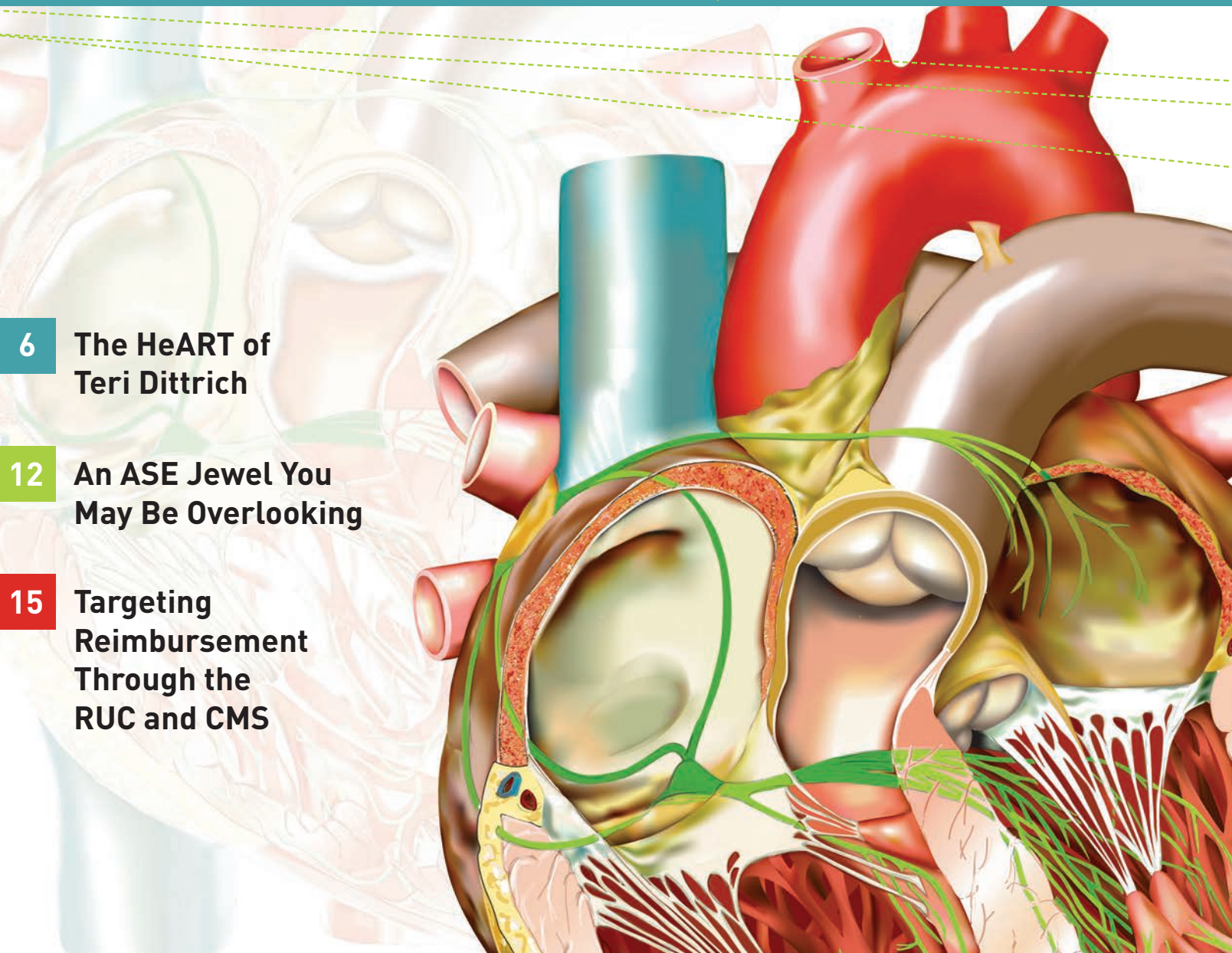


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ECHO

A MEMBER NEWS SOURCE

VOLUME 2, ISSUE 2 | APRIL 2014

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ABOUT ASE

The American Society of Echocardiography (ASE) is a professional organization of physicians, cardiac sonographers, nurses, and scientists involved in echocardiography, the use of ultrasound to image the heart and cardiovascular system. The Society was founded in 1975 and is the largest international organization for cardiac imaging.

ASE'S MISSION

ASE is committed to excellence in cardiovascular ultrasound and its application to patient care through education, advocacy, research, innovation and service to our members and the public.

Our members are the Heart and Circulation Ultrasound Specialists. They use ultrasound to provide an exceptional view of the cardiovascular system to enhance patient care.

COMMENT AND CONTRIBUTE

Like what you read? Have an idea for a future article? We want to hear from you! Email echo@asecho.org.

Managing Editor: Deborah R. Meyer

Contributors: Robin Wiegerink, Meredith Morovati, Irene Butler, Andrea Van Hoeve, Ronna Yates, Cheryl Williams, and Andie Piddington

Guest Contributors: Leo Lopez, MD, FACC, FAAP, FASE, Director of Pediatric Cardiac Non-invasive Imaging, Children's Hospital at Montefiore; Denise Garriss, The Korris Group; Sharon Mulvagh, MD, FASE, Professor of Medicine, Mayo Clinic; Sahar S. Abdelmoneim, MD, Assistant Professor of Medicine, Mayo Clinic; John J. Held, Director of Communications, ABIM Foundation; Noah Liel-Cohen, MD, Soroka University Medical Center and the Faculty of Health Sciences; Haim Silber, MD, Marom Clinic; Richard E. Kerber, MD, FASE, Professor of Medicine, University of Iowa Hospital; and Jonathan Lindner, MD, FASE, Professor of Cardiology, Oregon Health & Science University

The heart that graces the cover of this issue of *Echo* was created by Teri Dittrich, BA, RDCS, FASE.

ASE

MEMBERS:

As I am writing this note we are in the midst of the Winter Olympic Games held in Sochi, Russia. While I marvel at the athletes' commitment to endure years of grinding and repetitive training to reach that level of competition, I also remember that alongside every Olympic athlete is an equally-committed coach – a coach who must help the athlete accept constructive criticism, embrace challenges, and adapt to the changing conditions to reach his or her goal.

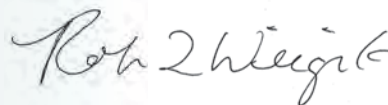
Albeit on a much less glamorous level, association leaders have many of the same challenges as the Olympic coach. We have to find ways to help our members navigate changes in the healthcare field that may impact their ability to reach their goals. And we find that there is an increasing need to continue communicating with our members about such changes in as many venues as possible to ensure that they are prepared and well-informed.

Recently, one of our physician members wrote the following to us:

"I have been happily surprised with my new ASE membership. I joined to get a discount for a meeting, but your website has a wealth of info, lots of resources. I'm delighted to have joined and expect to become more involved in the future."

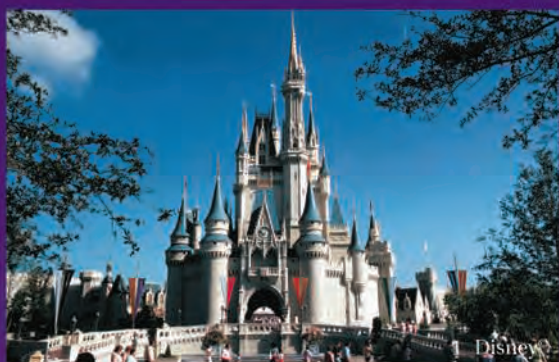
This is heartening to our leadership. We are striving to help each of you and are pleased when our efforts and your results coincide in a win for all parties. In this *Echo* issue we are covering some new topics: how to use the Connect@ASE Image Library to upgrade your presentations and improve your knowledge and how an FDA Cardiovascular Imaging Data Standards project may impact your reporting in the future. This, along with a personal glimpse into the pediatric echocardiography Fireside Chat at the upcoming Scientific Sessions and a piece about how ASE Guidelines are impacting a new echo school curriculum in Israel, is aiming at helping our readers stay informed about current happenings in the field.

Thank you for your continued membership, and please let us know what else we can do as your "coaches" to help you reach the podium!



Robin Wiegerink, MNPL, ASE's CEO

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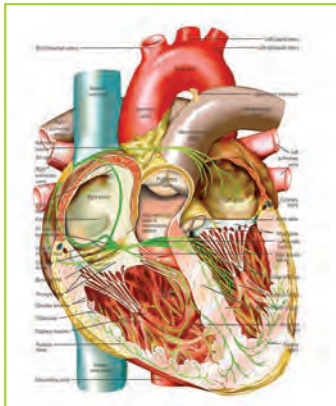
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Editor's Note:

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.

THE HEART *of* TERI DITTRICH

Contributed by Deborah R. Meyer, ASE, JASE Managing Editor



Teri Dittrich, BA, RDCS, FASE went to high school at a time when art classes were still a part of the core curriculum. "I always seemed to excel at art and was always told I had the insight for it," said Dittrich, who has been a member of ASE since 1990 and created the heart that is on the cover of this edition of *Echo* magazine. "It also made me fulfilled to do it."

Heading off to college at San Diego State, Dittrich had to decide between focusing on

science, to which she was also drawn, or art. "Art sounded like more fun."

Four years later, as she was getting ready to graduate with her BA in Fine Art with an emphasis on painting and printmaking, Dittrich was considering getting a Master of Fine Arts. "Then I asked myself, 'what is that going to do for me?' I knew that I needed to get a real job and make art my hobby, not my profession," said Dittrich.

Science, which had taken the back seat in college, now became a driving force in Dittrich's life. She started taking nursing prerequisites. One day, Grossmont College Cardiovascular Thoracic (CVT) program director Rick Kirby came to class and gave an overview of the CVT program.

"I was very interested in the invasive arm of the program and changed my course of study to obtain the CVT prerequisites. In 1988, the Grossmont noninvasive program basically just had what I think was a big A-mode/B-mode machine that didn't really excite me too much," Dittrich said. "But, as luck would have it, at some point in the first year of the CVT program at the University of California, San Diego (UCSD) clinical site, I was able to see 2D imaging with color flow on the 'new' HP 500. Immediately, I realized that all of my artistic desires could be satisfied by echocardiography."

Dittrich completed her registry in 1990 and worked for UCSD Medical Center for several years.

"Every time you are doing an echo on a patient, you are creating a work of art," Dittrich said.

Dittrich explained that ultrasound can be an incredibly artistic imaging modality. First, it is a very sophisticated and high-powered computer with many settings for image optimization. The specific imaging modes are 2D (black and white or even-colored B-mode), color flow Doppler, and spectral Doppler. The color and 2D-modes are layered and the images are moving and alive. "This is a person's story. As you become more skilled over time, you may start to experiment with all of the available settings and combination of settings, and if you are a little artistic or have photographic skills and notice things like grayscale (dynamic range), texture (speckles), contrast, color, hue, brightness, etc., you can start to make the

standard diagnostic image into a beautiful conveyance of diagnostic information. And, it's all done with sound waves so that kind of adds another aspect to the technology that I find appealing. It's very safe and non-toxic, without radiation to the operator or the patient. It can fulfill one's artistic desires for many years, as it has for me."

Dittrich said that enhancing the images for diagnostic interpretation works to a certain extent. Getting too creative is not a good idea. "But if you stay on the Ansel Adams side of the spectrum, you will be loved and revered by the doctors who interpret your studies. Especially if you are knowledgeable about the ASE guidelines and recommendations too," said Dittrich, who was ASE's Sonographer Volunteer of the Month this past February.

Dittrich left academia to work for biotech companies in clinical trials that involved echo. "They didn't understand echo even though they were using it as endpoints in their clinical trials, and I started to realize that they all needed help artistically, showing them what the echo was representing," Dittrich said. She decided that a mix of illustrations and moving images would help and set out to figure out how to show this. "If I highlighted an area of an echo pink for a few seconds, or annotated it or did a voice over, then I had to use a bunch of different computer programs like Final Cut Pro, After Effects, and Photoshop." She knew nothing about these programs when she started.

"Learning how to do this was a bit like learning to surf or golf," said the current golfer and former surfer. "At first it beats the hell out of you. Then the more you do it, the better you get. As soon as you get it, it is awesome. Then everything builds on itself from that point."

The heart she produced for the *Echo* cover grew out of her desire to learn how to make a medical illustration using the computer drawing programs.

As her skills grew, friends, family, and biotech companies began asking her to create a range of drawings and documents. Her husband is a doctor and often will ask Dittrich to create images for his presentations and research papers.

Like her former days as a brush-in-the-hand artist, Dittrich often finds herself working late into the night, enamored with the creative process.

She has returned to academia, working as a senior research sonographer at UCSD's Sulpizio Cardiovascular Center in San Diego, mainly performing investigator-sponsored clinical trials and recently strain rate imaging, occasionally doing clinical studies. Once the student, Dittrich is now an adjunct instructor for the Grossmont CVT noninvasive program. Occasionally she advises biotech companies incorporating echo-imaging arms into their drug or device development.

