations, most notably operator training and technique. It is recognized that the IAC Vascular Testing Division Carotid Diagnostic Criteria Committee attempted to resolve technical concerns by using the proximal or mid internal carotid artery for calculation of the ICA/CCA ratio; however, the highest PSV and EDV in *any site* within the internal carotid artery was selected for analysis.[2]

As the field continues to move towards using a single diagnostic criterion for the interpretation of internal carotid artery stenosis, equal effort and attention should also be given towards the creation and use of a single technical protocol. Accrediting organizations and professional societies have provided standards, guidelines or sample protocols as a reference, but most lack the specifics surrounding appropriate sampling locations within each vessel and technical approaches to employ when evaluating disease. Addressing this gap is key to ensuring that both *technical* and *interpretation* practices are reliable, reproducible, and accurate across all IAC accredited laboratories.

The challenge most sonographers face when performing extracranial duplex testing is the ability to distinguish atherosclerotic versus non-atherosclerotic disease.

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Radiation Safety in Structural Heart Interventions:

Prime Time to Protect Interventional Echocardiographers and Sonographers

*Contributed by **Priscilla Wessly, MD, FASE**, **Lauren Howard RDCS, FASE**, and **Renuka Jain MD, FASE**, all from Aurora St. Luke's Medical Center, Milwaukee, WI*



Long-term exposure to scatter radiation has been associated with cataracts, leukemia, cancers, early vascular and neurocognitive impairment.

ECHOCARDIOGRAPHIC GUIDANCE is indispensable in structural heart interventions and complements fluoroscopy guidance. Interventional echocardiographers (IEs) and sonographers who perform transesophageal echocardiography (TEE) and transthoracic echocardiography (TTE) are positioned near X-ray sources, resulting in high levels of exposure to scatter radiation. Long-term exposure to scatter radiation has been associated with cataracts, leukemia, cancers, early vascular and neurocognitive impairment.[1] It is thus imperative for echocardiography and cardiac catheterization laboratories to address the best practices for radiation safety.

Radiation Exposure Limits in Health Care

The guiding principle of radiation safety is known as **ALARA**—"as low as reasonably achievable;" at the core are three principles: minimizing **time**, increasing **distance**, and proper **shielding**. Given proximity of IE to the x-ray source and increasing length of structural procedures (particularly tricuspid), proper shielding becomes critical to maintain radiation safety. The International Commission on Radiological

Protection (ICRP) has established regulatory dose limits for occupational radiation exposure.[1]

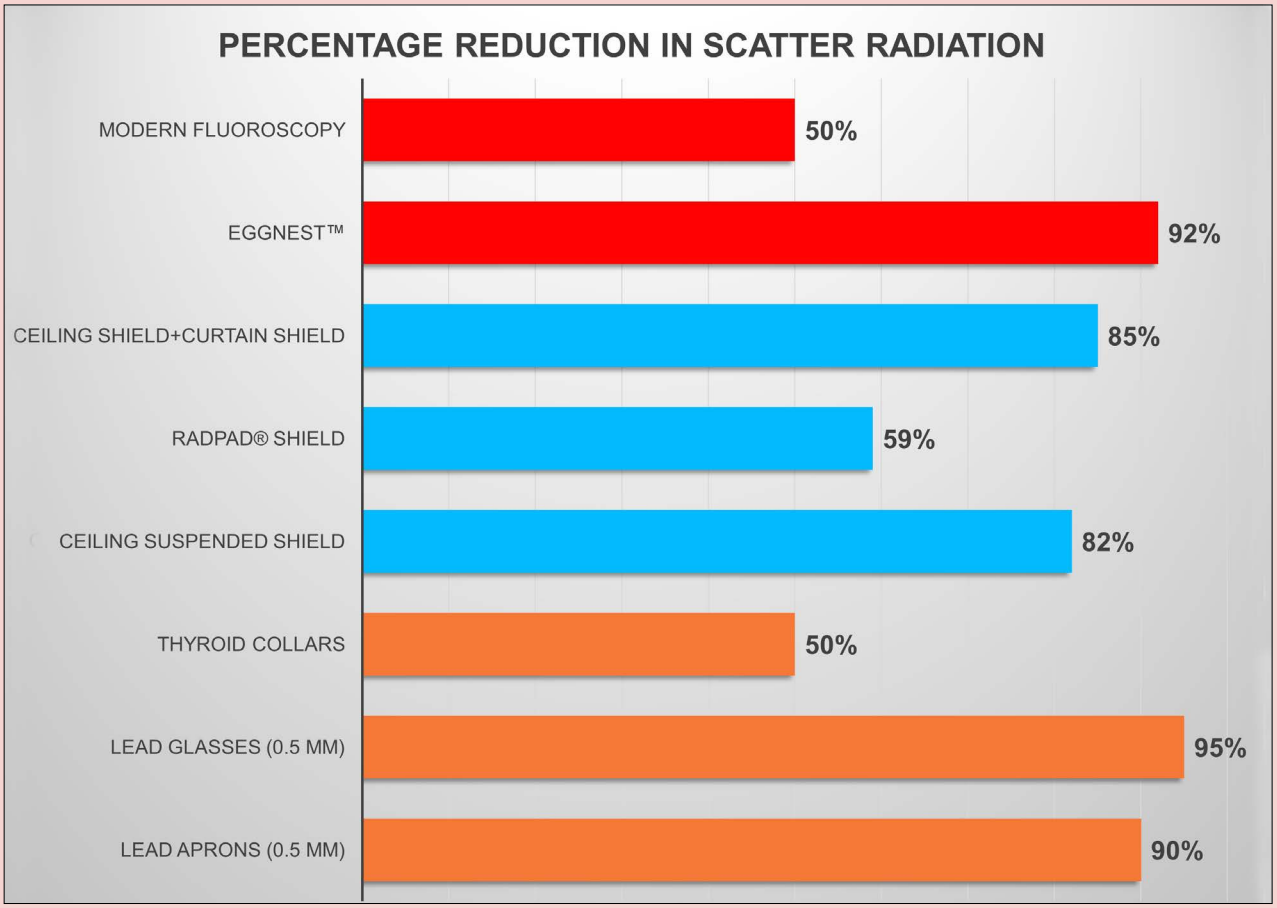
- **Effective dose:** 20 milliSieverts(mSv) per year, averaged over five years, with no single year exceeding 50 mSv.
- **Effective dose in pregnancy:** Once a pregnancy is declared, fetal dose ≤ 1mSv for the remainder of the pregnancy.
- **Lens of the eye:** 20 mSv per year, averaged over five years, with no single year exceeding 50 mSv.
- **Skin, hands, and feet:** 500 mSv annually.

