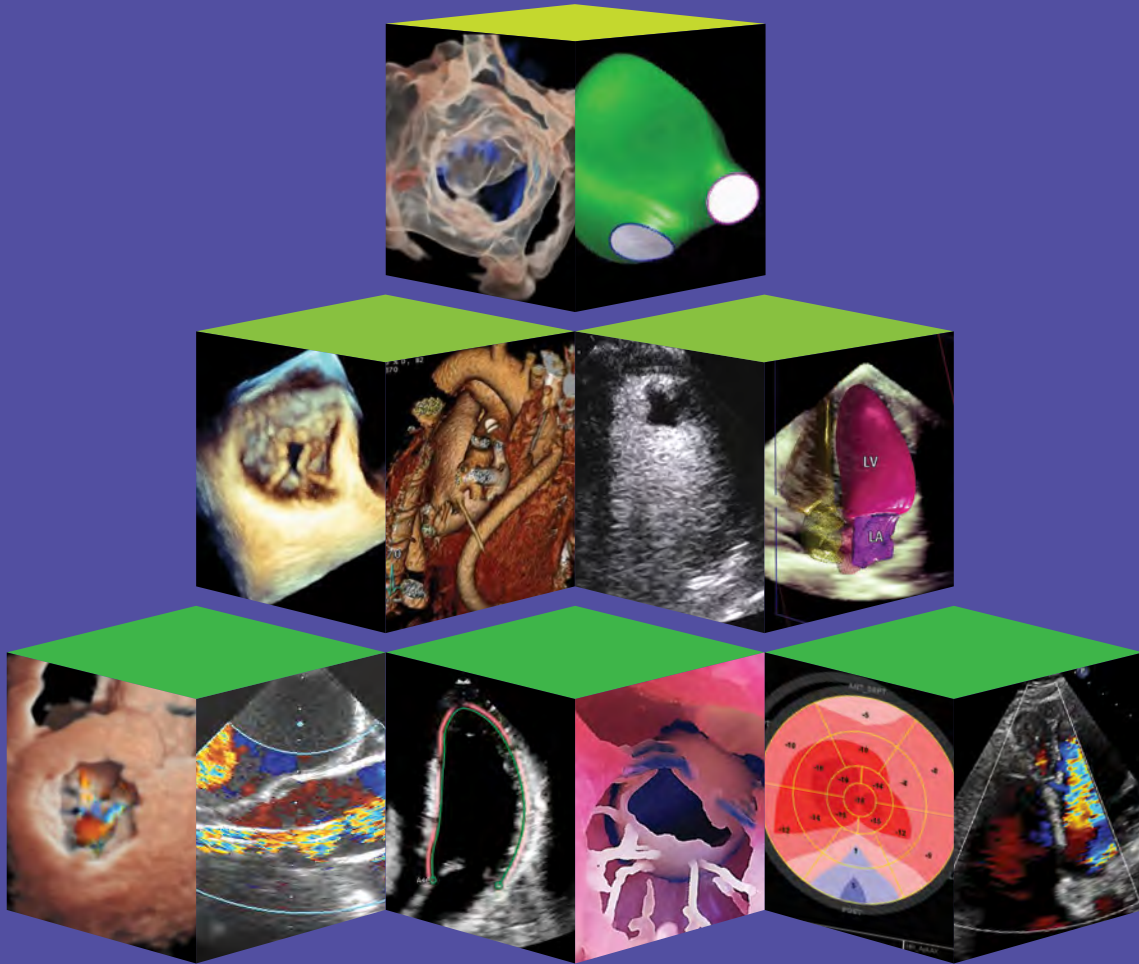


American Society of Echocardiography

# ASE 2023

Foundations and the Future  
of Cardiovascular Ultrasound



**June 23-26, 2023**

**Gaylord National Resort & Convention Center  
National Harbor, MD**

#ASE2023

[ASEScientificSessions.org](https://www.asescientificsessions.org)

**FINAL PROGRAM**

# DEFINITY<sup>®</sup>

VIAL  
FOR (Perflutren Lipid Microsphere)  
INJECTABLE SUSPENSION

## INDICATIONS

Activated DEFINITY<sup>®</sup> (Perflutren Lipid Microsphere) Injectable Suspension is indicated for use in patients with suboptimal echocardiograms to opacify the left ventricular chamber and to improve the delineation of the left ventricular endocardial border.

## CONTRAINDICATIONS

Do not administer DEFINITY<sup>®</sup> to patients with known or suspected hypersensitivity to perflutren lipid microsphere or its components, such as polyethylene glycol (PEG).

## IMPORTANT SAFETY INFORMATION

### WARNING: SERIOUS CARDIOPULMONARY REACTIONS

Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during or following perflutren-containing microsphere administration [see *Warnings and Precautions* (5.1)]. Most serious reactions occur within 30 minutes of administration.

- Assess all patients for the presence of any condition that precludes DEFINITY<sup>®</sup> administration [see *Contraindications* (4)].
- Always have resuscitation equipment and trained personnel readily available.

In postmarketing use, rare but serious cardiopulmonary or hypersensitivity reactions have been reported during or shortly following perflutren and PEG-containing microsphere administration [see *Adverse Reactions* (6)]. The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions and/or with pre-existing PEG hypersensitivity [see *Adverse Reactions* (6.2)]. It is not always possible to reliably establish a causal relationship to drug exposure due to the presence of underlying conditions.