Since 2008, Dittrich has been an incredibly active volunteer on ASE's IT Committee, bringing her wide range of skills to help with the creation of the iPhone/Android ASE Guidelines and AUC apps and anything else her committee needs done.

"A lot of people have the creativity to make art, no matter the medium, but are afraid to do it. I say be brave; you can do it." ♥

Converting Images to Information:

Setting Medical Research Cardiovascular Imaging Data Standards

Contributed by Andrea M. Van Hoefer, ASE's Vice President of Research

A picture is worth a thousand words. For echocardiographers, this saying is especially true. A cardiovascular ultrasound image of the heart can generate countless pieces of health information about a patient's response to a cardiotoxic agent, an obesity drug, or an interventional device. Yet currently, there is no standard way for clinical trial sponsors to submit cardiovascular imaging data to the U.S. Food & Drug Administration (FDA). This can negatively impact their process of evaluation for safety and effectiveness of drug and device products, slowing regulatory decision-making and delaying innovation and the release of new discoveries to the public.

In September 2011, experts from all subspecialties in cardiology, radiology, academia, informatics, clinical research, clinical care, federal government, professional societies, and industry met to launch the Standardized Data Collection for Cardiovascular Imaging Initiative. ASE was there, and together with the American College of Cardiology (ACC), American Heart Association (AHA), American College of Radiology (ACR), and imaging societies representing the entire domain of cardiology and radiology, agreed to participate in a multi-year effort to create a standard way for sponsors to submit cardiovascular imaging data to the FDA.

WHAT IS A DATA STANDARD? A data standard is an agreed-upon set of rules that allows information to be shared and processed in a uniform and consistent way. Building a data standard includes establishing and defining the types of data that may be collected in a study, along with a range of permissible values for each piece of information, verifying scientific validity by referencing back to current practice guidelines and standards, and finally obtaining consensus on format and content through national standards organizations like the Clinical Data Interchange Standards Consortium (CDISC) and Health Level Seven International (HL7).

WHY IS THIS WORK IMPORTANT? Because data standards are not just applicable to clinical research and device development – they define clinical work as well. Structured reporting systems, decision support tools, and electronic medical record systems all rely on universal data standards. Pamela Douglas, MD, FASE, Past President of ASE and Co-Chair of the Initiative, explains:

“A standard set of data elements is like a dictionary. You may not use every one in describing the information learned from each echo, but when you do use them, everyone has the same understanding about how it was derived and what it represents.”

Having a single set of data elements for echocardiograms means we can be sure that we are always speaking the same language.”

Representatives from ASE, along with those from the FDA, National Institutes of Health (NIH), industry, and imaging societies including the ACC, ACR, AHA, American Society of Nuclear Cardiology (ASNC), North American Society for Cardiovascular Imaging (NASCI), Society of Cardiovascular Computed Tomography (SCCT), Society for Cardiovascular Angiography and Interventions (SCAI), and the Society for Cardiovascular Magnetic Resonance (SCMR), worked together to identify and define critical data elements across cardiovascular imaging. Content workgroups were developed, and each society provided staffing and operational support

Converting Images to Information:

Setting Medical Research Cardiovascular Imaging Data Standards, Cont.

for that group. ASE led the valves and hemodynamics workgroup, but ASE members were also involved in cardiac structure and function; stress testing, perfusion and metabolism; coronary plaque and anatomy; pericardium and vascular; and congenital defects.

After two years of work, over 500 critical data elements for cardiovascular imaging research were identified. In the spring of 2013, those elements were submitted to HL7 for feedback. HL7 represents the communication standards by which electronic health information is shared, and their feedback, along with that of the FDA, helped prioritize over 200 TTE-specific elements for future development.

ASE is taking the lead in finalizing these TTE-specific data elements and plans to produce a white paper for reference by the clinical community. ASE has also engaged CDISC, the standards organization that represents the research industry. Their data

model is the regulatory standard for clinical trial submissions to the FDA. Together, the standards defined by CDISC and HL7 express how research data is acquired, exchanged, submitted, and archived. ASE is working to ensure that this standard will soon include a means to report TTE-specific cardiovascular imaging data.

Reinforcing the value of echocardiography as a clinical and scientific tool is crucial to ASE's mission.

By working to harmonize and improve efficiency in the regulatory submission process, this effort will serve to improve medical research across the entire spectrum – from pre-clinical research to healthcare delivery – and advance clinical decision-making and ultimately, patient care. ❤️

please save the date

ASE Foundation's
5th Annual Research Awards Gala

Saturday, June 21, 2014
The Nines | Portland, Oregon

In celebration of the 25th Anniversary of ASE's Scientific Sessions, the gala will feature a silver masquerade theme.

Want to join the fun and support echo research? Individual tickets and tables available online at asefoundation.org/gala. For additional questions regarding the event, contact gala@asecho.org.

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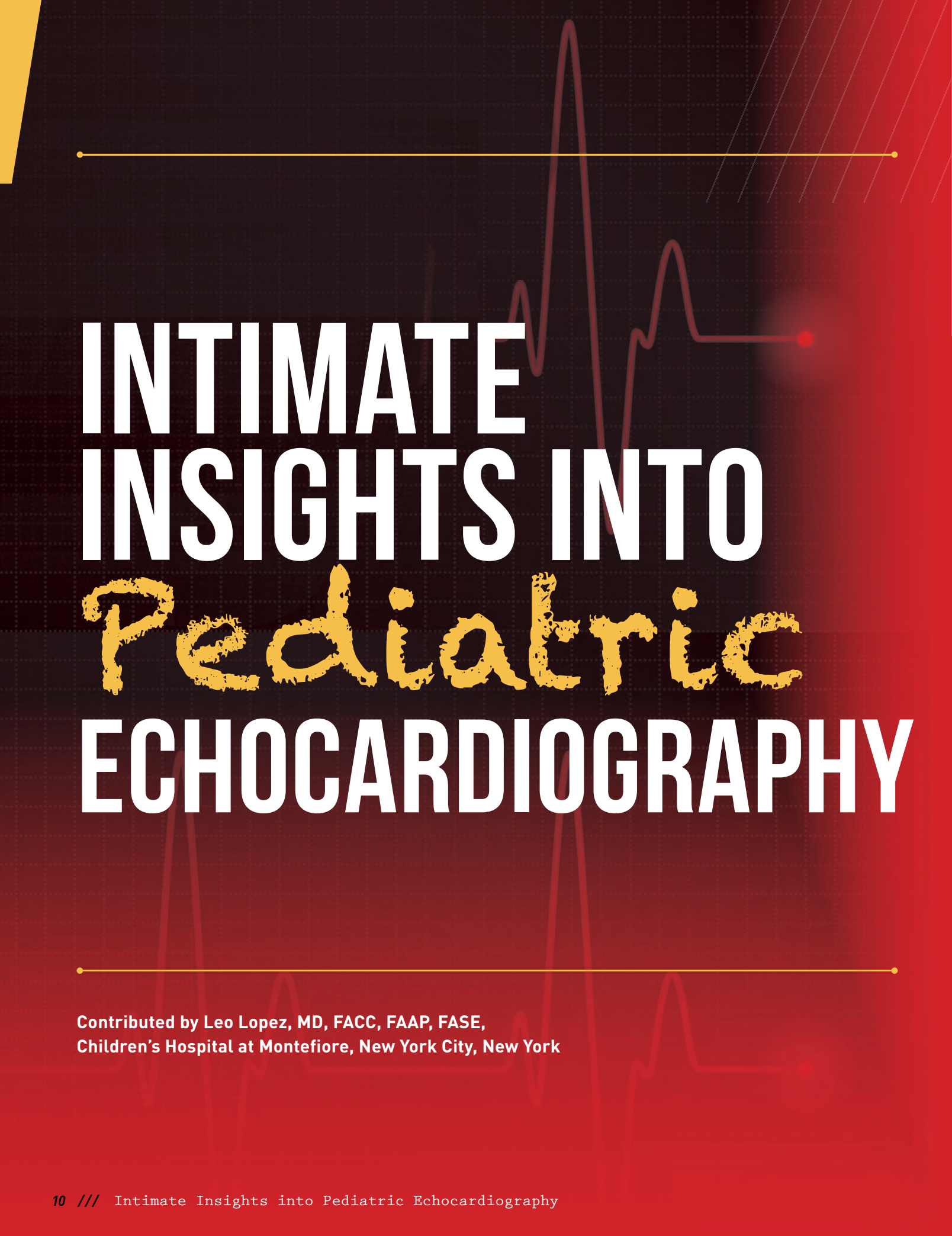
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INTIMATE INSIGHTS INTO *Pediatric* ECHOCARDIOGRAPHY

Contributed by Leo Lopez, MD, FACC, FAAP, FASE,
Children's Hospital at Montefiore, New York City, New York

Pediatric and congenital echocardiography has a long and colorful history, and many of us in the community have had little or no exposure to the pioneers who helped to establish and shape the field. Six years ago, the ASE Council on Pediatric and Congenital Heart Disease's representative on the ASE Scientific Sessions Program Committee established a tradition which has become a favorite component of the program at the annual Scientific Sessions – the Fireside Chat.

These sessions have honored leaders in the field of pediatric and congenital echocardiography during one-on-one interviews, reminiscent of the old television documentary series "This Is Your Life." During these sessions, the interviewers have examined various aspects of the lives of each honoree, particularly as they relate to the history of pediatric cardiology and echocardiography. All of the Fireside Chats have included very personal discussions of the honorees' reasons for becoming involved with the field, the choices they made along the way, the mentors and role models who shaped their careers, the students and colleagues who have had the privilege to learn from and work with them, and the impact of their career choices on their lives and their families.

The first Fireside Chat honored Dr. Roberta Williams with Dr. Peter Frommelt as the interviewer, giving all of us a candid and humorous glimpse into the early days of echocardiography, particularly from the perspective of a female pioneer in the male-dominated world of pediatric cardiology. Dr. Richard Van Praagh from Boston was interviewed the following year by Dr. Ira Parness in a beautifully touching exploration of the life of the founder of the segmental approach, including his enduring partnership with Dr. Stella Van Praagh and their efforts to educate the world about cardiac morphology. This Fireside Chat was especially memorable as it ended with an extended and well-deserved standing ovation for Dr. Van Praagh. The third year explored the accomplishments of Dr. Abraham Rudolph, interviewed by Dr. Mike Brook, where we all learned what it means to be an academic pediatric cardiologist, particularly in this world of increasing clinical demands. During the next Fireside Chat, Dr. Wayne Tworetzky interviewed Dr. Norman Silverman over a bottle of wine, reminiscent of Dr. Silverman's teaching sessions with dozens of fellows over the years. At this session, we heard of Dr. Silverman's adventures as a pediatric cardiologist emigrating from South Africa to the United States and celebrated his many

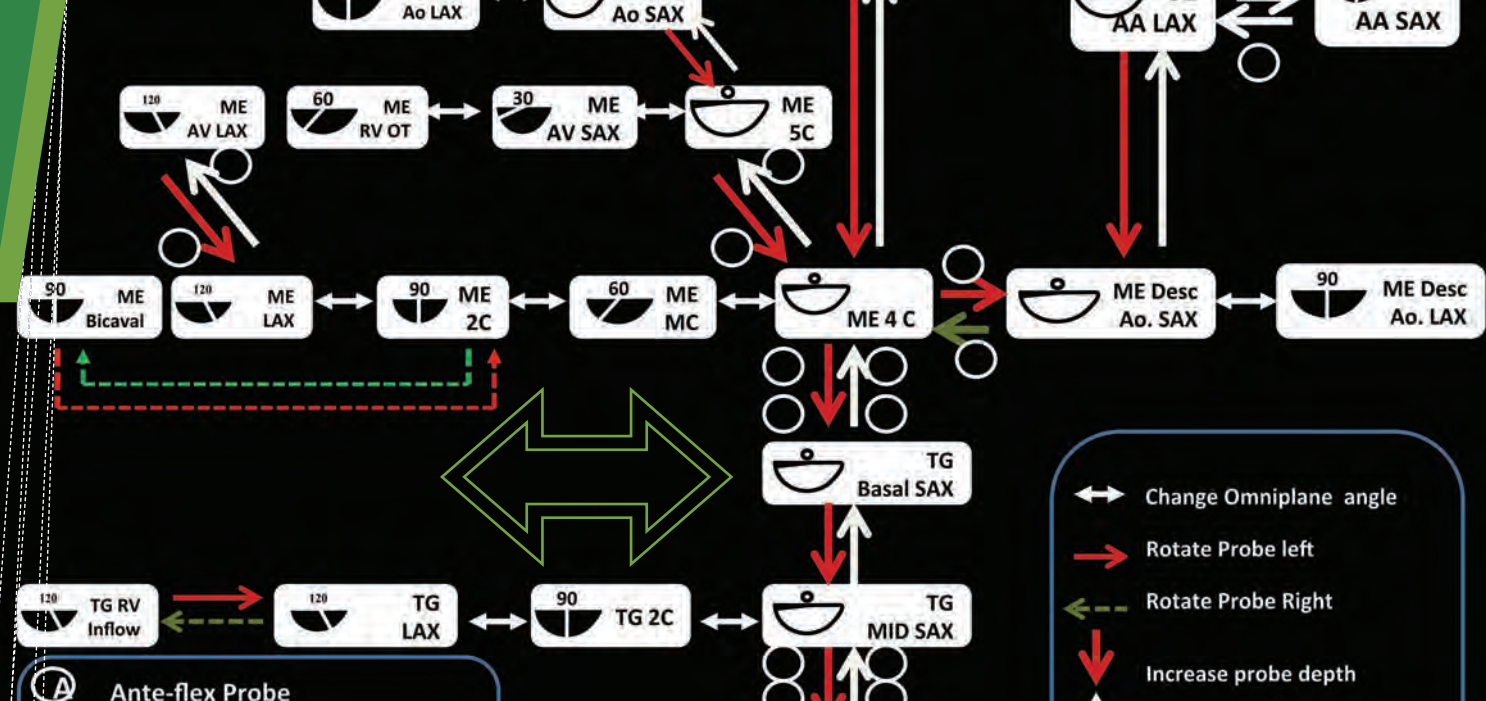
years as teacher and mentor to pediatric cardiologists from all over the world. And last year, Dr. Jeff Smallhorn, interviewed by Dr. Luc Mertens, showed us the importance of having a life outside of pediatric cardiology, mainly in terms of family and other loved ones.