While adherence to these limits is crucial, there is ongoing debate about whether they are stringent enough. The stochastic effects of radiation, such as cancer risk, increase with cumulative exposure, making even low doses concerning. Studies have reported detectable DNA damage in physicians after receiving radiation doses as low as 11 μSv during a single fluoroscopically guided procedure.[2]

Methods to Measure Radiation Exposure

Radiation exposure is traditionally monitored using aluminum oxide dosimeters. These devices collect cumulative exposure data, which is later reviewed by a Radiation Safety Officer monthly or quarterly. Thermoluminescent Dosimeters are used to monitor extremity radiation exposure. However, these traditional devices do not provide real-time feedback, meaning that staff may not be aware of excessive exposure until weeks or months later. To bridge this gap, real-time dosimeters such as

FIGURE 1: Reducing Scatter Radiation is achievable with existing technology.



RaySafe™ dosimeter allow IEs and sonographers to monitor their radiation exposure in real time during procedures. This instant feedback enables immediate adjustments to technique or positioning, helping to minimize unnecessary exposure.[3]

Added Risks Faced by IEs and Sonographers

IEs are exposed to significantly higher radiation doses than implanters, with variations influenced by procedure type, procedure length, proximity to X-ray source, and C-arm angles. In over 25% of cases, IEs received radiation doses up to ten times greater than the reported for implanters across various procedures[2]. Mitral paravalvular leak closures yield the highest median radiation exposure for IEs. Procedures guided by TEE produce three times more radiation compared to those using transthoracic echocardiography (TTE).[1]

Positions involving right anterior oblique (RAO) and steep RAO angles subject IEs to higher radiation levels. Sonographers assisting with TEE during structural procedures often stand near IEs, sharing similar exposure risks. For both IEs and sonographers, the side of the body nearest the C-arm incurs the highest exposure. Additionally, sonographers are at increased risk of overexposure to their scanning hand, particularly during transcatheter aortic valve replacement procedures.

Best Practices for Radiation Safety

The following best practices are essential for minimizing radiation exposure and is achievable with available technologies (***Figure 1***):

1. **IE and Sonographer Education:** Radiation safety should be in the curriculum of sonographer and cardiology training programs. Continued education and training on radiation safety should be a part of all echo labs.
2. **Utilization of Dosimetry:** Real-time dosimeters to monitor radiation exposure during procedures, enables immediate adjustments to technique or position. Personal and extremity dosimeters must be used to measure area-specific radiation risks.
3. **Use of Personal Protective Equipment:** Lead aprons (minimum 0.5 mm lead equivalency at the front and 0.25 mm at the back), lead glasses, and thyroid collars must be worn. Radiation safety glasses should have a large surface area, extend laterally to protect from side exposure, and fit tightly to prevent exposure from below. Thyroid gland is highly radiosensitive, with an increased risk of thyroid cancer from radiation exposure.[4] The RADPAD surgical cap reduces skin radiation exposure by 56% (a factor of 2.3) on the front of the head. However, it provides minimal protection for the brain, reducing radiation exposure by only 10% (a factor of 1.1).[5]
4. **Physical Barriers and Shielding:** Effective radiation dose reduction can be achieved through ceiling-suspended lead shields, curtain shields, movable rolling shields and disposable RADPAD® shield[3,6] Emerging technologies like the "EGGNEST™" system also show promise, potentially reducing scatter radiation by up to 90%.[7]
5. **Facility Design for Safety:** Structural procedural rooms should be designed and organized to provide maximum shielding. Overhead lead shields must be easily accessible, with sufficient space allocated for movable shielding devices.
6. **State-of-the-Art Equipment:** Modern fluoroscopy equipment with noise-reduction and dose-reduction features can lower radiation exposure.
7. **Safe Operator techniques:** Minimizing fluoroscopy time, reducing frame rates, and limiting the

In over 25% of cases, IEs received radiation doses up to ten times greater than the reported for implanters across various procedures.