Please see brief summary of Prescribing Information, including boxed **WARNING** on subsequent pages.

Please see full Prescribing Information at [www.DEFINITYimaging.com](http://www.DEFINITYimaging.com)

IN THE US

4 out of 5

contrast-enhanced  
echoes are performed  
with DEFINITY<sup>®3</sup>

INCLUDED IN OVER

2200

peer-reviewed  
publications<sup>4</sup>

MORE THAN

21 million

studies performed<sup>3</sup>

#### REFERENCES:

1. Kurt M et al. *J Am Coll Cardiol*. 2009;53(9):802-810.
2. Becher H, et al. Heidelberg, NY: Springer-Verlag; 2000:2-44
3. Data on file, Lantheus.
4. Embase and Medline Search, May 2018



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# See in High DEF(INITY)<sup>TM</sup>

A clearer echo. A better treatment plan.



*Your decisions have real-life consequences. High DEF(INITY)<sup>TM</sup>, high-resolution echocardiograms help answer clinical questions and improve patient management.<sup>1</sup>*

**DEFINITY<sup>®</sup>** provides prolonged enhancement at a low dose so your patients get the accurate echoes and diagnoses they deserve.<sup>1,2</sup>

○ ○ ○ ○ ○

**DEFINITY<sup>®</sup>**  
VIAL FOR (Perflutren Lipid Microsphere)  
INJECTABLE SUSPENSION

# DEFINITY®

VIAL FOR (Perflutren Lipid Microsphere)  
INJECTABLE SUSPENSION

FOR INTRAVENOUS USE

## BRIEF SUMMARY

Please see Full Prescribing Information available at [www.DEFINITYimaging.com](http://www.DEFINITYimaging.com) for additional information.

### WARNING: SERIOUS CARDIOPULMONARY REACTIONS

See full prescribing information for complete boxed warning

Serious cardiopulmonary reactions, including fatalities, have occurred uncommonly during or following perflutren-containing microsphere administration (5.1). Most serious reactions occur within 30 minutes of administration.

- Assess all patients for the presence of any condition that precludes DEFINITY administration (4).
- Always have resuscitation equipment and trained personnel readily available.

## INDICATIONS AND USAGE

Activated DEFINITY (Perflutren Lipid Microsphere) Injectable Suspension is indicated for use in patients with suboptimal echocardiograms to opacify the left ventricular chamber and to improve the delineation of the left ventricular endocardial border.

## DOSE AND ADMINISTRATION

### Important Administration Instructions

- DEFINITY is intended for administration only after activation in the VIALMIX or VIALMIX RFID apparatus. Before injection, this product must be activated and prepared according to the instructions outlined below. The VIALMIX or VIALMIX RFID apparatus should be ordered from Lantheus Medical Imaging, 331 Treble Cove Road, North Billerica, MA, 01862. For customer orders call 1-800-299-3431
- DEFINITY may be injected by either an intravenous (IV) bolus or infusion. Do not administer DEFINITY by intra-arterial injection [see Warnings and Precautions].
- The maximum dose is either two bolus doses or one single intravenous infusion. The safety of bolus and infusion dosing in combination or in sequence, has not been studied.

## Dosage

### Bolus

The recommended bolus dose for activated DEFINITY is 10 microliters (microL)/kg of the activated product by intravenous bolus injection within 30 to 60 seconds, followed by a 10 mL saline flush. If necessary, a second 10 microliters (microL)/kg dose followed by a second 10 mL saline flush may be administered 30 minutes after the first injection to prolong contrast enhancement.

### Infusion

The recommended infusion dose for activated DEFINITY is via an IV infusion of 1.3 mL added to 50 mL of preservative-free saline. The rate of infusion should be initiated at 4 mL/minute, but titrated as necessary to achieve optimal image enhancement, not to exceed 10 mL/minute.

## CONTRAINDICATIONS

Do not administer DEFINITY to patients with known or suspected:

- Hypersensitivity to perflutren lipid microsphere or its components, such as polyethylene glycol (PEG) [see Warnings and Precautions].

## WARNINGS AND PRECAUTIONS

### Serious Cardiopulmonary Reactions

Serious cardiopulmonary reactions including fatalities have occurred uncommonly during or shortly following perflutren-containing microsphere administration, typically within 30 minutes of administration. The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions (acute myocardial infarction, acute coronary artery syndromes, worsening or unstable congestive heart failure, or serious ventricular arrhythmias). Always have cardiopulmonary resuscitation personnel and equipment readily available prior to DEFINITY administration and monitor all patients for acute reactions.

The reported reactions include: fatal cardiac or respiratory arrest, shock, syncope, symptomatic arrhythmias (atrial fibrillation, tachycardia, bradycardia, supraventricular tachycardia, ventricular fibrillation, ventricular tachycardia), hypertension, hypotension, dyspnea, hypoxia, chest pain, respiratory distress, stridor, wheezing, loss of consciousness, and convulsions. [see Adverse Reactions].

### Hypersensitivity Reactions

In postmarketing use, serious hypersensitivity reactions were observed during or shortly following perflutren-containing microsphere administration including:

Anaphylaxis, with manifestations that may include death, shock, bronchospasm, throat tightness, angioedema, edema (pharyngeal, palatal, mouth, peripheral, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, and erythema.