David Sahn, MD, FASE, of Oregon Health & Science University, will be honored in this year's Fireside Chat.

This year's Fireside Chat will honor Dr. David Sahn, which is especially poignant as we celebrate the 25th anniversary of the ASE Scientific Sessions in Dr. Sahn's hometown of Portland, Oregon. Dr. Sahn is one of the earliest and most prominent pioneers in echocardiography, who, during the course of his career, has been on the ASE Board of Directors since 1982 and served as the ASE President from 1987 to 1988. He has published over 430 peer-reviewed articles and over 50 book chapters, presented over 740 abstracts, and mentored over 230 students, physicians, and research associates. The interviewer will be Dr. Lisa Hornberger, who worked with Dr. Sahn early in her career when she was a medical student and he was the Division Chief of Pediatric Cardiology at the University of California in San Diego, and this session will surely give us a lively and entertaining view of his life. Perhaps we might even hear Dr. Sahn play a song or two on his guitar. So please join us as we celebrate Dr. David Sahn's career, and all of pediatric and congenital echocardiography, at the Fireside Chat immediately following the "Fetal Echo and Prognosis Session" that begins at 3:30 p.m. on Monday, June 23.

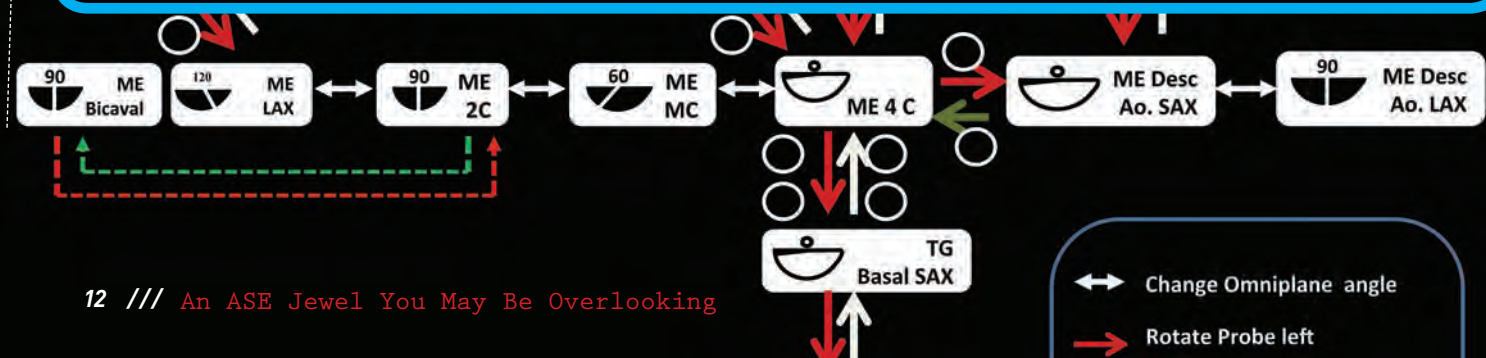
Dr. Lopez is Director of Pediatric Cardiac Noninvasive Imaging at the Children's Hospital at Montefiore in New York City. He is currently the Chair of the ASE Pediatric and Congenital Heart Disease Council. ❤️

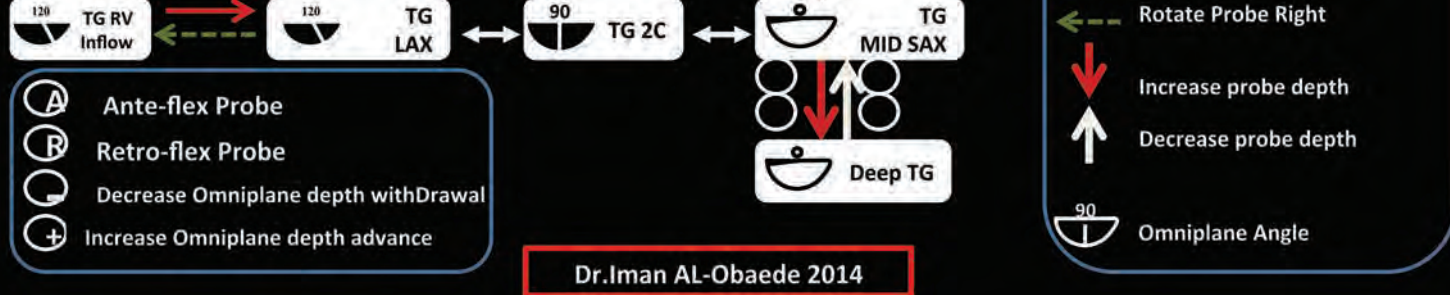


An ASE Jewel You May Be Overlooking

ASE's Image Library – Are You Using This Valuable Member Asset?

Contributed by Meredith Morovati, MBA, ASE's Vice President of Membership and Fellowship





Does this sound familiar? You are looking through your computer for a particular image of an interesting case but you can't find it. So you move to a dusty CD of old presentations in your office to locate it. No luck. Google doesn't turn up anything suitable either. Now, you are late to your meeting where you were planning on showing this great image to your colleagues.

ASE member Vicente Font, MD, FASE from Ft. Lauderdale, FL described a similar personal scenario. "I was looking for an example of a cardiac tumor. I thought I had good examples." But, after not having any luck, he then tried the ASE Image Library where he said he found "better studies that had better quality and brought more information to the table."

Many members are using the Image Library to help update their talks, review cases, or use as examples when discussing issues with staff. We have received many rave reviews from members who have found the ASE Image Library to be relevant and easy to use. One member said, "The Library will provide you with a wide spectrum of images that can address any clinical problem. You can use them for teaching or your own self-improvement. It is a valuable resource for trainees and the advanced echo practitioner alike."

Mr. James Simon, a sonographer in Syracuse, NY, agrees: "As a fairly new sonographer, I am excited by the vast knowledge that is available and by the challenges that cardiovascular imaging presents. So the Image Library gives me not only clinical information, but a diversion as well."

"I try to use images that I or my colleagues have acquired," said Mr. Simon. "However, for 3D imaging I utilize the Library as we do not currently have that capability."

Maureen McDonald, MBA, RDMS, RDCS, FASE, a clinical cardiac ultrasound instructor at Thomas Jefferson University in Philadelphia, concurs. She finds the ASE Image library has images and cases that help her students see things differently. "I find the Library has some interesting cases that really make

the students think 'outside the box.' In addition, the cases also have a brief patient history which I also find is a useful tool in their assessment of the image(s)."

The Image Library is also an evolving resource. We encourage members to upload their own images and presentations to help others. Basil Saeed Al-Dlaemi, MD, from Baghdad, Iraq has recently uploaded images to the ASE Image Library from a recent thesis and said he received many positive comments from other members.

"I only wish there were more cases to choose from," Ms. McDonald added. "The Library is easy to access...at the click of the mouse."

"We as members of the ASE have an important responsibility to share good videos, images, and clips with each other," Dr. Font noted.

Dr. Al-Dlaemi agrees. After his positive experience sharing images, he now plans to share more in the future including a PowerPoint he recently presented in his cardiac center in Iraq.

The Image Library is designed to be easy to use. You can upload a variety of formats and download them as well. Key words can be used to help other members find your file. (Tip: Don't use "interesting case" as a key word. Use something specific like "Valvular Regurgitation.")

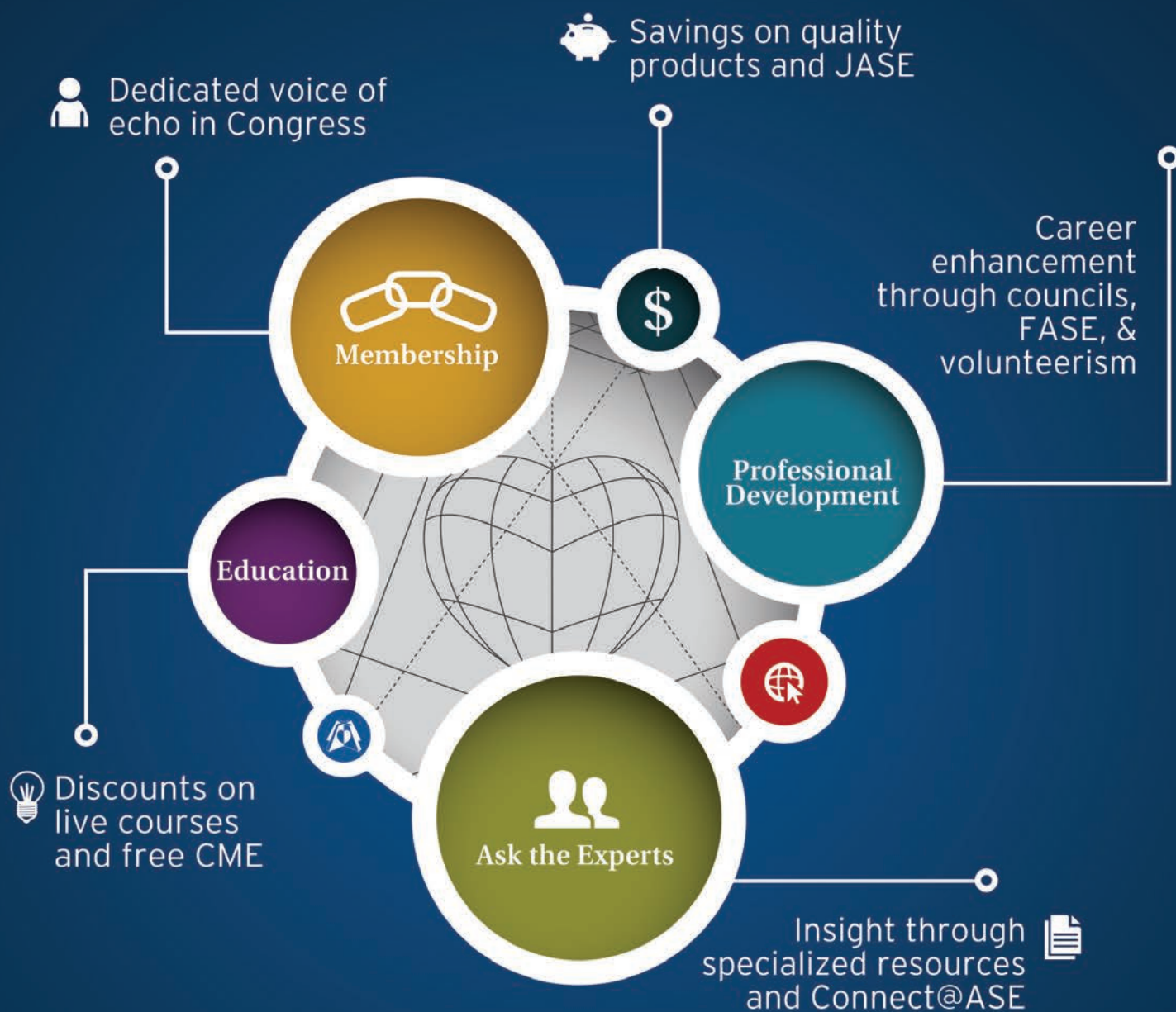
Some, like Mr. Simon, start by perusing the Image Library out of curiosity. And, once they have had an experience uploading, they realize how easy it is to share images. Mr. Simon noted, "I think that it is easy to navigate, upload to, and search the library. The system seems to work well." Dr. Font agrees, "I think it is a good system. I hope people realize the potential because it is a good platform."