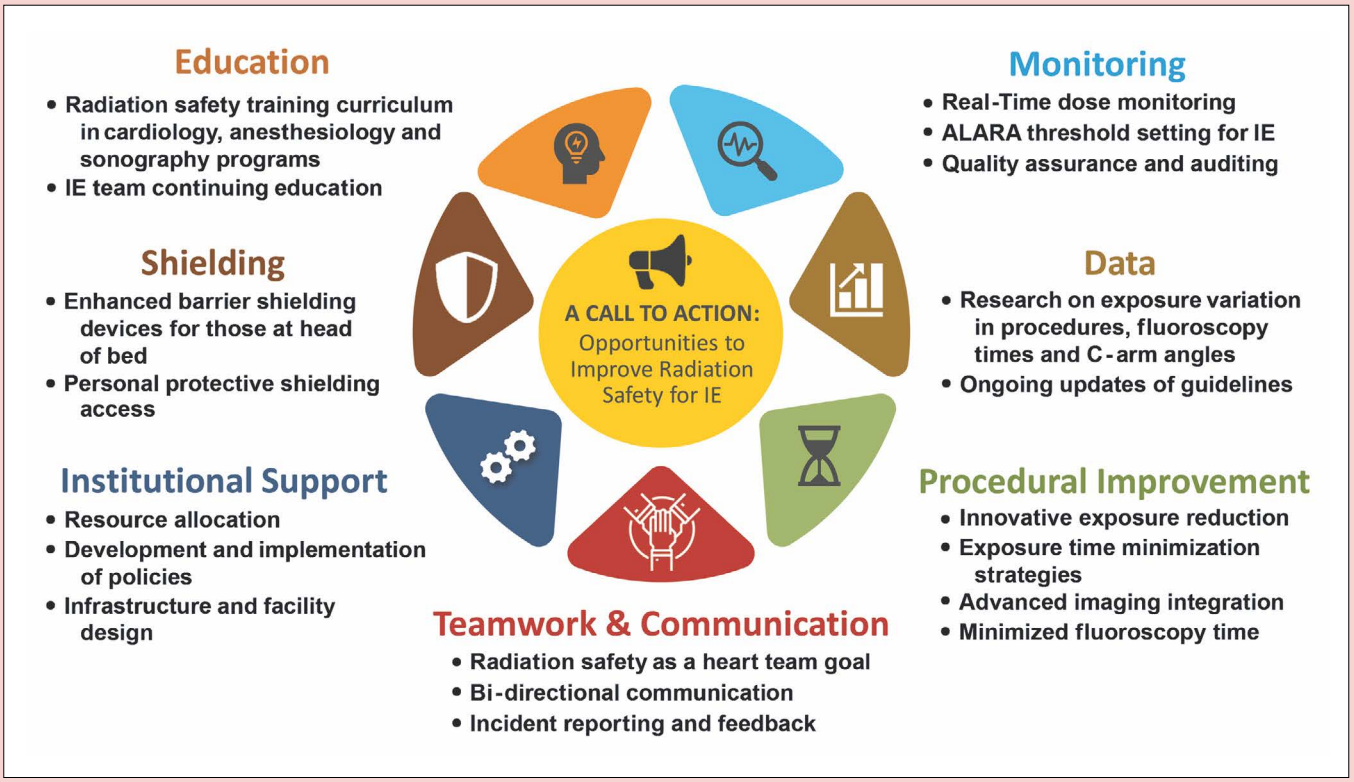


FIGURE 2: A Call to Action: Opportunities to improve radiation safety for IE and sonographers (previously published in JASE)

use of cine fluoroscopy are critical techniques for reducing exposure.

8. **Regular Monitoring:** Regular monitoring of individual radiation with personal feedback on exposure levels can help staff adjust their practices.
9. **Promoting Advocacy and Communication:** IEs and sonographers must be proactive in advocating for their own safety and that of their colleagues. This includes vocalizing concerns about radiation protection and ensuring safety measures are consistently followed.

Future Directions/Conclusion

Now more than ever, safeguarding interventional echocardiographers and sonographers must be a top priority. Hospitals and health systems must also be engaged in promoting safety of their employees (***Figure 2***). The time to act is now! Every beam counts.

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The ASE Volunteer Experience

Contributed by ***Daniel Forsha, MD, MCS, FASE, Children's Mercy, Kansas City, MO; Kenan Stern, MD, FASE, Mount Sinai Children's Heart Center, New York, NY; Rebecca C. Klug, BA, ACS, RDCS, (AE, PE), RT(R), FASE, Mayo Clinic Rochester, MN; David Barris, MD, Mt. Sinai Children's Heart Center, New York, NY; Lily Berhe, MHA, RDCS, Levine Children's Congenital Heart Center; Elena N. Kwon, MD, FASE, Children's Hospital at Montefiore, Bronx, NY; and Benjamin Eidem, MD, FASE, Mayo Clinic, Rochester, MN***

"As I look back over my years of membership in ASE, I am filled with both a sense of awe and a deep gratitude for all the opportunities that I have had to participate and grow in our Society."