These reactions have occurred in patients with no prior exposure to perflutren-containing microsphere products. DEFINITY contains PEG. There may be increased risk of serious reactions including death in patients with prior hypersensitivity reaction(s) to PEG [see Adverse Reactions (and Description)]. Clinically assess patients for prior hypersensitivity reactions to products containing PEG, such as certain colonoscopy bowel preparations and laxatives. Always have cardiopulmonary resuscitation personnel and equipment readily available prior to DEFINITY administration and monitor all patients for hypersensitivity reactions.

### Systemic Embolization

When administering DEFINITY to patients with a cardiac shunt, the microspheres can bypass filtering by the lung and enter the arterial circulation. Assess patients with shunts for embolic phenomena following DEFINITY administration. DEFINITY is only for intravenous administration; do not administer DEFINITY by intra-arterial injection [see Dosage and Administration].

### Ventricular Arrhythmia Related to High Mechanical Index

High ultrasound mechanical index values may cause microsphere cavitation or rupture and lead to ventricular arrhythmias. Additionally, end-systolic triggering with high mechanical indices has been reported to cause ventricular arrhythmias. DEFINITY is not recommended for use at mechanical indices greater than 0.8 [see Dosage and Administration].

## ADVERSE REACTIONS

The following serious adverse reactions are described elsewhere in the labeling:

- Serious Cardiopulmonary Reactions [see Warnings and Precautions]
- Hypersensitivity Reactions [see Warnings and Precautions]

### Clinical Trials Experience

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

A total of 1716 subjects were evaluated in pre-market clinical trials of activated DEFINITY. In this group, 1063 (61.9%) were male and 653 (38.1%) were female, 1328 (77.4%) were White, 258 (15.0%) were Black, 74 (4.3%) were Hispanic, and 56 (3.3%) were classified as other racial or ethnic groups. The mean age was 56.1 years (range 18 to 93). Of these, 144 (8.4%) had at least one adverse reaction (Table 1). There were 26 serious adverse events and 15 (0.9%) subjects discontinued because of an adverse event.

### Serious Adverse Reactions

Among the 1716 study patients, 19 (1.1%) suffered serious cardiopulmonary adverse reactions.

For all adverse reactions, the overall incidence of adverse experiences was similar for the <65 year age group and the > 65 year age group, similar in males and in females, similar among all racial or ethnic groups, and similar for bolus and infusion dosing. Table 1 summarizes the most common adverse reactions.

**Table 1 New-Onset Adverse Reactions Occurring in ≥0.5% of All DEFINITY-Treated Subjects**

	DEFINITY (N=1716)	
Total Number of Adverse Reactions	269	
Total Number of Subjects with an Adverse Reaction	144	(8.4%)
Body system	n	(%)
Preferred term		
Application Site Disorders	11	(0.6)
Injection Site Reactions	11	(0.6)
Body as a Whole	41	(2.4)
Back/renal pain	20	(1.2)
Chest pain	13	(0.8)
Central and peripheral nervous system disorder	54	(3.1)
Headache	40	(2.3)
Dizziness	11	(0.6)
Gastrointestinal system	31	(1.8)
Nausea	17	(1.0)
Vascular (extracardiac) disorders	19	(1.1)
Flushing	19	(1.1)

N=Sample size 1716 subjects who received activated DEFINITY

n=Number of subjects reporting at least one Adverse Reaction

Other adverse reactions that occurred in ≤0.5% of the activated DEFINITY-dosed subjects were:

**Body as a Whole:** Fatigue, fever, hot flushes, pain, rigors, and syncope

**Cardiovascular:** Abnormal ECGs, bradycardia, tachycardia, palpitation, hypertension and hypotension

**Digestive:** Dyspepsia, dry mouth, tongue disorder, toothache, abdominal pain, diarrhea and vomiting

**Hematology:** Granulocytosis, leukocytosis, leukopenia, and eosinophilia

**Musculoskeletal:** Arthralgia

**Nervous System:** Leg cramps, hypertonia, vertigo and paresthesia

**Platelet, Bleeding, and Clotting:** Hematoma

**Respiratory:** Coughing, hypoxia, pharyngitis, rhinitis and dyspnea

**Special Senses:** Decreased hearing, conjunctivitis, abnormal vision and taste perversion

**Skin:** Pruritus, rash, erythematous rash, urticaria, increased sweating, and dry skin

**Urinary:** Albuminuria

### Postmarketing Experience

In a prospective, multicenter, open-label registry of 1053 patients receiving DEFINITY in routine clinical practice, heart rate, respiratory rate, and pulse oximetry were monitored for 30 minutes after DEFINITY administration. No deaths or serious adverse reactions were reported, suggesting that these reactions are unlikely to occur at a rate of more than 0.3% when DEFINITY is used according to recommendations.

The following adverse reactions have been identified during the post-marketing use of perflutren and PEG-containing microsphere products. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Fatal cardiopulmonary and hypersensitivity reactions and other serious but non-fatal adverse reactions were uncommonly reported. These reactions typically occurred within 30 minutes of DEFINITY administration. These serious reactions may be increased among patients with pre-existing PEG hypersensitivity and/or unstable cardiopulmonary conditions (acute myocardial infarction, acute coronary artery syndromes, worsening or unstable congestive heart failure, or serious ventricular arrhythmias [see Warnings and Precautions]).

Reported reactions included:

### Cardiopulmonary

Fatal cardiac or respiratory arrest, shock, syncope, symptomatic arrhythmias (atrial fibrillation, tachycardia, bradycardia, supraventricular tachycardia, ventricular fibrillation, ventricular tachycardia), hypertension, hypotension, dyspnea, hypoxia, chest pain, respiratory distress, stridor, wheezing.