Go to your member portal and get into Connect@ASE today and view the ASE Image Library! Upload an image to share with your colleagues and help improve the content. Though the ASE Image Library may not completely replace your personal collection, you may be able to put away that dusty box of CDs. ❤️



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TARGETING REIMBURSEMENT Through the RUC and CMS

Contributed by Denise Garriss, Principal at The Korris Group

There is nothing intuitive about the process by which Medicare determines payments for physicians. It is a complex and onerous practice. Even as the healthcare landscape radically changes two factors in establishing Medicare payments continue to be critical to the process: the AMA/Specialty Society Relative Value Scale Update Committee (RUC) and the Centers for Medicare & Medicaid Services (CMS).

The RUC is a unique, multi-specialty committee comprised of 31 members. This committee is tasked with making relative value recommendations to CMS for new and revised codes, as well as annually updating relative value units (RVUs) to reflect changes in medical practice.

This is accomplished by conducting surveys for physician work and practice expense (clinical labor, supplies, and equipment). Survey results are submitted to the AMA RUC, which reviews and decides whether to accept, reject, or modify the recommendations. It should be noted that the RUC is not a federally chartered advisory body and operates under its first amendment rights to provide recommendations to CMS regarding how healthcare providers should be paid.

The RUC's recommendations to CMS hold considerable influence on the relative values assigned to physician services and, as a result, how much physicians are paid. CMS expects allowed expenditures under the Medicare physician fee schedule to exceed \$546.7 billion this year, and the RUC will be instrumental in determining how those dollars are parceled out.

CMS has historically accepted 80 percent or more of the RUC's recommendations. Given that the average cardiologist's patient mix is 40-50 percent Medicare, the RUC is likely to have a direct influence on approximately half of your income.

The real impact of the RUC is even bigger when one considers that many other payers tie their fee structure to Medicare's – approximately 85 percent of private payers and 69 percent of Medicaid programs, according to one recent survey.

ASE is actively engaged in developing the recommendations submitted to CMS. The society works with the other specialty societies in crafting the surveys to ensure that they are pertinent to the services being reviewed. During the survey process ASE works to engage survey participation, since low participation may result in inaccurate and unfair data. When the RUC meets, ASE is committed to guaranteeing that all compelling evidence is presented. ASE has retained the services of a consultant who works with ASE members to ensure fair and appropriate reimbursement.

The latest echocardiography codes revalued by the RUC resulted in maintaining the current valuation: CPT code 93308, 93320, 93321, and 93325. In an environment where most values for codes reviewed by the RUC are decreased, these results are significant victories. ASE was also instrumental in the adoption of an addition of a code to describe echocardiography, transesophageal (TEE) concurrent with guidance of a transcatheter intracardiac or great vessel(s) procedure that is currently being valued.


ASE was able to have representation before the RUC's Practice Expense Review Committee to introduce the concept of an "ultrasound room." The "room" updated the cost calculated for space and equipment needed when providing high quality cardiac ultrasound. Prior to this updating, cost was based on data submitted some 20 years ago in the pre-digital age and did not factor in today's state-of-the-art technology.

ASE then worked with the entire RUC and CMS, and after the culmination of several years of concentrated effort, CMS finalized the inclusion of an "ultrasound room" in November of 2013.

This change translated into significant increases for several echocardiography codes in non-hospital settings. With RVUs increasing by 23% for the "Technical Component" or "TC" for the most commonly performed echo services, TTE with spectral and color Doppler CPT 93306, and a 15% increase in global payment. Medicare payment for stress echo (CPT 93351) is in the same range, 23% increase for the TC and 14% increase for the global service.

ASE is committed to advocating for high quality ultrasound practice and appropriate regulation and reimbursement. The society's work with the RUC and CMS is an important factor in guaranteeing fair rates and helping our members provide their patients the care they need.

Denise Garriss is a Principal at The Korris Group and is retained by ASE to assist with ongoing strategic activities to maintain and improve coverage and reimbursement for echocardiography services. ❤



VOLUNTEERS *in the* SPOT LIGHT

Contributed by Irene Butler,
ASE's Vice President of Health Policy

//////

ASE is very fortunate to have volunteers who are incredibly dedicated, hardworking, and willing to share their expertise with our organization. Their commitment is the basis for most of ASE's victories. Often these volunteers work behind the scenes, and so we would like to focus on three ASE members, who over the past few years have been crucial to some of ASE's advocacy successes, and provide them with some limelight for their efforts.

ASE is working hard to ensure the voice of the echo practitioner is heard on issues related to coding and reimbursement. To achieve this goal, ASE must have solid representation in the American Medical Association's House of Delegates (HOD), the Relative Value/Update Committee (RUC), and the Current Procedural Terminology (CPT) Editorial Panel.

As ASE's AMA delegate for several years, Peter Rahko, MD, FASE has provided a steady presence and was instrumental in securing a seat in the AMA's HOD in 2013. Due to his efforts, ASE now is a full member with broad membership benefits. Dr. Rahko continues to attend two meetings annually as the ASE delegate, each necessitating his presence for four to five days and requiring numerous hours of preparation. His time and hard work ensure that ASE has a voice in the largest association of physicians and can participate on several key committees that help guide medical practice today and in the future.

Another volunteer, Michael Main, MD, FASE, has represented ASE on both the AMA's RUC and CPT Editorial Panel for close to two years. In this role, Dr. Main works to ensure that codes are appropriately valued and members receive the payments that they have earned. Working with the Advocacy Committee and the Society's RUC contractor, Dr. Main led ASE's effort which resulted in the inclusion of an "ultrasound room" valuation allowing for significant increases to echo payments. Additionally, in an era when the RUC routinely decreased the value of codes, they were able to present compelling evidence to uphold the current value for CPT Doppler add-on codes 93320, 93321, and 93325. Dr. Main is now collaborating with several other members to develop a new interventional TEE code. During these particularly challenging economic times, this has proven to be a very demanding but rewarding volunteer assignment.

Overseeing all of these efforts and every other aspect of ASE's advocacy work is David Wiener, MD, FASE. As ASE's Advocacy Chair, he is asked for his input on every issue that impacts advocacy. During these turbulent times, the number and range of topics can be daunting. Dr. Wiener leads a monthly advocacy conference call to assess and strategize on the various threats that arise. Just a few issues that he has managed so deftly include private payer matters, ASE's partnership with the Choosing Wisely® campaign, involvement in Capitol Hill fly-ins, ASE's participation in a variety of coalitions and collaborations, legislative initiatives, and regulatory recommendations and actions.

Dr. Rahko, Dr. Main, and Dr. Wiener have each worked tirelessly on behalf of ASE. **Their efforts have resulted in victories that benefit echocardiography and help ensure that quality healthcare is provided.** And, they are representative of our larger volunteer workforce as ASE is privileged to have many volunteers who work together to *advocate for an environment of excellence in the quality and practice of cardiovascular ultrasound.* ♥

Thank you to all our volunteers!

Enhanced Cardiac Ultrasound: Present & FUTURE

Contributed by Sahar S. Abdelmoneim, MD, MBBCh., MSc, MS, FESC, and Sharon L. Mulvagh, MD, FASE, FACC, Mayo Clinic, Rochester, Minnesota

It has now been over two decades that we have had access to commercially available products to **enhance** cardiac ultrasound images. These products, collectively termed "ultrasound contrast agents," (perhaps an unfortunate label, as they have been frequently mistaken as being akin to radio-opaque contrast materials, which they most definitely are not), have effectively rendered extinct the Achilles heel of echocardiography, the "technically difficult echo (TDE)." Ultrasound contrast agents are composed of tiny microbubbles, less than the size of red blood cells and stabilized from osmotic collapse in the circulation by lipid or protein shells and a minute amount of inert gas. During transthoracic echocardiography, these microbubbles interact with and reflect ultrasound in a nonlinear manner unique from the surrounding tissue, such that they are readily visualized within vascularized structures. Their applications in transthoracic echocardiography have led to emergence of a novel "vocabulary" to define their appearance and function: after an intravenous injection of less than a few microliters, we first see the

microbubbles in the right heart, and then after transpulmonary passage, their appearance in the left heart. We term the appearance in the left ventricular cavity "left ventricular opacification" (LVO), which then permits distinct "endocardial border definition" (EBD), and improved assessment of wall motion and thickening. LVO and EBD enable determination of left ventricular function in patients with TDE, such that the feasibility, accuracy, and reproducibility of echocardiography is significantly improved, preventing the need to resort to alternative imaging modes, or worse, missing or making the wrong diagnosis. Thus, LVO has a major impact on the performance and quality of echocardiography by conversion of a non-diagnostic to a diagnostic study, increasing the number of interpretable segments, increasing the percentage of interpretable studies, decreasing the inter-observer variability,¹ improving interpreter rate of learning and confidence, improving the accuracy of left ventricular ejection fraction (LVEF) and volumes and ultimately guiding clinical care.² Clinical management examples in cardiovascular practice where accurate LVEF and volume measurements

are essential include: determination of appropriateness for device implantation in patients with ischemic cardiomyopathy; serial testing while monitoring for LVEF changes during potentially cardio-toxic chemotherapy; and identification of structural and functional changes related to severe valvulopathies and optimal timing of surgical intervention. **Figure 1** illustrates an example before and after enhancement in which microbubble agent use demonstrates uniform LVO permitting complete EBD, and accurate tracings for quantitative assessments of LVEF and volumes.

Beyond these "blood pool" assessments of ventricular function in resting and stress conditions, the presence of microbubbles in the circulation enables a plethora of cardiac conditions to be detected, including LV structural abnormalities (apical hypertrophy, noncompaction, LV apical ballooning), complications of myocardial infarction (pseudoaneurysms, ruptures), and intracardiac thrombi, tumors and masses, which can be evaluated in any cardiac chamber.^{2,3}

Enhanced Cardiac Ultrasound: Present & FUTURE^{cont.}

However, microbubble enhancement of cardiac images does far more than make “pretty pictures.” Indeed, the real value of the utilization of these enhancement agents is that their use translates into improved patient management in a cost-effective manner. LVO has been shown to alter drug management in 10% of patients and avoid additional diagnostic procedures in 33% of patients, with the highest impact seen in hospitalized intensive care unit patients (cost-benefit analysis showed a significant savings of \$122/patient).⁴

So valuable is the use of these agents that our professional and accrediting organizations, American Society of Echocardiography (ASE), International Ultrasound Contrast Society (ICUS), and Intersocietal Accreditation Commission (IAC) – Echocardiography, have recommended and/or mandated that the use of “echo contrast agents,” and the appropriate ultrasound imaging equipment to detect them, is required for echo laboratory accreditation.

Indeed, the evolution of this essential technique is a true “requited” love story, which is in danger of becoming “unrequited.” With the simultaneous development and availability of microbubbles engineered for ultrasound enhancement, specific ultrasound imaging modalities have been developed for their detection. These modalities, collectively termed “multi-pulse tissue cancellation techniques,” are also ubiquitous and commercially available, readily accessed through awareness of vendor-specific “knobology” [or, more relevantly, “screenology”]. Ultrasound imaging to detect microbubbles is done

at lower acoustic output of the ultrasound machine, the acoustic output parameter measurement being the “mechanical index” (MI), and is termed “low mechanical index” imaging. This knowledge and awareness is, however, unfortunately not ubiquitous, and much like any good relationship, takes a bit of work and effort to acquire experience and achieve optimal effects. When this marriage of microbubbles and low mechanical index multi-pulse imaging is done, LVO and EBD are performed optimally, and the harmony permits a bonus, that of detecting microbubbles not only in the cardiac chambers, but also within the myocardium. Microbubbles are true red blood cell tracers, unlike any other imaging “contrast agent” utilized. They do not extravasate beyond the microcirculation, and their detection within the myocardium defines the presence of myocardial perfusion, and thus myocardial viability. Conversely, their absence in the resting state denotes myocardial infarction, a “fixed defect,” or alternatively, if present at rest but absent (or reduced) upon stress (pharmacologic or exercise), a “reversible defect” is present, consistent with ischemia. Unique amongst “contrast agents,” microbubbles can be deliberately depleted within the myocardium by exposure to a brief duration of “high MI” ultrasound, and then both the rate and intensity of “repletion” of microbubbles into the myocardium is observed during “low MI” imaging. These “depletion/repletion” sequences, with alternation of brief high MI, during sustained low MI imaging, define perfusion of the myocardial microcirculation. **Figure 2** shows an example of a patient with a significant LAD stenosis with both a perfusion and regional wall motion abnormality seen in the apical segments during regadenoson vasodilator stress testing. Similar findings can also be achieved by performing pharmacologic stress echo with dobutamine using contrast agent enhancement for LVO; simultaneous acquisition of perfusion information using “depletion/repletion” sequences augments regional wall motion interpretation and improves both sensitivity and specificity for detection of myocardial ischemia.