–Benjamin Eidem (immediate Past President of the ASE)

Many members have not yet joined these committees and are unaware of the benefits and rewards that they can bring.

IT IS THAT TIME OF YEAR again when the American Society of Echocardiography puts out their *Call for Volunteers* allowing members to apply for the many ASE committees. This period extends from November 1, 2024 to January 3, 2025. Many members have not yet joined these committees and are unaware of the benefits and rewards that they can bring. Here, we bring together the experiences of seven pediatric-based ASE members to share their ASE membership experiences finishing with the immediate Past President of the ASE, Benjamin Eidem, who has included his 10 tips for successful candidacy.

Daniel Forsha, MD, FASE

As I enter the 13th year of my ASE membership, I have nothing but appreciation and respect for the opportunities that have been presented by the ASE. My ASE journey began during fellowship and has included poster and podium presentations, ASE Leadership Academy, running the ASE strain learning labs at the Scientific Sessions, participation in the Pediatric TTE Guidelines and Echocardiographic Reporting

Standards writing groups, membership-at-large in the Ethics and PCHD Council Steering Committees, co-chairing the Research Committee and chairing the pediatric sub-committee of the IGE Registry. Each of these experiences developed a different group of skills, formed relationships with new groups of amazing ASE colleagues, and presented a new set of challenges to overcome. Some required more time than others, but all of them provided strong rewards, typically equaling the amount of work I put into each of them. These experiences are not meant to just add a line to the CV, but instead to contribute meaningfully to the critical work of the ASE while providing the right environment for some of the most important relationships of my professional life to form. I have met and had the chance to work closely with a significant and growing number of people who have impacted my life and career in many wonderful ways. While it is difficult to predict where each person's ASE path will end up, starting down that path by applying for Fellowship of the ASE and volunteer positions in a committee had a huge impact on my career and I would strongly recommend it for anyone willing to roll up their sleeves and contribute to something significant.

Kenan Stern, MD, FASE

Volunteering on the Guidelines and Standards Committee has been a beneficial experience in so many ways. I have had an opportunity to "see under the hood" and learn about the process of guideline creation. I have been inspired by the hard work and dedication of the authors, writing groups, committee leadership, members, and staff. So much caring, thought, effort and energy goes into making sure ASE publishes the most relevant and meaningful guidelines. And everyone's contributions are valued. Participation has also been a great way to meet members of ASE from different councils and subspecialty areas from my own. I have been honored to play my part in serving on the committee and look forward to future opportunities to contribute to ASE.

David Barris, MD

ASE has been instrumental in my career development. My involvement started during my pediatric residency, when I presented my research at the scientific sessions. This valuable experience introduced me to ASE's vibrant, collaborative community. I have continued to return during fellowship as a conference attendee and presenter and have been generously supported by our council's travel grant. Recently, as a pediatric advanced imaging fellow I was able to help create a pediatric micro-lesson on intra-operative imaging for repair of ventricular septal defects. This not only provided me with valuable experience in the process of educational content creation, but also has allowed me to "pay it forward" by helping educate the next generation of imagers. Now, as a pediatric advanced imager just starting out in my career, I am excited to maintain my involvement in this organization that has had such an impact on my own development as an echocardiographer.

Lily Berhe, MHA, RDCS

A decade ago, during my sonography education, I was introduced to the American Society of Echocardiography (ASE), and it has since become an essential part of my professional journey. As I advanced in my career, taking on various cardiac sonography registries, ASE consistently provided the resources and guidance I needed. The ASE guidelines and educational materials have been foundational for our echo lab, and this inspired me to successfully advocate for organizational membership for my entire sonography team. In recognition of my contributions, I was honored to receive a plaque as a 2023 ASE Ambassador. As I transitioned into a leadership role in cardiology imaging, I made the decision to join the Pediatric and Congenital Heart Steering Committee as well as become a faculty member. It has been a privilege to be involved with ASE, and I am deeply grateful for the opportunity to contribute to this incredible organization.

Becky Klug, ACS, RDCS, FASE

It has been an honor and a privilege to become involved in the American Society of Echocardiography as a volunteer on multiple committees. I have also had the joy of connecting with colleagues across the nation through contributing to the PCHD council. I started my Journey with ASE while I was in the Mayo Clinic Echocardiography program as I was able to apply, and subsequently achieved the honor of receiving the Alan D. Waggoner sonographer student scholarship. Through this achievement, I attended my first scientific session and was amazed at the passion of attendees from sonographers to Nurses, to MD's, cardiologist, and vendors within the world of Echocardiography. This opportunity opened the door to my participation in many committees. The amount of knowledge I attained through these volunteer activities was like no other. I grew my career by taking on tasks with support from the other committee members. As I did this, I gained more confidence year by year and was asked to participate in learning labs and as a speaker at various cardiology conferences. Throughout these opportunities to participate in the ASE volunteer groups I was able to connect with colleagues across the world and make new work relationships within the field of echocardiography that share the same passion for the sonographer career as I do. My experience has taught me teamwork, as working with people whom you have never met can be intimidating at times, however it helped me strengthen my communication skills and grow as a person. It helped build character and leadership skills molding me into a more seasoned sonographer over the years. Lastly, and most importantly, my volunteering with ASE has given me the opportunity to give back to the profession that had educated me and assisted in my career growth over the past 15 years. It has truly been an amazing experience, and I will be forever grateful to all that have supported my personal and professional career growth.