### Hypersensitivity

Anaphylaxis, with manifestations that may include death, shock, bronchospasm, throat tightness, angioedema, edema (pharyngeal, palatal, mouth, peripheral, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, and erythema.

### Neurologic

Coma, loss of consciousness, convulsion, seizure, transient ischemic attack, agitation, tremor, vision blurred, dizziness, headache, fatigue.

## PATIENT COUNSELING INFORMATION

Advise patients to inform their healthcare provider if they develop any symptoms of hypersensitivity after DEFINITY administration, including rash, wheezing, or shortness of breath.

Distributed By  
Lantheus Medical Imaging  
331 Treble Cove Road  
N. Billerica, Massachusetts 01862 USA



For ordering, call toll free: 800-299-3431  
All Other Business: 800-362-2668  
(For Massachusetts and International, call: 978-667-9531)

Patent: <http://www.lantheus.com/patents/index.html>

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**PROGRAM INFORMATION**

Conference Overview..... 7  
 Welcome Message..... 9  
 ASE 2023 Program Committee..... 10  
 Registration Information..... 11  
 Facility Information & Map..... 12  
 Program Information & Regulations..... 14  
 CME & Education Information..... 16  
 Disclosure Information..... 18

**FRIDAY, JUNE 23**

Schedule at a Glance..... 22  
 Friday Schedule..... 23

**SATURDAY, JUNE 24**

Schedule at a Glance..... 28  
 Saturday Schedule..... 30

**SUNDAY, JUNE 25**

Schedule at a Glance..... 42  
 Sunday Schedule..... 44

**MONDAY, JUNE 26**

Schedule at a Glance..... 58  
 Monday Schedule..... 60

**SPECIAL EVENTS AND NETWORKING OPPORTUNITIES**

Special Events and Awards..... 71  
 Friday, June 23..... 73  
 Saturday, June 24..... 73  
 Sunday, June 25..... 76  
 Monday, June 26..... 78  
 ASE Foundation Awards and Grants..... 79

**ECHO EXPO & SHOWCASE OF INVESTIGATORS**

Echo Expo Floorplan..... 84  
 Echo Expo Hours..... 85  
 Science & Technology Theater Schedule..... 85  
 Exhibitor Assignments..... 94  
 Exhibitor Descriptions..... 95  
 Showcase of Investigators..... 102  
 Abstract Graders..... 103

**GENERAL INFORMATION**

About ASE..... 109  
 Officers & Board of Directors 2022-2023..... 110  
 Fellows of The American Society of Echocardiography..... 111  
 ASE Foundation..... 113  
 ASEF Cumulative Giving Recognition..... 114  
 2022 Annual Appeal Donors..... 116

# CALL FOR APPLICATIONS



## EARLY-CAREER DEVELOPMENT GRANT FOR ECHO SCIENTISTS (EDGES)

3  
GRANTS  
OF UP TO  
\$25,000

The EDGES grant will provide funding to early career clinical, basic science, or engineering investigators who are conducting research projects that address a clinical gap in cardiovascular ultrasound imaging.



Deadline to Apply: **July 1, 2023** | Learn more at: [ASEFoundation.org/EDGESResearchGrant/](https://ASEFoundation.org/EDGESResearchGrant/)

# CONFERENCE OVERVIEW

	FRIDAY, JUNE 23	SATURDAY, JUNE 24	SUNDAY, JUNE 25	MONDAY, JUNE 26	
6:30 AM »					« 6:30 AM
7:00 AM »					« 7:00 AM
7:30 AM »		Sessions		Sessions	« 7:30 AM
8:00 AM »					« 8:00 AM
8:30 AM »		34 <sup>th</sup> Annual Edler Lecture & Awards Presentation	Sessions	24 <sup>th</sup> Annual Feigenbaum Lecture & Weyman YIA Competition	« 8:30 AM
9:00 AM »					« 9:00 AM
9:30 AM »					« 9:30 AM
10:00 AM »		Break	Break	Break	« 10:00 AM
10:30 AM »					« 10:30 AM
11:00 AM »		Sessions	Sessions	Sessions	« 11:00 AM
11:30 AM »					« 11:30 AM
12:00 PM »					« 12:00 PM
12:30 PM »		REGISTRATION	REGISTRATION	REGISTRATION	« 12:30 PM
1:00 PM »		S & T Theaters: Lantheus	S & T Theaters: Philips	S & T Theaters: Pfizer	« 1:00 PM
1:30 PM »		S & T Theaters: Janssen	S & T Theaters: Pfizer		« 1:30 PM
2:00 PM »	Sessions	Sessions	Haluska Research Award Competition	Sessions	« 2:00 PM
2:30 PM »					« 2:30 PM
3:00 PM »	REGISTRATION	EXHIBITS OPEN	EXHIBITS OPEN	EXHIBITS OPEN	« 3:00 PM
3:30 PM »	Sessions	Break	Break	Break	« 3:30 PM
4:00 PM »		Sessions	Sessions	Sessions	« 4:00 PM
4:30 PM »					« 4:30 PM
5:00 PM »	Sessions and Council Business Meetings				« 5:00 PM
5:30 PM »		S&T Theaters: Bracco			« 5:30 PM
6:00 PM »		S&T Theaters: Bristol Myers Squibb	President's Reception in the Echo Expo		« 6:00 PM
6:30 PM »					« 6:30 PM
7:00 PM »	Welcome Reception and Council Networking Bobby McKey's Piano Bar 6:00-9:30 PM		ASE Foundation 14 <sup>th</sup> Annual Research Awards Gala 6:30-11:00 PM <i>(Ticketed Event)</i>		« 7:00 PM
7:30 PM »					« 7:30 PM
8:00 PM »					« 8:00 PM
8:30 PM »					« 8:30 PM

# Advancing the ImageGuideEcho™ Registry Experience: Join Today!

## Registry Expansion

The Pediatric Echo and *new* Perioperative Echo Modules allow for convenient access to multi-center echo data.