These observations are particularly helpful in differentiating ischemic from non-ischemic cardiomyopathy, and wall motion abnormalities due to conduction disturbances (e.g.: LBBB) versus ischemia.⁵

Although the use of ultrasound contrast agents for myocardial perfusion has been extensively researched, validated, and published upon, it currently remains an “off-label” application that has not yet been routinely implemented in clinical practice, but is generally limited to use in several experienced academic centers and research studies. The argument is posed that the multicenter validation studies have yielded “mediocre” results regarding accuracy data. There are many reasons for this, primarily relating to lack of a true comparator gold standard. Use of an anatomic luminographic technique (coronary angiography) to test a method which evaluates functional abnormalities at the microcirculatory level should not be expected to yield 100% comparability. This has been clearly demonstrated with other non-invasive functional techniques when compared to coronary angiography as well.⁶ This, plus data interpretation requiring masked (blinded) reads, devoid of “clinical context,” results in an artificial situation that surely will fail in “head-to-head” comparison testing, akin to the “apples vs. oranges” comparison difficulties. The approach that is preferable then, is to determine if a new technique can predict patient outcomes, which is the relevant end-point. Fortunately, we have several large, multisite studies, demonstrating the predictive value of major adverse cardiac events using cardiac ultrasound microbubble contrast agents, yet the awareness and implications of these studies have not been widespread. This is unfortunate, as an inexpensive, portable, rapidly performed and interpreted technique which requires no ionizing radiation to assess both cardiac structure and myocardial perfusion could benefit patient care and guide clinical management in the ED and critical care environments. Such clinical scenarios are encountered daily: detection and assessment of ischemic burden in acute coronary syndrome (ACS) at the bedside in patients with active chest pain and non-diagnostic ECG’s;⁷ differentiation of ACS due to obstructive CAD and stress-induced cardiomyopathy;⁸ assessment of reperfusion efficacy and

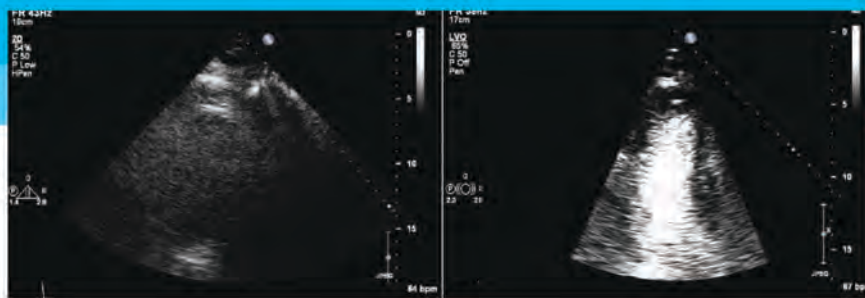


figure 1

detection of microvascular no-reflow in ACS; detection of myocardial viability;⁹ degree of collateral circulation; and evaluation of microvascular functional abnormalities in chest pain symptomatology patients with positive stress testing results, yet no significant obstructive epicardial coronary artery disease.

Indeed, we can get fancy with these concepts, and utilize quantification algorithms permitting the non-invasive quantification of myocardial blood flow in ml/min/g of heart tissue to explore mechanisms involved in multiple disorders associated with myocardial dysfunction.¹⁰ But just like a good marriage, we don't need to be fancy to have a good basic relationship between microbubbles and ultrasound – adherence to just a few basic concepts is necessary.

Let's take stock of where we are today. In 2000, with an update in 2008, ASE Task Force on Ultrasound Contrast published a "consensus statement," outlining recommendations for the use of contrast in cardiac ultrasound. Similarly, recommendations targeted specifically to sonographers were published in a 2005 document, which is scheduled to be updated in 2014.¹¹ These documents outline and describe in detail the characteristics and methods for optimal use of commercially available microbubble contrast agents, focusing upon those that are available now in the U.S., while also recognizing that there are other agents available elsewhere in the world but not currently available here. Both U.S. FDA-approved, available agents contain minute amounts of perfluorocarbons (PFC): Optison, approved in 1998 has an albumin shell, and Definity, approved in 2001 has a lipid shell. They are specifically approved for

LVO and EBD. Health Canada has approved only one contrast agent, Definity. Other contrast agents are available for use in Europe, Asia, and Japan, and are similar in terms of their size distribution but vary in their shell composition and gas within.

Given the advantages of enhanced cardiac ultrasound, why is current usage (~8% of all echoes) about half of what has been estimated to be appropriate, given the numbers of TDE, which unfortunately continue to increase fuelled by the obesity epidemic in our nation? Obstacles to adoption of enhanced ultrasound have included issues both internal and external to the echocardiography laboratory. Failure to have established policies guiding the indications for administration of ultrasound contrast agents results in time wasted on acquisition of suboptimal images, and then the inertia to initiate the necessities for contrast agent administration (establishing IV, preparing agent) results in further consumption of time. A collaborative team effort amongst physician lab leaders, sonographers, and nurses working together within their scope of practice can enable appropriate communication, order flow, and training to achieve the procedural routine for enhanced ultrasound contrast administration. External obstacles have included historical concerns regarding reimbursement (which are now unfounded), local administration issues regarding non-invasive test reimbursement and misaligned financial incentives (other competing non-invasive modalities may be reimbursed at a higher rate, and thus preferentially performed despite increased patient risk and cost), and legal/consenting issues arising from the black box warning. This latter deserves further review and attention to reassurance as detailed below.

Contrast agent-related side effects are minor and infrequent (rate of severe reactions < 1 in 10,000), comparable to or lower than other routinely utilized radio-opaque (CT) or ferro-magnetic (MRI) contrast agents. Unique to lipid containing ultrasound enhancing agents, severe transient back pain may occur somewhat more frequently (1/300 to 1/1,000), thought due to a complement mediated (CARPA) type reaction. The

safety of these agents has also been confirmed in specific populations, including those with pulmonary hypertension and those in critical care settings; moreover, a lower acute mortality in critically ill hospitalized patients receiving ultrasound contrast agents has been demonstrated. Unfortunately, in 2007, because of pseudocomplications misinterpreted as potential safety signals, a black box was placed on the package inserts of the two, FDA-approved, commercially available contrast agents. Response to this miscue from the using community and professional societies (ASE, ICUS) was immediate and profound, and as the evidence base demonstrating safety grew, amid intense efforts to educate the FDA on the safety and value of enhanced cardiac ultrasound, the additional warnings were essentially step-wise removed from 2010 through 2011, along with further liberalization of labeling revisions. Additional safety and efficacy data was provided to the FDA confirming safety of ultrasound contrast agent use during exercise and pharmacologic stress testing, and statements regarding lack of such evidence were removed from the package insert. Labels were additionally changed to indicate that in the uncommon event of a serious reaction, it would usually occur within 30 minutes of administration, negating the need for additional monitoring beyond the time frame of performing the echocardiographic study. There is also no longer a cautionary statement regarding avoidance of contrast agents in patients with pulmonary hypertension. There remains confusion regarding the "contraindication" in presence of intra-cardiac shunting. There is no evidence to support avoidance of contrast use in presence of a patent foramen ovale, and indeed there is evidence to indicate safety.¹² Data in pediatric populations is still emerging, but they appear to be safely used in several studies as well.¹² Retrospectively, the "safety issue" with contrast echo agents can be likened to a stray "affair," which has been mediated, but not completely resolved, with a ground-swell of evidence-based safety data and restoration of the labelling to original contraindications. Unfortunately for many institutions, and especially their administrators, the fallout from the "scarlet letter" of the black box remains; true reconciliation would be achieved with its removal.

Enhanced Cardiac Ultrasound: Present &

FUTURE^{cont.}

So what of the future? *The future is implementation of what we have now.* We have for our immediate use a well-developed robust technique which is underutilized for its approved purpose of improving cardiac structure assessment, and moreover has been demonstrated to be useful for prediction of cardiac outcomes by extending its application to include perfusion. The optimal cardiac imaging technique is purported to be non-invasive, non-ionizing (have no radiation), digital, portable, inexpensive, and have a high frame rate with 3-D and tomographic capability. Enhanced ultrasound contrast has nearly all of these capabilities with the exception of clearly reproducible tomographic capability. So what can we do to make the present happen?

Top 10 list of Enhanced Cardiac Ultrasound “things to do” to benefit patients now:

1 Change the name of “contrast echo” to terms such as “enhanced cardiac ultrasound.” This may decrease the reticence of patients to undergo enhanced cardiac ultrasound imaging due to misconceptions and confusion over inappropriate concerns about radiation and renal dysfunction, which do occur with classic “contrast” agents, but not with microbubbles detected by ultrasound enhancing agents.

2 Recognize that the best ultrasound settings for detection of microbubble enhancement during LVO and EBD (continuous low MI, with intermittent high MI), also detect microbubbles in the myocardium (i.e.: myocardial perfusion). We must emphasize to equipment manufacturers that we must preserve these settings in newer versions of their equipment and incorporate them into three dimensional assessments of left ventricular function and perfusion.

3 Require on-site audits by IAC-Echocardiography that include appropriateness of ultrasound contrast agent use in accredited labs. Ensure that echo labs are achieving the expected

metrics (use in a minimum of approximately 20% to 30% of studies) regarding enhanced ultrasound use in patients undergoing rest and stress echocardiography.

4 Remove the “policy for alternative imaging modality” in the IAC-Echocardiography criteria. Ensure adequate resources exist for enhanced cardiac ultrasound use in accredited laboratories. There is no need why a patient should have to proceed to a more expensive procedure with greater risk, when use of a contrast agent could yield diagnostic information within the echocardiography laboratory.

5 Establish and recognize Training Requirements for Use of Enhanced Cardiac Ultrasound for our sonographers and fellows in training through the relevant regulatory bodies. Work with CAAHEP, JRC-DMS, COCATS, and others to mandate training requirements in enhanced cardiac ultrasound.

6 Incorporate enhanced cardiac ultrasound guidelines into ACC and AHA documents for management of CAD. This has already been done in the European guideline documents (use in acute coronary syndrome evaluations in the emergency department and intensive care units; use in stress testing for chronic stable CAD).¹³

7 In this era of patient-centric care, educate and engage patients in their diagnostic test choice options regarding risks, benefits, and outcomes, specifically as pertain to radiation and procedural costs. Tools exist, such as “shared decision-making,”¹⁴ where this could be readily implemented.

8 Establish educational mini-mentorships and workshops to teach enhanced cardiac ultrasound techniques. Preceptorships within laboratories with recognized expertise in enhanced cardiac ultrasound should be established for visiting echocardiographers, sonographers, and nurse team members to gain experience in optimization of enhanced cardiac ultrasound techniques.

9 Through our professional societies, establish coordination task forces on enhanced cardiac ultrasound with the

following goals: Oversee patient registries for outcomes data, consolidate perfusion protocols, work with ultrasound equipment manufacturers to maintain software for detection of ultrasound microbubbles on their systems, and maintain and update guideline documents.

10 Do not conduct any more large multicenter trials to determine “accuracy” of perfusion with angiographic comparators, but rather focus efforts upon multicenter outcomes trials.

Future Applications of Microbubbles

Beyond diagnostic imaging, ultrasonically detected microbubbles have an emerging and evolving role in therapeutics, or “theragnostics.” The recent and ongoing development of targeted microbubbles to create drug delivery is generally thought to be the future of “contrast echo.” Targeted microbubbles have been evaluated for molecular imaging of inflammation (targeted to activated white blood cells and endothelium for the identification of vulnerable plaque in atherosclerosis, and identification of tissue injury to detect myocardial ischemia); tumor antigen (facilitate diagnosis of neoplasms with ultrasound and evaluate tumor response to antiangiogenic therapy); and thrombus (therapeutic and diagnostic implications accelerating clot lysis). Additionally targeted imaging may have significant therapeutic applications for accurate delivery of gene and drug therapy.¹⁵

In Summary, based on data available from original publications, reviews, and guidelines, the use of enhanced cardiac ultrasound agents with rest and stress echocardiography in patients with suboptimal images is considered part of standard clinical echocardiographic practice and is supported by ultrasound professional societies and their accrediting bodies. Echocardiogram feasibility and performance, confidence of interpretation, and cost-effectiveness are significantly greater with enhancement when indicated for LVO and has also been shown for the off-label use for myocardial perfusion.

The demonstrated safety profile of enhanced cardiac ultrasound is comparable (or superior) to other non-invasive imaging modalities, yet without radiation exposure or excessive cost, with the added features of portability, ready availability and

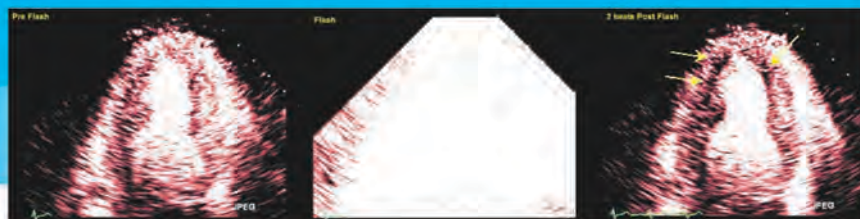


figure 2

interpretation, which are major advantages to this technique. While there have been obstacles to the use of enhanced cardiac ultrasound, none is insurmountable, and most relate to lack of understanding, misconceptions, or inadequate training. Education of our patients, sonographers, trainees, and colleagues is key to successful appropriate and value-driven use of cardiac ultrasound enhancement. The uniqueness of microbubbles as targeted-drug delivery vehicles for theragnostics is as yet emerging. However, there is no better time to improve the quality of patient-centric care than now, and enhanced cardiac ultrasound for the currently approved indications provides a clearly tangible, yet underutilized, existing opportunity. Let's use it! Carpe diem!