Elena N. Kwon, MD, FASE

Since fellowship and beyond, the ASE Scientific Sessions have been a place that has allowed me to meet and reconnect with so many people. As a fellow, I have fond memories of being introduced to important

imagers as a prospective applicant for a 4thyear in imaging or for a future job. I have been fortunate to receive a travel grant from the council as a fellow and have had the opportunity to present orally and have multiple poster presentations over the years. ASE has been a great resource for me in my different roles directing echolabs. The yearly Echolab Director meetings have been very informative, and the exhibit hall has been a great way to demo the different ultrasound platforms or learn about new features and software available. The community that ASE has provided me has also been invaluable. I have always looked forward to the yearly dinners with my former fellows and attendings I knew from my fellowship or 4th year in imaging. I am excited to contribute to ASE by being a part of the Advocacy Committee this year and am honored to be a member at large in the PCHD Council.

Benjamin W Eidem, MD, FASE

From my initial abstract presentation at the Scientific Sessions as a fellow over 25 years ago, I can't help but remember all the individuals at ASE who have shaped and guided my career, all the task forces and committees that I have been able to serve on, and all the leadership roles that have allowed me to more fully appreciate the depth and breadth of our Society. It was one of my highest honors as the incoming president of ASE to appoint members of our Society to vacancies in our committees and task forces. During my presidency, one of my primary focuses continued to be on our membership. My vision during my presidency primarily focused on our membership with 2 key foundational questions: (1) What do individuals want/need to become ASE members, and (2) How do individuals grow as ASE members? These questions in essence constitute the "value proposition" of membership in our Society. I believed and still believe that addressing these questions effectively can be a cornerstone for con-

tinued health and growth of ASE. I also think that it is helpful to remind our members about the depth and breadth of our committees and task forces with hopes of enabling them to position themselves to participate and excel in these opportunities. To do so, I would like to highlight ***ten tips*** that I feel will make each member a successful candidate for various roles in our Society.

(1) Review the current committees and task forces at ASE
The best way to participate at ASE is to have a working knowledge of our various committees and task forces. This can be facilitated by reviewing these on our website. You will find the various responsibilities and charges for each committee and task force listed to give you insights into what each committee or task force does at ASE.

(2) Be flexible in your initial ASE participation
One of the great things about ASE is the opportunity to serve in many diverse committees and task forces over your years of membership. You may feel that some committees and task forces may not be in your ideal skill set or area of interest; however, every committee or task force will afford you the chance to get a wider vision of ASE as well as to network with other members as well as the leadership of those committees.

(3) Be ready and stay informed
While most committee and task force assignments begin after our annual Scientific Sessions, there continue to be additional opportunities for participation throughout each year. Many of these may be ideal for you. So stay informed on Connect@ASE and *Echo* Magazine as well as other social media posts from ASE detailing these opportunities.

(4) Apply for Fellow of the ASE (FASE)
It is a distinct honor and privilege to be a fellow of our Society! I would highly encourage each of you to review the FASE criteria and application process on the ASE website. When it comes to committee and task force assignments, being FASE is a distinct advantage because it demonstrates commitment to ASE.

(5) Be patient
One big piece of advice from my own experiences at ASE is to have patience in your desire and expectations to participate in our committees and task forces. I view my participation at ASE as a journey. Over my 25 years of ASE membership, there have been many committees and task forces that I was interested in; however, for many of these, I often needed to wait a year or two to be assigned to that opportunity. So, view your membership participation at ASE as a journey and be patient for opportunities ... because they will certainly come!

(6) Consider participation in all areas of ASE
In addition to committees and task forces, there are many additional areas to consider for participation at ASE. ASE has 6 councils, each of which has its own governance with several at-large positions available each year. In addition, each council has various opportunities for member participation including their own task forces, writing groups, webinars, and other council-specific activities. Utilizing council participation is a great step to other areas of ASE service. Specialty interest groups (SIGs) also provide an avenue for participation and collaboration. Participation in educational areas of our Society are also incredible opportunities including product development, live courses, review courses, and webinars.

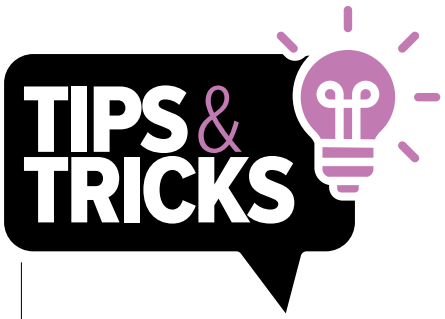
(7) Participate in the ASE Foundation
The ASE Foundation is a wonderful place to become involved at ASE. Global outreach has been a very meaningful and rewarding experience for many members of our Society. Travel grants and scholarships within ASEF enable many members to attend the Scientific Sessions and other activities. Funding of scholarly research is a wonderful mission of ASEF that enables many early career as well as seasoned investigators in our Society to fund their important research efforts. The ASEF also has its own Board of Directors with several at-large positions available. Finally, we can all participate in our Society through philanthropy and giving to the ASEF to enable all their fruitful efforts to continue.