## Actively Adding More Data

Major milestones: 430,000+ TTE Studies, 73 physicians submitting data, 6 actively participating institutions, 9 pending enrollments.

## Center for Continuous Quality Improvement

Easily satisfy QI accreditation requirements through the Registry's partnership with the Intersocietal Accreditation Commission (IAC).

## Future Projects & Possibilities

Disease-centered models allowing future collaborations with multi-institutional and multi-modality research within a single expert-driven platform.



ASE's ImageGuideEcho Registry is the nation's first echo-specific clinical data registry for quality improvement.

**Stop by booth #531 in the Echo Expo to learn more!**

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## FOUNDATIONS AND THE FUTURE OF CARDIOVASCULAR ULTRASOUND

*“The loftier the building, the deeper must the foundation be laid.”*—Thomas à Kempis (medieval theologian)

*“Love, friendship, networking - these are all critical connections and the foundation of a healthy, happy life.”*—Whitney Wolfe Herd (modern businesswoman)

ASE is indeed a lofty edifice built on a deep foundation and reaching toward the future. Our education, science, innovation, public service, global outreach, and clinical care will be on display at the annual Scientific Sessions, June 23-26, 2023, in National Harbor, Maryland. ASE 2023 is about “critical connections”—across countries, institutions, and specialties—cardiovascular professionals forging the “foundation of a healthy, happy life” for our patients and ourselves.

The ASE 2023 program committee built tremendous pathways (practice specialties, modalities) and topic areas (disease states and technology applications). ASE 2023 focuses both on cardiovascular ultrasound as *Foundational* to cardiovascular practice by emphasizing the “building blocks” and the “bedrock” of quality, but also the exciting *Future* of cardiovascular ultrasound as we examine novel techniques, tools, building materials, and styles.

Building brings us together, and the Scientific Sessions will also celebrate connectivity—the glue, screws, nails, and sealant of our amazing Society. We hope you will:

- Participate in the all-new, intimate “Read with Me” small group sessions reviewing echos with experts in a “flipped classroom.”
- Join the Sonographer Career Day, Saturday, June 24 (free to sonography students).
- Put on your work gloves and learn tips and tricks in DIY scanning or learning labs.
- Grab a cup of coffee or tea each morning and head to sessions highlighting the best new research or the most eye-popping case findings.
- Re-establish ties with old friends in the Meet Up rooms, FASE Lounge, or over a meal.
- Meet and hear from the “architects” of ASE guidelines in special review sessions.
- Get a peek at blueprints in the Science and Technology Theaters.

### NEW THIS YEAR

- **The Arena:** An all-new construction hosting “can’t miss” sessions including debates, “TED” style talks, The Heart Team in Action, Echo in the Wild, Echo Heard Round the World, Best of Imaging Research, and AI and the Workflow in the Echo Lab, to name a few!
- **Cardio-Oncology Building Blocks Bootcamp:** All you need to know about this growing field built into an extended session.
- **Echogenomics:** Interaction and innovation in pediatric cardiology.
- **The Cutting Edge of POCUS Training and Advantages and Limitations of Cardiac POCUS: A Case Series:** Focus on critical care echo and cardiac POCUS.
- **Engineering in the Echo Lab: Building the Future:** Session on academic and industry collaboration.
- **Echo Lab Medical and Technical Directors Forum:** Lab management in challenging times.

And, of course, in addition to sessions covering the full spectrum of cardiovascular medicine, cardiovascular ultrasound techniques, and multimodality imaging, we have all our “Foundational Favorites.”

### FOUNDATIONAL FAVORITES

- ShowCASE & MACH-1
- The Fetal Symposium
- Joint Sessions with the European Association of Cardiovascular Imaging (EACVI) and the Japanese Society of Echocardiography (JSE)
- *New England Journal of Medicine* Pathologic Conference
- Gardin Keynote Lecture featuring NIH and FDA luminary cardiologist Dr. George Mensah
- IAC Quality bootcamp
- Value Summit featuring a Capitol Hill Insider
- Educators’ Summit: Creating an ACS program

Finally, we hope you secured your seat at the ASE Foundation Gala, where we will celebrate “All the Colors of the World” and raise funds for cardiovascular ultrasound research. We look forward to seeing your formal attire that celebrates your heritage.

Welcome to National Harbor!



**James N. Kirkpatrick, MD, FASE**

ASE 2023 Chair  
University of Washington Medical Center  
Seattle, WA



**Madeline Jankowski, BS, RDCS, ACS, FASE**

ASE 2023 Co-Chair  
Northwestern Medicine  
Chicago, IL

# ASE 2023 PROGRAM COMMITTEE



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*Learning Lab, Chair*



Matthew Vorsanger, MD, RPVI, FASE  
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Luciana Young, MD, FASE  
*Pediatric/ Congenital Track Chair*

## ATTENDEE REGISTRATION

The ASE Registration Desk is located in the Convention Center Pre-function area on the Ballroom Level of the Gaylord National Resort & Convention Center. Attendees may pick up their conference materials and name badge at this location.