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FIGURE LEGENDS

Figure 1 Case of a 48-year-old male with dyspnea on exertion, BMI 48 kg/M2. Apical 4-chamber view before (left) and after (right) contrast enhancement showing a uniform contrast LVO permitting complete EBD and visualization of all endocardial segments.

Figure 2. Case of a 69-year-old male who underwent regadenoson vasodilator stress echocardiography evaluation. Apical 4-chamber view at peak regadenoson stress showing a sub-endocardial defect in the apical septum and anterolateral wall (LAD distribution, arrows) 2 beats after microbubble depletion (brief high MI exposure). Coronary angiography confirmed [a mid left anterior descending artery (LAD) 70% stenosis.

For both figures the left ventricle is displayed on the left of the images. ❤️

Dr. Sharon L. Mulvagh is a Professor of Medicine at Mayo College of Medicine, Consultant in Cardiovascular Diseases and Internal Medicine, Director of Women's Heart Clinic, and Associate Director of Preventive Cardiology at Mayo Clinic, Rochester, Minnesota. She chaired the ASE Task Force for Clinical Applications of Ultrasound Contrast, culminating in consensus documents published in 2000 and 2008. She has also served on the ASE's Board of Directors, and on Research Awards, Education, and Nominating Committees, and has often chaired sessions at ASE's Scientific Sessions.

Dr. Sahar S. Abdelmoneim is an Assistant Professor of Medicine and a Research Associate in the Department of Medicine, Cardiovascular Diseases Division, Cardiac Ultrasound and Hemodynamic Laboratory at Mayo Clinic, Rochester, Minnesota. She is also an Assistant Lecturer of Cardiology at Assiut University in Egypt. She has completed nine years of dedicated echocardiography research focused on the utilization of ultrasound contrast agents for left ventricular opacification and myocardial perfusion under the mentorship of Dr. Mulvagh.

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MAKING AN IMPACT

How much can \$20 do?

A lot more than you might think when it is combined with the donations from our other members! The Society's Annual Appeal for the ASE Foundation (ASEF) has been asking all members to voluntarily donate a suggested amount (\$20) towards ASE's unfunded charitable activities. **This past year, over 2,200 of our members joined the movement and contributed – directly giving more than \$191,000 to fund our 2014 initiatives.**

How is this money being used?

This year we are using a large portion of these 2013 donations to support an important project – pledging over \$200,000 toward a new, multi-year research grant to support the "Value of Echo." The Foundation is also allocating funding for a humanitarian trip to a Los Angeles, CA event that provides services to thousands of underserved individuals in one day and putting together another international mission to reach those in need across the globe. We are also giving ten scholarships to sonographer students to underwrite part of their school tuition and giving them funding to attend the annual Scientific Sessions. And, there is a guideline dissemination project distributing ASE translated posters in Spanish-speaking areas of South America to help educate that community of providers.

THIS IS JUST A QUICK SNAP-SHOT OF THE WORK OF THE FOUNDATION AND THE ANNUAL APPEAL WHICH IS A YEAR-ROUND EFFORT. TO FIND OUT MORE ABOUT THE ACTIVITIES OR TO DONATE GO TO ASEFOUNDATION.ORG



ASE Foundation

Being a donor means you have helped others



Donations to ASEF have really impacted those in the field. Here's a quote from one of our recent scholarship recipients:

"It has been an honor to be chosen as one of the recipients of the Alan D. Waggoner award. Because of this scholarship, I have had the financial freedom to continue research at the UW Hospital during my school break. I am working every day to enhance my skills as an Echocardiographer. This award has allowed me to continue exploring opportunities and further build my experience... Now I feel a new sense of support and encouragement in my efforts. I look forward to attending the 2012 Scientific Sessions and seeing what more Ultrasound can bring to patient care. Thank You!"

Denise Spiegel

How do the donors feel about the impact of these gifts?

We really can't say it better than one of our members has:

"ASE is only as strong as the community that surrounds and supports it. My monthly ASEF donation allows me to continuously "give back" and support our profession. In addition, my personal passion for sonographer professional development is support through ASEF funding for sonographer travel and research grants."

Merri Bremer, RN, RDCS, Mayo Clinic

Photo Caption: The 2013 Alan D. Waggoner Student Scholarship Award Ceremony (left to right): Renita Adams, Rodalyn Soriano, Tehila Wiener, Ashley Robertson, Christine Dauber, Alan Waggoner, Wendy Yang, Alyson Cooke, Ian Crandall. Not pictured: Stacy Hedges, Stephanie Kelley.

Israeli ECHO School – A Different Approach

Contributed by Noah Liel-Cohen and Haim Silber, on behalf of the Israel Working Group on Echocardiography and the Israel Heart Society

Being an echocardiographer, a physician as well as a sonographer, is a demanding and complex profession requiring continual dedication and learning. There are various approaches to the way echocardiography is taught and practiced; the recommendations of the American Society of Echocardiography and the European Association of Cardiovascular Imaging are widely accepted and implemented. Unexperienced echocardiographers can study in many ways: self learning, dedicated schools, courses, meetings, etc. Practicing Echo warrants continued education that can be achieved by similar approaches.

In the United States transthoracic studies are performed mostly by sonographers and interpreted by cardiologists. There are dedicated programs for their studies. In Europe the practice is different and studies are done by both cardiologists and sonographers depending on local policies. Both in the U.S.

and in Europe, the leaders of the echo societies emphasize the need for accreditation and are active in promoting it as an important way to improve health care. This was also pointed out in the recent publication by BL Gorman in the last *Echo* magazine (Vol. 2, Issue 1, pgs. 24-28), showing the spread in the participation of echo labs in accreditation programs leading to improved commitment to quality. However, the way to accreditation must start with encouraging education and standardization.

In Israel transthoracic studies are predominantly performed by sonographers and interpreted by cardiologists. However, unlike in the U.S., the sonographers in Israel have no dedicated course or school. They study in a school for biomedical technologies for two years and during the 3rd year they have two practice periods of five months, which have to be in two different medical technologies. Those interested in echo may be accepted in an echo lab for one of the periods. Of course, this period is much too short to learn and become independent in echocardiography. If they get a position as a sonographer, they improve their skills by on-the-job practice and learn from the other sonographers and cardiologists. Echocardiography is done in large medical centers as well as in smaller clinics. The regulations in this regard in Israel are limited and therefore training is variable. This situation may create lack of consistent education and standardization in the performance of the studies and is very much dependent on the knowledge and dedication of the staff in the specific clinic. Though the standard of the practice of echocardiography in Israel is high, as is evident from the research going on, publications, and participation in multicenter studies, still it is not practiced at the same level everywhere.

Therefore, we would like to share with you our approach of how we are promoting and advancing the knowledge and the standardization of the way echo is practiced in Israel. We were serving as the secretary and the head of the echocardiography working group in Israel until recently, and we set as our main goal to start a platform for continued education in echocardiography that could offer courses on different levels of knowledge. We knew that the need definitely exists, and we were sure there would be a huge interest from various echocardiographers to participate in programs that would promote their knowledge and skills in echo. We sought to give an opportunity to study echo in a systemized way to different audiences including sonographers at the beginning of their work and also those that are already experts, cardiologists in practice

seeking to become more proficient in echo, and other physicians that would like to implement echo in their practice such as intensive care and emergency department physicians.

We asked a group of senior echocardiographers from all over Israel to join us in leading and creating this school. They all thought it was important and agreed to contribute actively in any way needed.

We decided to join an existing school for ultrasound in OB/GYN. This school was started about ten years ago in Meir Medical Center, a hospital in the center of Israel, by Prof. R. Tepper, a prominent gynecologist who understood the need for a school dedicated to his profession. This setting gave us administrative support as well as much from their prior experience in starting such a project. This hospital is one of many hospitals owned by Clalit Health Services, the largest health provider in Israel.

The first course we decided to start with was a course for senior sonographers, most of them with years of practice in major Israeli medical centers. We chose this group as they are the mentors in the echo lab, both of the new and inexperienced echocardiographers as well as others coming to study in the echo lab. They carry on with the education and tutoring and set the standards of work and patient care on a day-to-day basis. Therefore it would be a good starting point with those leading the education in the field. They will continue to spread the word and be our ambassadors in the main important places where echo is taught and practiced.

There were many constraints in setting such a program such as who would pay for the course and who would pay for the sonographers' time off of their jobs. The course could not be very long, what should we teach? Thus we needed to decide what was most important. Should we teach only echocardiography or should we teach also physiology and cardiology in order to broaden the knowledge and understanding in cardiology, which is definitely essential to their level of performance? What about other subjects such as team work, interaction with the reading physicians? Work with the patients and their families? What to say? How to say? Should we test the participants' knowledge before and/or after the course, and should we use it for personal or organizational accreditation? What should be the mix between the "bread and butter" and advanced technologies? How deep should we go into procedures that are performed only in selected hospitals (especially interventions in structural heart disease)?



[Figure 2]

After much debate we decided on the program (Figure 1, on next page, which began in January, 2013. The course consisted of seven meetings (total of 42 hours) of intense learning, mostly echocardiography but included also some other important issues. Twenty-four sonographers participated in the first course; many of them head sonographers in their hospitals or clinics, mostly only one participating sonographer per lab. All the lectures were given by senior cardiologists and echocardiographers, and the presentations were made available to the participants and later on they will be available at the site of the Israeli working group on echocardiography (www.israel-heart.org.il). There was no actual hands-on practice in this course as we thought it was not needed in this group. However we thought it was very important to actually practice different measurements stressing various aspects of how they should be done, discussing and choosing the most appropriate images for the measurements, and understanding the implications on the accuracy of the calculations and on clinical decision making. This part of the course was done in a computer laboratory available at the hospital, using a cardiology PACS (Scimage) with cases prepared ahead of time by the lecturer (Figure 2). Those sessions were used to stress points in how the data should be acquired optimally and supply tips about the correct way to measure. The instructors in these sessions were both physicians and leading sonographers.

Israeli ECHO School – A Different Approach



 האיגוד הקרדיולוגי בישראל ISRAEL HEART SOCIETY	 החוג הישראלי לאקוקרדיוגרפיה THE ISRAEL WORKING GROUP ON ECHOCARDIOGRAPHY
School of Echocardiography Israel Working Group on Echocardiography Israel Heart Society	בית הספר לאקוקרדיוגרפיה החוג לאקו קרדיוגרפיה האיגוד הקרדיולוגי בישראל
בתוך בית הספר לאולטרסאונד של החברה הישראלית לאולטרסאונד במיילדות וניקולוגיה Meir Medical Center, Clalit Health Services, Israel	
Course program for senior sonographers in echocardiography 2013	
08.01.2013 The mitral valve: Structure and function Disease states Evaluation of mitral stenosis Evaluation of mitral regurgitation Cases studies on work stations: instruction in measurements of mitral stenosis and regurgitation	
21.01.2013 The right heart: Anatomy and physiology of the right heart Evaluation by echocardiography Disease states of the right heart Cases studies on work stations: instruction in measurements of the right side	
Acute coronary events: Pathophysiology and treatment of acute coronary events Acute myocardial infarction: 1. Evaluation by echocardiography 2. What complications to look for	
05.02.2013 Aortic valve and aortic disease Structure and function of the aortic valve Aortic stenosis: evaluation by echocardiography, Indications for surgery Aortic regurgitation: evaluation by echocardiography, Indications for surgery Cases studies on work stations: instruction in measurements of the aortic stenosis and regurgitation Aortic diseases	
19.02.2013 Diastolic function Diastolic function: physiology Diastolic function: echocardiographic evaluation Cases studies on work stations: instruction in measurements of diastolic function	
More on the mitral valve Ischemic mitral regurgitation: pathology and echocardiographic evaluation Mitral valve prolapse: pathology and evaluation	
05.03.2013 Left ventricular function Left ventricular structure and echocardiographic evaluation of global function Segmental left ventricular function evaluated by echocardiography Cases studies on work stations: instruction in measurements of global and segmental left ventricular function	
Endocarditis: 3D echocardiography: What have we learned and important clinical applications and examples	
19.03.2013 Strain echocardiography: What is it and the current knowledge and use in clinical settings	
Adult congenital heart disease: Introduction What to look for in young adults	
Protocol of a the standard echo exam and what to do in special cases Tips on picture enhancement and artifacts	
09.04.13 Hemodynamic assessment from echocardiographic studies	
Team group in the echo lab Communication between the sonographer and the patient and his family	
Course assessment	

(Figure 1)

We also allowed some time for other important issues such as: the protocol of the standard echo exam and what to do in special cases, stressing the central role of the sonographers, tips on data enhancement and artifacts, team group in the echo lab, and communication between the sonographer and the patient and his/her family.