(8) Publish your important work in our flagship journals: JASE, CASE and Echo Magazine
In addition to abstract submissions at the Scientific Sessions, ASE journals offer a diverse opportunity for our members to submit and publish their work. Each journal has a distinct "flavor" in their type of content which is ideal for all our members to have a choice for their submissions.

(9) Explore micro volunteer opportunities at ASE
Micro volunteer opportunities are ideal for all members of ASE who want to start "small", with a limited time commitment needed for participation, but these also enable members to dream "big" for future leadership opportunities in our Society.

(10) Be a local liaison for ASE
Local echo labs and echo societies are foundational to ASE. Being an ASE liaison in your echo lab or local echo society extends the reach and emboldens the mission and strategic reach of our Society. Your advocacy efforts at the local, state, and regional level also can play an enormous role in the future of echocardiography as a specialty as well as ASE as a Society.

In summary, ASE is truly the home for all users of ultrasound. We are very fortunate to have an amazing number of very talented members in all areas of our Society. It continues to be my vision and hope that each of our members can find their ideal areas of participation at ASE that can enable and advance their individual career goals as well as facilitate meaningful interactions with many colleagues throughout our Society.



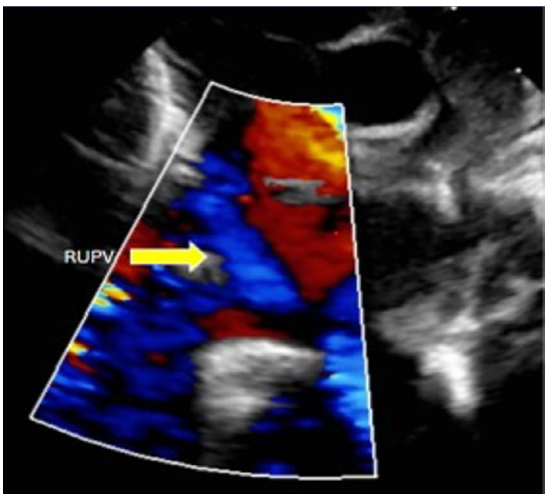
"Make every detail perfect and limit the number of details to perfect."
– Jack Dorsey

As congenital cardiac imagers we appreciate the value of sharing tips and tricks amongst colleagues at our institutions. Considering this, the Pediatric & Congenital Heart Disease Council believes that our section of the Echo magazine may be a great avenue to share our tricks of the congenital cardiac imaging trade with colleagues across the globe. In this article we will focus on tips for imaging the right upper pulmonary vein in various views. We hope you enjoy and find value in these quality improving tips.

FOCUS ON CONGENITAL CARDIAC IMAGING

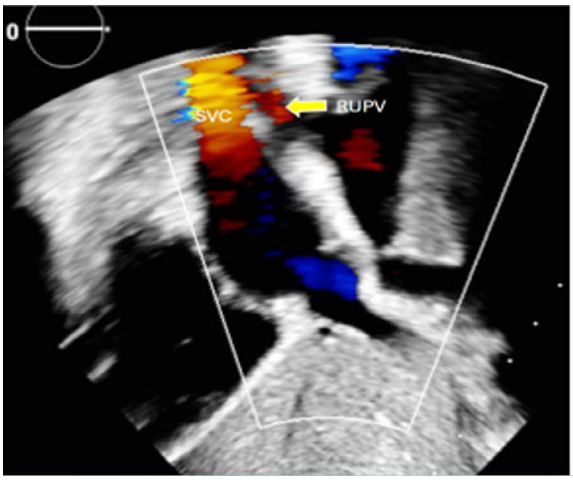
RUPV Imaging tips

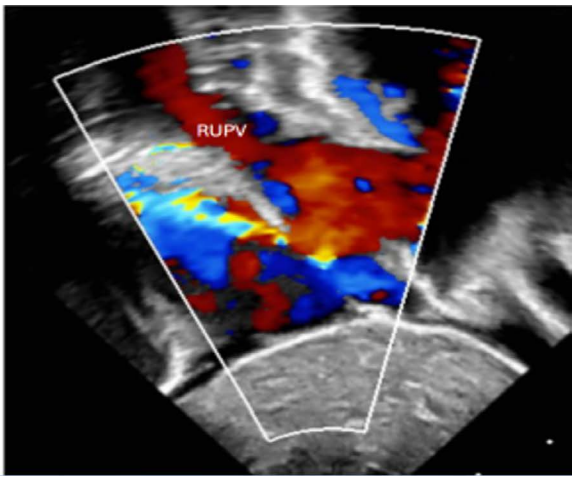
- **Get the RPA as perpendicular to the sector as possible in the high infraclavicular view**
- **Look underneath the RPA to visualize the right upper pulmonary vein**