## REGISTRATION HOURS

Friday, June 23.....	12:00 PM – 5:30 PM
Saturday, June 24.....	6:00 AM – 6:30 PM
Sunday, June 25.....	6:30 AM – 6:00 PM
Monday, June 26.....	6:30 AM – 4:30 PM

## NAME BADGES

Admission to the educational sessions, Echo Expo, and Science & Technology Theaters is by badge only. Please wear your name badge at all times when in the convention center. We recommend, for your safety, that you do not wear your name badge outside of the convention center. ASE exhibitors may scan your badge in the Echo Expo or Science & Technology Theaters. Your name badge is used for lead retrieval and provides exhibitors with your name, institution (where applicable), address, business telephone number, and email address.

ASE will not release email addresses of attendees who declined the lead retrieval option on their registration form. Family members with guest badges will be admitted to the Echo Expo and may sit in on educational sessions as space allows, but they are not eligible for a conference bag or to claim CME/MOC/CEU credit. Guests must be at least 12 years old. You may purchase guest badges for family members at the ASE Registration Desk. ASE reserves the right to revoke or deny attendance to any participant, speaker, exhibitor, news media reporter, or photographer at presentations or activities during the 34<sup>th</sup> Annual ASE Scientific Sessions.

## SPEAKER READY ROOM

Faculty name badges are available at the ASE Registration Desk during registration hours. The Speaker Ready Room is located in Chesapeake 1 on the Ballroom Level and staffed with technicians to assist faculty with uploading and previewing presentations. It is open during the following times:

Friday, June 23.....	11:00 AM – 5:00 PM
Saturday, June 24.....	6:00 AM – 5:00 PM
Sunday, June 25.....	6:00 AM – 5:00 PM
Monday, June 26.....	6:00 AM – 3:00 PM

## NEWS MEDIA

For information regarding news releases, news conferences, and interviews, please visit the ASE Registration Desk located in the Convention Center Pre-function area on the Ballroom Level. Copies of all news releases are also available on ASEcho.org under “News.” Media representatives must be registered and display their official ASE badge to enter conference areas. Please conform to our Photography and Audio/Visual Recording policy. Use #ASE2023 and follow @ASE360 for ASE’s breaking news.

# FACILITY INFORMATION & MAP

The Gaylord National Resort & Convention Center's physical address is:

201 Waterfront Street  
National Harbor, Maryland, USA, 20745

Located on the banks of the Potomac River, the Gaylord National is within walking distance or a short water taxi ride of world-class restaurants, entertainment, and attractions.

## FIRST AID

Emergency medical professionals will be available during the hours of the ASE 2023 meeting, as well as during setup and breakdown of the entire event. In the event of a medical emergency, please find a staff member or security guard to call the medic on duty.

## LOST & FOUND

Questions regarding lost or found items can be directed to the ASE Registration Desk located in the Convention Center Pre-function area on the Ballroom Level.

## PRINTING AND SHIPPING SERVICES

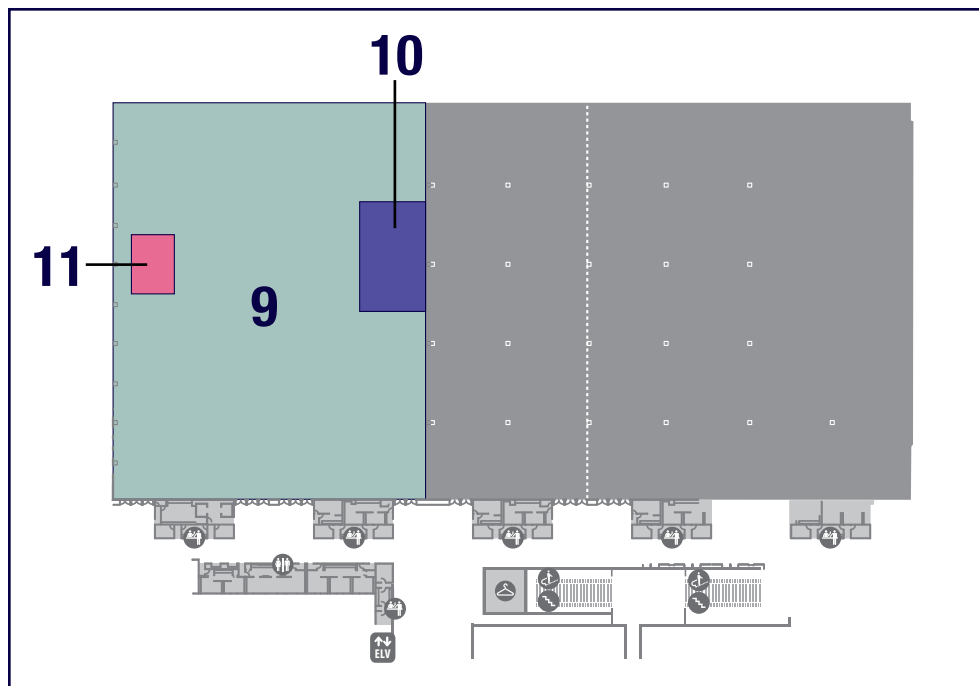
The Gaylord National Resort & Convention Center features a full-service FedEx Office business center, located on the Ballroom Level near the Convention Center Pre-function. The FedEx Office is open seven days a week, 7:00 AM to 7:00 PM.