The participants in the course as well as their echo lab directors thought the course was a great success. All thought they enhanced their abilities in the course, and it also helped them to better organize the knowledge they already had and emphasized crucial points. Many of them went over the presentations with their staff, both sonographers and physicians, as soon as they had completed a meeting. The attendees were so grateful for this new opportunity and experience, which they had long felt the need for.

The word spread and the demand for more courses is growing. We are planning now the next courses: for trained sonographers with limited experience, for leading physician echocardiographers to discuss complicated cases and issues, for cardiac surgeons and for non-cardiologists seeking to learn more about echocardiography, as many are starting to use echo as a point-of-care supplement.

Our hope is that the school will grow into a real vibrant and busy echo school with ongoing program for the many interested in practicing echocardiography, with the ability to teach by lectures, by use of work stations, and also on actual simulators.

There are many countries with similar situations such as in Israel, with regards to the practice of echo. We hope that sharing our beliefs and thoughts and also our experience may enhance and encourage others to find similar approaches that suit their specific place and will promote echo practice, standardization, and education. ❤️

Dr. Noah Liel-Cohen is the head of the echocardiography laboratory of the Cardiology Division at the Soroka University Medical Center of the Clalit Health Services affiliated with the Ben Gurion University of the Negev in Beer Sheva, Israel. The echo lab serves both in and out patients of this 1000-bed hospital at the south of Israel. Until recently, Dr. Liel-Cohen served as the chair of the Israel Working Group on Echocardiography. She and Dr. Silber co-founded the first Israeli echo school and also established the Israel Echocardiography Research Group.

Dr. Haim Silber is the head of the Marom Cardiology Clinic in Kfar Saba, Israel. He has acted previously as the head of Cardiology for Maccabi Healthcare Services. Until recently, Dr. Silber was the secretary of the Israel Working Group on Echocardiography. He and Dr. Liel-Cohen have co-founded the first Israeli echo school.

DEMONSTRATING THE VALUE OF ECHOCARDIOGRAPHY: ASE FOUNDATION RESEARCH GRANT AVAILABLE

ASE members know that echocardiography provides an exceptional view of the cardiovascular system to safely and cost-effectively enhance patient care. In our changing healthcare environment, an emphasis on demonstrating the actual value added by using echocardiography is more important than ever before. That is why the ASE Foundation is focusing this year's research award funding on obtaining data that demonstrates the relevance and impact of echocardiography on patient outcomes.

The ASE Foundation's 2014 Research Award will be a large, multi-year grant, with up to \$200,000 available for funding over two years. In selecting the Award recipient, of particular interest will be proposals designed to provide comparative evidence of the cost effectiveness, safety, and benefit of using echocardiography to manage patients – either in disease-specific areas or a particular clinical condition or situation – or to study temporal changes in disease. The goal behind this significant funding opportunity is to gather data that will help ASE continue its work to position echocardiography as the most valuable imaging technique in healthcare. Whether advocating for high

quality ultrasound practice and appropriate regulation and reimbursement, or educating payers, providers, and the public about echocardiography as the first choice in imaging, evidence of echo's value-added impact on patient outcomes is crucial to the conversation.

The application cycle is open now. Applicants must be a current ASE member with either a research or health-professional doctoral degree or a current echocardiography or cardiovascular ultrasound professional credential. Visit www.asecho.org/research to view the full funding opportunity description and application requirements. Applications for this Award are due by Monday, June 2 at 11:59 p.m. Eastern. Funding will be announced in early August and will be available for use September 2014 through September 2016. ♥



ASE Foundation

The ASE Foundation's 2014 Research Award will be a large, multi-year grant, with up to \$200,000 available for funding over two years.

Funding will be announced in early August and will be available for use September 2014 through September 2016.

ethics in echocardiography—what does that mean?

Contributed by Richard E. Kerber, MD, FASE,
University of Iowa Hospitals and Clinics, Iowa City, Iowa

What are “ethics?” A dictionary definition: “The discipline dealing with what is good and bad and with moral duty and obligation; the principles of conduct governing an individual or a group.”

Does this apply to echocardiography? In fact, the American Society of Echocardiography has a Code of Ethics which you can Google. We know that ethics plays an important role in healthcare: in direct patient care, in codes of professional healthcare societies, and even in billing and reimbursement issues. **While general principles can serve as guides for ethical action in the healthcare environment, the specific application of these principles is often a matter of uncertainty as we healthcare professionals deal with ethical dilemmas in our daily practice.**

What kind of ethical questions arise in the echo lab?
Here are some examples with which you may have wrestled.

- 1 If you are a sonographer, how should you respond to the patient who asks “What did you see? What’s wrong?” Is it ethical (or even legal?) to give the patient your opinion? Does not giving your opinion violate a patient’s right to know?
- 2 If you are a physician, what should you tell a patient whose echo shows an expected finding – for example, an atrial myxoma? Should you simply advise the patient to discuss the examination results with the referring primary care provider? Suppose the echo was requested because of a transient ischemic episode, and the myxoma has numerous frond-like protuberances which could be sources of further embolic events? Should you explain to the patient that he/she is in imminent danger of incurring a stroke and immediately call a surgeon on the grounds that the need for a surgical intervention overrides the usual process of sending a report to the referring MD?
- 3 Suppose you are a physician who disagrees with a diagnosis of “severe” mitral regurgitation for which the patient has been advised to undergo surgery – but you believe that the mitral

regurgitation is only moderate and that surgery is not warranted. Should you tell the patient that you disagree with the diagnosis and recommendation for surgery? What should you say to your colleague who read the echo? What should you say to a surgeon who may have already been consulted?

- 4 If you are a nurse who assists with transesophageal echocardiograms, and you feel one of the physicians in the laboratory consistently orders dangerously high doses of conscious sedation drugs, potentially endangering patients’ lives, what should you do? Should you talk to the physician? Should you talk to the Director of the Echocardiography Laboratory? Should you refuse to administer the drugs?

These are ethical questions involving issues of patient autonomy, patient safety, responsibilities to referring physicians, colleagues, and others. Have you faced these or similar issues? Want some help addressing them?

OK, ASE to your rescue. At our June 2014 Scientific Sessions in Portland, we will have a session on “Ethics and Dilemmas in the Practice of Echocardiography” on Sunday, June 22, 1:15-2:45 p.m. Similar sessions were held in our ASE Scientific Sessions in 2009 and 2011 and were well received. Our 2014 Session will be as interesting and helpful as our previous ones. Plan to join us for a provocative, enjoyable, and enlightening session.

Dr. Kerber is a Professor of Medicine and Emergency Medicine, Division of Cardiovascular Medicine, at the University of Iowa Hospitals and Clinics. He is an elected member of ASCI, AAP, AUC, and ACCA and is a Past President of ASE. ♥

A SILVER ANNIVERSARY FOR A TRADITION OF EDUCATIONAL VALUE

Contributed by Jonathan R. Lindner, MD, FASE, Oregon Health & Science University, Portland, Oregon

This year marks the Silver Anniversary for our Scientific Sessions and as the Program Chair, I would like to extend a very warm invitation to attend what promises to be a very special program. As a companion piece to Dr. Kerber's musing on *Ethics in Echocardiography* (see article at left), I wanted to expand on what you can expect and prime your appetite for all the Sessions have to offer in Portland, Oregon from June 20-24.

The Educational Experience – Why You Should Be There

Our program is designed to provide a stimulating educational experience for all physicians, sonographers, trainees, scientists, and other healthcare providers who have an interest in cardiovascular imaging. The bulk of the meeting is organized into thematic tracks that vary not only in content but also learning methods which include case-based teaching of the essentials of echocardiography, didactic lectures on state-of-the-art technology and clinical applications of echo, "extreme echo" sessions where the latest advances in imaging and physics are revealed, debates, and of course the popular Echo Jeopardy sessions. There really is something for every type of learner at every level in their career.

Certainly, this meeting is a must for those who are interested in staying on the cutting edge of echocardiography. *There are sessions that feature the latest information on methods and clinical integration of 4-D imaging, echo in heart failure (advanced myocardial mechanics and LV assist devices), assessment of valve disease, contrast echocardiography, and echo in oncology.* Or, for the general echocardiographer who wants to advance his/her knowledge in specific areas that are becoming increasingly important, such as adult congenital heart disease, strain imaging, assessment for cardiac resynchronization, and new clinical applications for stress echo, we have dedicated sessions on these topics. And, if you want to do a deep dive, there is an entire day session on perioperative echo and use of echo in percutaneous valve interventions.

I am pleased to announce that we have been able to attract an international faculty who are world experts in their field and also gifted teachers including some who will stretch the boundaries of our knowledge. Among these are physicist Peter Burns, Alain Chait who is a world expert in obesity and diabetes, and valve disease pioneers Bob Bonow and Albert Starr.

Even if your CME needs are fulfilled for the year, you will want to attend to take in sessions focused on the changing healthcare field, and we have planned valuable updates on practical issues such as billing, integration of appropriate use documents, and quality performance measures in echocardiography.

What is your practice niche? I would bet we have it covered. There are special sessions focusing on sonographer education to provide the latest updates on new imaging procedures and clinical applications. The case-based learning sessions provide probably the best opportunity for trainees in cardiovascular medicine and echocardiography to gain skill and knowledge required for subspecialty boards. There are also dedicated tracks for Pediatric and Adult Congenital Heart Disease



specialists and for Vascular Imaging that will provide a well-rounded educational experience for these specific attendees.

Importantly, we are kicking off the meeting by introducing a Maintenance of Certification (MOC) session which should be an important draw for physicians in practice, in light of the recently updated ABIM policy for frequency of MOC activities for board recertification and for reporting of MOC activities even for those who are not required to undergo recertification. The content of this session meets the ABIM MOC standards for 10 credits towards Medical Knowledge Requirement.

The Venue Is Loaded with Options for Entertainment

The host city of Portland is an international destination for many reasons. It is known for its striking natural beauty and food/drink scene. It is in close proximity to both the stunning Northwest Pacific coast and the nearby Cascade mountain range, which is home to Mount Hood and the Columbia River Gorge with its dramatic vistas and towering waterfalls. The natural beauty of the Pacific Northwest can be appreciated on foot, on bike, or by kayak. Portland also boasts a diverse array of award-winning restaurants. The region is renowned for the local seafood, artisanal cheeses, and food carts. The nearby Willamette Valley is home to over 100 wineries that specialize in pinot noirs. Portland is also home to some of the best microbreweries in the United States. Other special features of the city include world-famous Powell's book store, the Rose Garden, the farmers markets, and coffee shops on seemingly every corner. *I'll reveal one last secret which is that despite its reputation, Portland is sunny and dry on most days in the summer months (although I'm not promising anything!).*

On behalf of the entire planning committee, we hope that you will join us in Portland and take advantage of the superb educational opportunities being offered at the 25th Silver Anniversary of the ASE Scientific Sessions.

Dr. Lindner is the M. Lowell Edwards Professor of Cardiology at the Knight Cardiovascular Center at the Oregon Health & Science University. He has served on ASE's Research and Education Committees. In 2006, Dr. Lindner was the Feigenbaum Lecturer at the annual Scientific Sessions and in 2011, was awarded the Richard Popp Excellence in Teaching Award. He is an Associate Editor for the *Journal of the American Society of Echocardiography*. ❤️



education corner

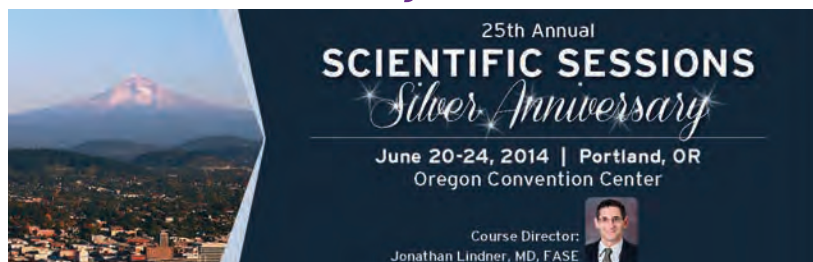
Contributed by Cheryl Williams,
ASE's Education Manager

POINT of CARE ULTRASOUND

The journey of ultrasound technology as a diagnostic technique is continuing to evolve at a rapid pace. Proven safe and effective, it is an invaluable tool for diagnosis. It's an incredibly flexible technology and can be used for both a full echocardiography work-up and a point of care assessment. Focused ultrasound is recognized by emergency, critical care, and cardiology departments alike as a resource that can be used as an adjunct to the physical examination to provide evaluation for a wide variety of patients.