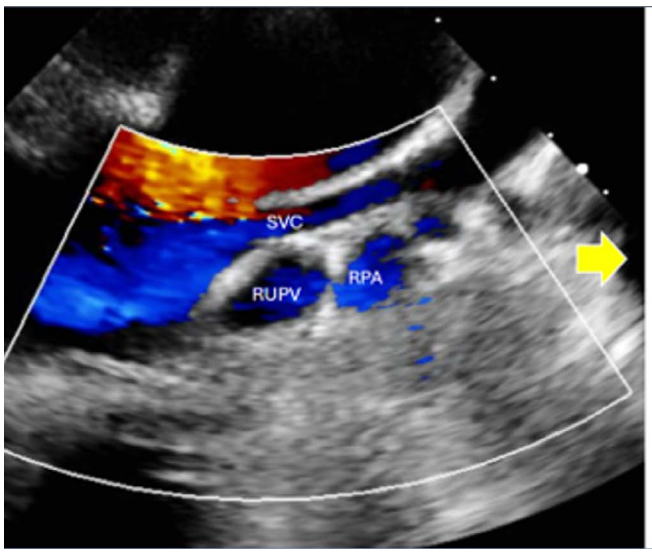
TIPS & TRICKS

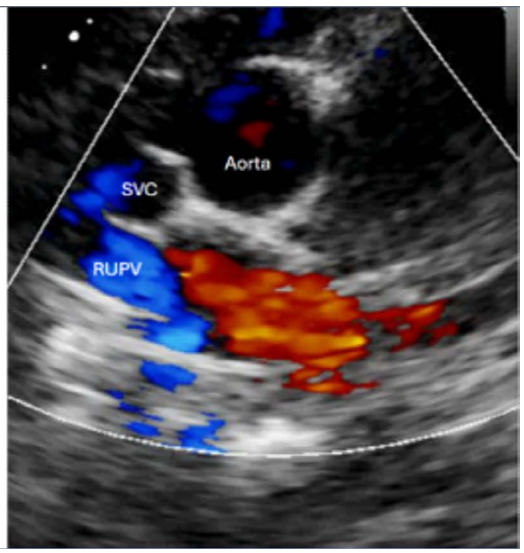
- Visualize the right upper pulmonary vein to the left of the SVC in the subxiphoid short axis view.





- Observe the right upper pulmonary vein in cross section in the high right parasternal "bicaval view" and rotate 90 degrees clockwise to open the right upper pulmonary vein entering the left atrium





THE DYING ART OF TEACHING ECHOCARDIOGRAPHY

Contributed by Bhaskar Arora, MD, FASE, Staff Cardiologist, Portland VA Medical Center, Portland, OR

I distinctly remember the feeling after passing the National Board of Echocardiography (NBE) certification exam, hailed by my seniors as a very challenging test designed to fail cardiologists. I prepared for it, including watching all the board prep videos like everyone had told me. I was surprised that I learned more about echocardiography from watching these videos than I did from the four months of echocardiography rotation in the first two years of fellowship. As proud as I felt about my NBE exam performance, I wondered about the reason behind this knowledge deficit that I wasn't even aware of despite completing two thirds of my training. The initial instinct was to blame myself for not reading all the ASE guidelines early in my fellowship. I went on to complete the remainder of my training and spent more time in the echo lab trying to hone my skills and teach my juniors what I had learned.

My perspective changed once I graduated and started my year of advanced echo fellowship at the University of California, San Francisco. I went into this training with the expectation that I would be learning cool structural TEEs but didn't appreciate the fact that I would be spending a lot of time in the reading room. Initially, I was perplexed that I was spending all this time reading transthoracic studies which was taking away from the structural experience. As the year progressed, I became more familiar with the different faculty in the reading room, many of whom were nationally and internationally recognized echocardiographers. The lab was always busy with well over a hundred studies per day and we kept churning through the TTEs, triaging stress echo, and TEEs without realizing when the day was over. Most fellows and faculty left after 5 p.m. to fulfill other personal and professional obligations but one senior attending Dr. S., known as the Godfather of Echocardiography on the West Coast, stayed behind and kept reading the studies late into the evening. I was warned in the beginning that I should try to escape at the end of the day and not stay late because this attending was notorious for keeping trainees late.

Since I was living apart from my family and had no obligations, I stayed with him and read these studies until we were finished. What surprised me about Dr. S. was the sincerity and discipline when it came to reading the study. He always started with the clinical context, then looked at the vitals, body surface area, and created an impression about the person whose echo we were about to read. He carefully reviewed all the pieces of data and often remeasured the left ventricular mass and volumes, even late in the day. He then opened the images from the comparison study and carefully inspected the variables before making his conclusion which he summarized in a fashion that was

I LEARNED AN IMPORTANT LESSON. HE WAS NOT DOING IT FOR HIMSELF, HE WAS ROLE MODELING THE BEHAVIOR FOR ME AND THAT WAS MY REWARD FOR STAYING LATE.

MY HOPE IS THAT THE FUTURE GENERATION OF CARDIOLOGISTS WILL CONTINUE THIS TRADITION OF READING AND TEACHING ECHOCARDIOGRAPHY IN THE READING ROOM.

helpful in advancing the care of the patient. This level of attention to the detail was stunning, and at times annoying, since I was taught to eyeball the ejection fraction if the Simpson's tracing was poor quality or if I disagreed with the calculated ejection fraction (EF). After watching Dr. S. retrace the left ventricle countless times when he clearly could accurately estimate the EF, I learned an important lesson. He was not doing it for himself, he was role modeling the behavior for me and that was my reward for staying late. He used to say, "a cardiologist is a person with the delusion that they can eyeball the left ventricular ejection fraction."