## PARKING

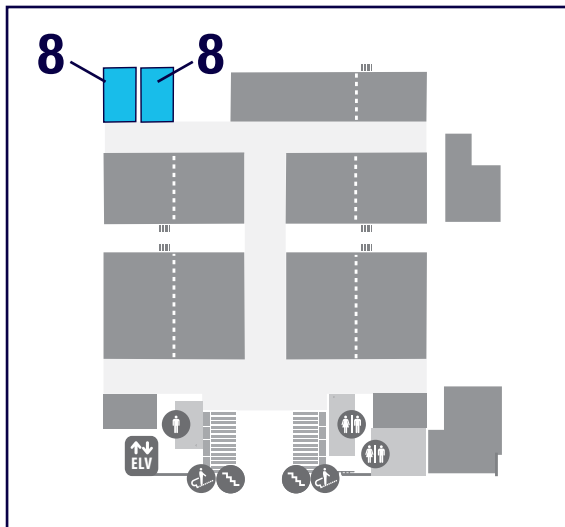
Attendees receive discounted parking at a rate of \$25 per day at the Gaylord National Resort & Convention Center. This total will automatically be added to your room reservation if you are staying at the Gaylord. If you are not staying at the Gaylord, please visit the ASE Registration Desk to receive a discounted parking pass. A new pass is required each day.

- 1 Registration
- 2 Session Rooms
- 3 ASE Foundation
- 4 Product/Info Booth
- 5 Speaker Ready Room
- 6 Learning Lab
- 7 DIY Acquisition Room
- 8 Quiet Rooms
- 9 Echo Expo/S&T Theaters
- 10 FASE Lounge
- 11 Arena