In the ASE President's Message, published in the *Journal of the American Society of Echocardiography* (JASE) in October 2013, President Benjamin F. Byrd, III, MD, FASE, noted that, "In a collaborative effort with our fellow professionals, ASE is increasing its focus on providing tools and resources for emergency department physicians, critical care physicians, primary care physicians, anesthesiologists, and others who are providing care to their patients by using hand-held and portable ultrasound technology at the bedside." In line with this part of ASE's mission, the highest importance is placed on providing education that brings all users of cardiovascular ultrasound up-to-date with the latest technological developments, guidelines and uses. As such, the use of ultrasound in a point of care setting has been integrated into some of ASE's most popular educational offerings, and new activities are being developed to meet the growing demand for education among those using portable ultrasound technology.

25th Annual Scientific Sessions – Silver Anniversary



As captured by Dr. Lindner on the previous page, one of the greatest advantages of ASE's Scientific Sessions is that it provides educational sessions for all users of cardiovascular ultrasound, in a variety of different formats. In addition to lectures dedicated to echocardiography, included in this year's meeting are point of care talks provided by expert faculty, including lectures such as "Point of Care Echo in the Identification of Ischemia," a Clash of the Titans debate on "Hand Held, Point of Care Echocardiography," "Hand-held Echo Devices for FOCUS Exam," and "Bedside FOCUS Exam: Value in the Perioperative Period." In addition, the program will feature other lectures specific to emergency medicine to discuss complications of acute myocardial infarction, trauma emergencies, complications in the post-cardiac surgery patient, and presentations of stress cardiomyopathy.

To view the full program, or register online, visit us at www.ASEScientificSessions.org

Attendees at the ASE 2013 Scientific Sessions had the following to say:

"Something for everyone at all times. Well thought out. I like the inclusion of point of care related topics."

"I was impressed with all of the faculty, everyone seemed enthusiastic about the importance of echocardiography in clinical medicine."

3rd Annual Echo Florida



Echo Florida first began in 2012, born out of member requests to have an ASE course with an easy-to-access East Coast location. Since its inception, Echo Florida has quickly garnered the attention of professionals in the field of cardiovascular ultrasound and achieved a positive reputation that continues to attract more attendees each year. Directed by Michael Picard, MD, FASE, about whom attendees have raved as being an "excellent teacher with great passion" who does a "wonderful job as course director," the 3rd Annual Echo Florida course will provide a comprehensive review of cardiovascular ultrasound in clinical practice. The faculty is composed of U.S. and international experts who will discuss the strengths and limitations of established and emerging technologies and illustrate how these technologies can be used to improve and streamline patient care in a cost-conscious manner.

In line with ASE's drive to increase focus on providing tools and resources for all cardiovascular ultrasound users, a full day devoted to point of care echocardiography will be held on Saturday, October 11. Brief lectures with case illustrations will discuss protocols for use of small echocardiographic devices in various settings such as emergency room, intensive care unit and community screening programs. Attendees also complete a FOCUS protocol supervised by expert faculty with a variety of different ultrasound equipment. Objectively, this session is intended to help identify established roles for point of care echocardiography and to help users perform the critical components of a point of care echocardiogram.

As an added incentive to registering for the point of care echocardiography symposium at Echo Florida, registrants will receive a copy of ASE's focused echocardiography teaching DVD, "Focused Cardiac Ultrasound: Fundamentals of Acquisition and Interpretation." This state-of-the-art DVD is an instructional video to be used for self-guided learning and professional lectures. The DVD features several interactive sections for flexible presentation, including an easy to navigate DVD menu, overview of relevant cardiac anatomy, presentation of transducer positions for heart and lung, imaging examples of a wide variety of pathologies, case presentations with discussions, and an interpretation practice section designed to gauge levels of familiarity with the materials presented. This DVD may also be purchased at www.asemarketplace.com.

A Past Echo Florida attendee said the following about the conference:

"The course director (Dr. Picard) did a superhuman job giving many and excellent lectures and instructing in the point of care course on Saturday."

Reserve your spot early as the point of care symposium has sold out TWO YEARS in a row! www.asecho.org/echoflorida

Point of Care Ultrasound Seminar: Lung & Pleural Ultrasonography

ASE, in collaboration with CAE Healthcare, will host the Point of Care Ultrasound Seminar: Lung & Pleural Ultrasonography, November 15-16, 2014. This two-day seminar, held at the waterfront Ritz-Carlton hotel in Sarasota, Florida, will feature the basic principles and techniques of lung and pleural ultrasound and much more. Master the skills of lung and pleural ultrasound and learn how to integrate this modality into your practice with leaders in the field of point of care ultrasound. Practice pathology recognition using state-of-the-art ultrasound simulators during the numerous hands-on practice sessions under the supervision of seasoned clinicians.

The course is designed to meet the needs of physicians specializing in anesthesiology, pulmonology, emergency medicine, intensive care, and cardiology, as well as other healthcare providers using lung and pleural ultrasound.

For more information, visit www.caehealthcare.com

November 15-16, 2014
The Ritz-Carlton, Sarasota
Sarasota, FL USA
Jointly provided by ASE and CAE Healthcare.

Additional Point of Care Resources

- ➔ Focused Cardiac Ultrasound: Recommendations from the American Society of Echocardiography, *JASE*, June 2013 – Found at www.asecho.org/Guidelines
- ➔ Focused Cardiac Ultrasound in the Emergent Setting: A Consensus Statement of the American Society of Echocardiography and American College of Emergency Physicians, *JASE*, December 2010 – Found at www.asecho.org/Guidelines
- ➔ Curriculum on the Use of Bedside Ultrasound, created by CAE Healthcare. Cardiac Ultrasound e-Learning Curriculum has been endorsed by ASE – Found at <https://www.caeiccu.com/lms>
- ➔ Visit www.ASEUniversity.org for a listing of additional point of care ultrasound courses near you! ♥

AMERICAN SOCIETY OF ECHOCARDIOGRAPHY

Silver Anniversary

25 TH ANNUAL
SCIENTIFIC SESSIONS

OREGON CONVENTION CENTER
JUNE 20-24, 2014 *in* PORTLAND, OR
• NEW FRIDAY SESSIONS! •

REGISTRATION NOW OPEN AT
ASESCIENTIFICSESSIONS.ORG





Strongly Forging AHEAD

Contributed by John J. Held, Director of Communications, ABIM Foundation

Nearly two years after the first nine lists of “Five Things Physicians and Patients Should Question,” were released, the *Choosing Wisely*® campaign has now grown to more than 60 specialty societies. Throughout 2013, 39 societies published lists, and nearly 20 more will announce new lists in 2014. The American Society of Echocardiography released its list of things to question in February 2013 (www.asecho.org/choosingwisely).

The campaign continues to inform critical conversations about waste and overuse, and stories appear in the media and blogs on a daily basis. For the second straight year, the *Choosing Wisely*® campaign was featured by Medscape in “The Year in Medicine: News That Made a Difference.”

Just recently HealthLeaders Media named “*Choosing Wisely*” as one of its top healthcare buzzwords to watch in 2014.

In late 2013, the ABIM Foundation, working with Drexel University College of Medicine, launched a series of education modules to help physicians engage their patients in conversations about tests and procedures to question. The scenario-based modules include situations physicians commonly encounter, using the *Choosing Wisely*® lists of things to question as a starting point. Modules address areas – such as patient requests for an MRI for back pain, antibiotics for sinusitis, CT scans for head trauma in children, and pre-operative stress tests – and provide specific

recommendations on how physicians can engage their patients in conversations about the risks and benefits of these tests or treatments.

This work builds on ASE’s efforts to advance the campaign through a grant from the ABIM Foundation supported by the Robert Wood Johnson Foundation. In 2013, ASE launched a smartphone app helping physicians better understand when an echocardiogram is – or is not – indicated. The Echo AUC app is available for free from the iTunes and Google Play stores.

In early 2014, ASE and representatives from the ABIM Foundation hosted a Live Webinar on the *Choosing Wisely*® campaign, ASE’s participation, and the new AUC app that the ASE Foundation developed. This webinar featured a special presentation by Daniel B. Wolfson, Executive Vice President and COO of the ABIM Foundation, Andrew Keller, MD, FASE, Cardiologist, and James Thomas, MD, FASE, Cardiologist and past president of ASE. A link to the recording of this webinar can be found on ASE’s *Choosing Wisely*® page <http://www.asecho.org/choosingwisely/> ♥

Visit www.choosingwisely.org to learn more and sign up for monthly e-mail updates.

Members Putting Their Skills to Work to Better the Field

Contributed by: Ronna Yates, ASE's Project Specialist

We would like to acknowledge a team of ASE members for going above and beyond for the organization by participating on a subgroup initiative for the CME committee. These members include **Daniel Bourque, MS, RCS; Joe Calkins, MD, FASE; Meryl Cohen MD, FASE; Raymond Musarra, RDCS, FASE; Tabby Riley, RDCS, FASE, and Wendy Sowa-Maldarelli, MS, RT, RDCS, FASE.** In order to grow and improve our educational platforms, these volunteers recently completed an important **Quality Assurance** project in addition to their normal committee responsibilities.* The goal of this project was to further improve the quality and accuracy of our overall education program. They conducted an audit requiring a review of over 25 of ASE's CME activities to assure the accuracy in their content, post exam materials, evaluations, and alignment to the ACCME standards for physician education. As a result of their work, a new committee review checklist was implemented to ensure fairness and accuracy of our CME content and examination materials. Without their help, ASE would not be able to provide the enhanced CME-based member benefits we offer today.

One of the interesting benefits of ASE membership is having the opportunity to get more involved and engaged as a volunteer. Our volunteers help set standards, develop products, create courses, and advocate for echo on the federal and state levels, among other things. Participation allows them to contribute their ideas to the Society **and broaden their professional scope and skills.** Our committee volunteers are enthusiastic about their work in echocardiography and for ASE. Here are some of their personal recollections:

"I could not feel more passionate about the goals of the American Society of Echocardiography. The CME Committee to me, not only guarantees that the education of the Society fulfills the needs of its membership, but also that the accomplishment of this goal will translate into improvement in patient care and outcomes."

-CME Committee Chair

"As a pediatric cardiologist since 1986, I have been an advocate for my patients. Many legislators are well-meaning, but have not lived with a child who has congenital heart defects and do not fully understand the impact of legislative changes on these children and their families. My involvement on the advocacy committee helps to give these children a voice."

-Advocacy Committee Member

"Serving on an ASE Committee is an honor. Significant personal and professional satisfaction is achieved when the committee's projects and ideas come to fruition."

-FASE Committee Chair

"As a member of the Advocacy Committee of ASE I am very concerned with the potential adverse effect the neutrality recommendation will have not just on hospitals but also on the field of echocardiography. ASE is the leading organization promoting high quality cardiac ultrasound, and as a member of the advocacy committee I am charged with fighting the obstacles for performing high quality echocardiography. Since hospitals are charged with performing the most challenging echocardiographic exams on sick patients, these exams are often long, and require the use of additional sophisticated tools such as 3D and speckle tracking, some of which are not even reimbursed for. Slashing reimbursement for hospital echocardiography laboratories will limit their ability to invest in the highest quality technology and staff they currently do, and will therefore limit their abilities to perform high quality echo exams on their challenging patients."

-Advocacy Committee Member

Our online volunteer process is open each year in November. It is a way for members to personally apply to provide their unique talents. For instance, if you love politics and/or are concerned about echo reimbursement, then you may want to join the Advocacy Committee (see more about this on page 16 in another article). If you are detail-oriented and enjoy reviewing content, then the CME or Education committee might be up your alley!

This year we had over 100 members apply online during the volunteer application process (held November through January). Over 60 of these individuals were placed on a committee or task force and will begin their assignments in June. ASE is so grateful for each and every one of our volunteer contributions, whether large or small. Our volunteers help to advance our mission in committing to excellence in cardiovascular ultrasound.

* CME Committee volunteers ensure that ASE's educational meetings and enduring materials meet the requirements for ACCME accreditation. They are responsible for reviewing and approving requests for ASE sponsorship and CME programs. In addition, they assist ASE staff in the review of program content to ensure a standard of non-promotional education in ASE sponsored activities. ♥

NEW!

ASEUniversity III Case-Based Learning

Featuring MOC and CME Credit!

ASE's new ASEUniversity III: Case-Based Learning includes two volumes which are entirely case-based, online cardiovascular ultrasound learning activities. Each volume is designated for 5 AMA PRA Category 1 Credits™ and has been accepted by the ABIM for 10 points towards medical knowledge self-assessment requirements.

Topics covered include:

Volume 1

- Artifacts
- Cardiac masses
- Cardiomyopathies
- Congenital heart disease
- Coronary artery disease
- Diastolic function
- Doppler
- New technology
- Pericardial disease
- Stress echocardiography
- Valvular heart disease
- Ventricular size and function

Volume 2

- Aortic regurgitation
- Cardiomyopathies
- Closure devices/device placement
- Congenital heart disease
- CRT
- Doppler
- Endocarditis
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