Fast-forward to 2024, I am now a seasoned attending cardiologist, echocardiography has remained my passion, and I continue to teach fellows and sonographers. I have been recognized and respected for my reading and teaching skills by my trainees and peers and when I think back and reflect on all the things that helped shape my echo reading skills, it is those moments with Dr. Schiller, reading echo late in the evening. To this date, I continue to retrace the left ventricle and keep role modelling the same behaviors hoping that the new generation of cardiologists and imagers will learn to interpret these studies in context of the clinical picture.

What I learned from Dr. Schiller, whether it was a fun fact about echo that you won't find in a textbook, or the power of noninvasive hemodynamic assessment using Spectral Doppler, it can only be learned by sitting next to each other in the reading room. With increasing pressure on clinicians for higher productivity, there is less emphasis on education in the echo lab and unfortunately, many trainees are not getting the 1:1 supervision and mentoring they need. Echocardiography will always remain the primary cardiovascular imaging modality given its unique ability to assess hemodynamics and help understand complex pathophysiology. My hope is that the future generation of cardiologists will continue this tradition of reading and teaching echocardiography in the reading room.

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Keywords: Echocardiography report, Education, Reading room.

Dear JASE Readers,

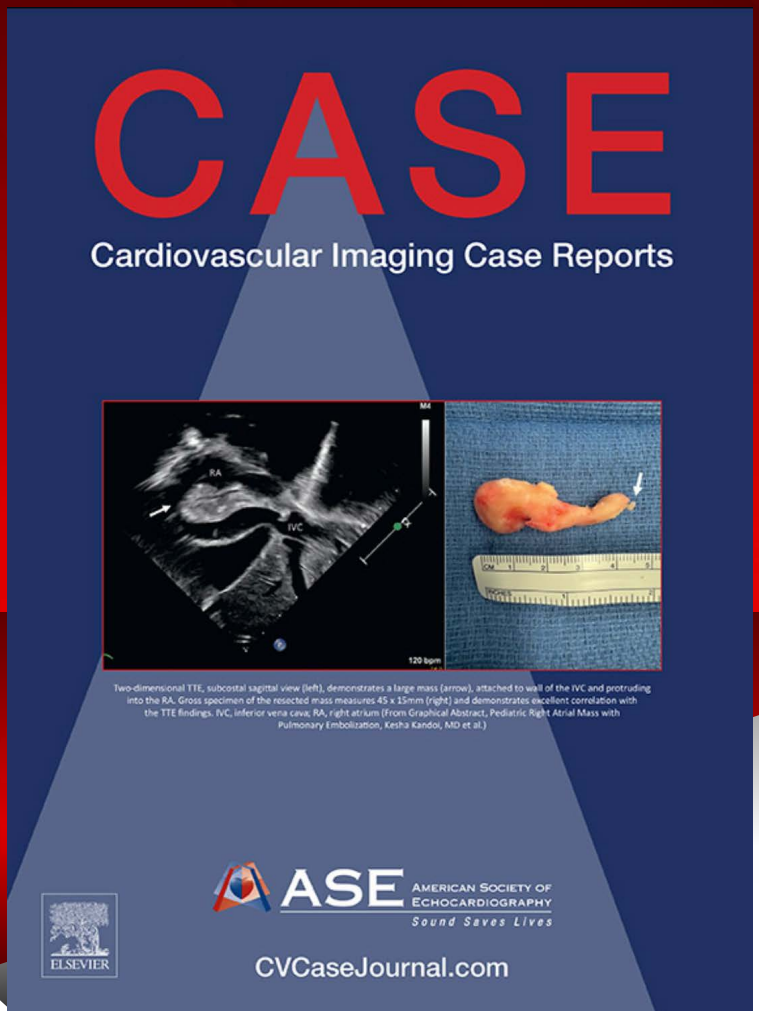
2024 has been a wonderful year for our journal! Both our volume of submissions and article requests increased by 20%.

We have worked to improve the reader and author experience by providing an Author Spotlight, more editorials, and improved graphics. We have published focus issues on the topics of Precision Imaging in Echocardiography and Pediatric, Neonatal, and Congenital Heart Disease.

We continue to receive and publish landmark articles that inform the guidelines and enhance our clinical understanding of cardiovascular disease and wellness.

We appreciate your engagement and support as we seek ways to continue to improve. Keep in touch!

Patricia A. Pellikka, MD, FASE
JASE Editor-in-Chief



Dear CASE readers,

Thanks so much for your wonderful CASE submissions that build the material used every month.

We continue to receive high quality, educationally relevant reports to help us maintain current interpretation and management skills while informing us on new and innovative approaches to care.

Without your engaged and active participation as manuscript authors, care providers, sonographers, technicians, and peer reviewers, CASE would not reach its full capabilities.

The entire CASE Editorial Team looks forward to your next CASE submission, your next peer review, your Sonographer Sound-Off or Unlock The CASE, or LTE.

CASE is your Journal!

Vincent L. Sorrell, MD, FASE
CASE Editor-in-Chief

ECHO

ASE'S MISSION

To advance cardiovascular ultrasound and improve lives through excellence in education, research, innovation, advocacy, and service to the profession and the public.