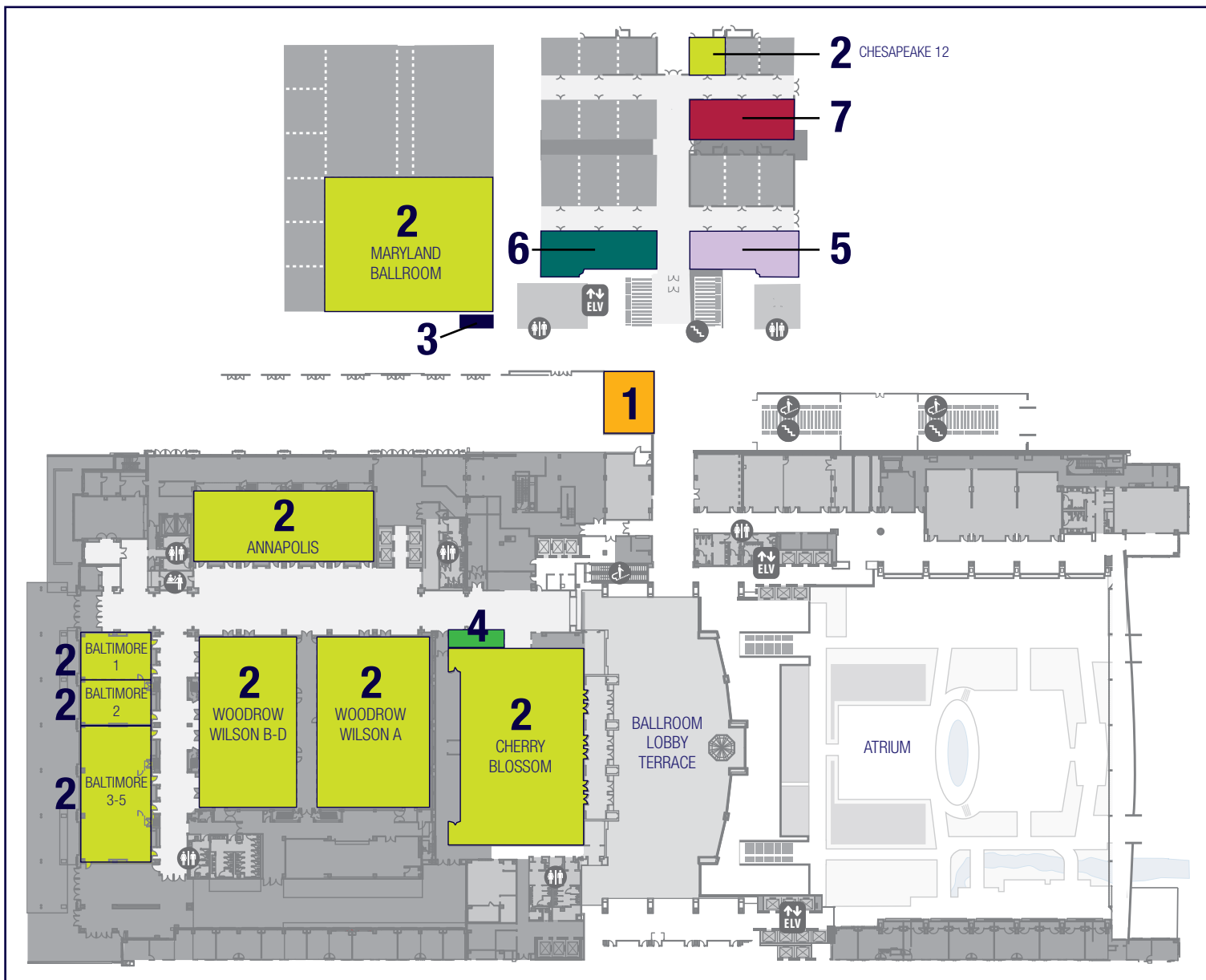
## PRINCE GEORGE'S EXHIBIT HALL LOWER ATRIUM LEVEL



NATIONAL HARBOR ROOMS ABOVE BALLROOM LEVEL



BALLROOM LEVEL



## FOOD FUNCTIONS

ASE will provide continental breakfast in the Annapolis and Maryland Pre-function spaces on Ballroom level, from 6:30 – 7:30 AM Saturday through Monday. Morning and afternoon coffee breaks are available for registered attendees Friday, June 23 through Monday, June 26. Please refer to the Schedule at a Glance pages for the times of the daily morning, afternoon, and lunch breaks.

ASE will provide lunch on a first-come, first-served basis (max. 300 participants) for attendees of the Science & Technology Theaters, located in the Echo Expo on the Lower Atrium Level. See page 85 of this program for a detailed Science & Technology Theater schedule.

## INTERNET ACCESS

Staying at the Gaylord?

Use **Gaylord Resorts Network** with your last name and room number.

A limited bandwidth network is available for attendees not staying at the Gaylord.

Network: **ASE2023**

Password: **echofirst**

## SAFETY

Audience seating is on a first-come, first-served basis. According to fire code, a session must be closed if the room fills to capacity. ASE reserves the right to close session rooms as needed, without compensation to attendees. Inappropriate behavior or undesirable conduct, including, but not limited to, verbal or physical abuse, whether threatened or performed, will not be permitted or tolerated. You must wear your name badge at all times in the convention center. Be sure to remove your badge when you leave the convention center.

## DOWNLOAD WHOVA, ASE'S NEW LIVE COURSE APP

ASE is using the online platform Whova as its 2023 live courses app. Whova will give you access to the entire meeting program at your fingertips. You can also use the app to ask questions during the sessions you attend. Some sessions will also use Whova's polling functions. Search "Whova" in the Google Play and Apple Stores to download.

Whova allows for more interaction among participants at the meeting including:

- Finding others who are attending ASE 2023 and reaching out to them at any time.
- Planning social activities such as a morning run, coffee hours, or meet-ups with your fellow attendees.
- Uploading pictures from the event to share with others
- Important course information like:
  - ◆ The event agenda and planning your personal schedule.

- ◆ Access to documents shared by organizers or speakers.
- ◆ Updates like possible last minute session changes from the organizers.

If you have already used the Whova app, just double-check what is installed on your phone, tablet, or computer, and log in using your existing account email and password.

## FIRST TIME WHOVA USER?

### MOBILE APP

After downloading Whova, you will be prompted to create an account. We suggest that you use the email address you used when registering for ASE 2023 and create a strong password. By using the email address you used when registering for ASE 2023, the platform will associate you with the event and take you to your event page automatically.

### WEB PORTAL

Once you have downloaded and signed into the Whova app on your mobile device, you will receive an email from Whova with the web portal URL. Open your email on your laptop/tablet and click the web portal link to access the app through your browser.

If you are not automatically connected to the event and you are prompted for an event code, please reference the email you were sent on Monday, June 19, from "[event-noreply@whova.io](mailto:event-noreply@whova.io)", or visit the registration desk in the Convention Center Pre-function area on the Ballroom Level of the Gaylord National Resort & Convention Center.

## AUDIO/VIDEO/PHOTOGRAPHY/SOCIAL MEDIA POLICIES

Please be aware that during the ASE Scientific Sessions, attendees, vendors, guests, and exhibitors may be photographed or videotaped by ASE staff and contractors capturing the event. Some of these photographs or videos may be displayed by ASE in future publications or other materials. By virtue of your attendance, you agree to allow ASE to use photographs of you in its promotional materials.

Much of the information being presented at the ASE Scientific Sessions is proprietary and may include unpublished data. It is the responsibility of the presenter to notify the attendees that they do not want their research captured. This can be done by verbal announcement from the podium or with a notice on a poster presentation. Please be respectful of these wishes and **DO NOT** capture or share details of unpublished data. The following policies must be followed. Attendees who violate these policies may be asked to leave the educational session and are at risk of losing their conference badge and privileges.

## **AUDIO/VIDEO RECORDING POLICY**

Audio/video recording of any portion of the meeting room slides or poster presentations at ASE 2023 Scientific Sessions is prohibited. ASE reserves the rights to all recordings or reproductions at ASE meetings. Audio/video recording by individuals for personal use and for social media use is allowed only at social events and in public spaces throughout the meeting.

## **PHOTOGRAPHY POLICY**

ASE 2023 attendees may take photographs during social and educational sessions provided the photographs are strictly for personal and noncommercial use. Please do not use flash photography, block audience members, or in any way be disruptive when taking photos.

## **SOCIAL MEDIA POLICY**

The use of social media at the ASE Scientific Sessions is welcomed, including live tweeting. Sharing photographs, including a single slide from a presentation, on social media is permitted. Please identify the presenter by name and tag in the post. ASE has printed Twitter handles on name badges to encourage engagement. Some presenters may request that photographs of their presentation not be shared. It is the responsibility of the attendee to respect the presenter's request. Use #ASE2023 when posting on social media and be sure to tag @ASE360.

## **QUIET ROOMS – LACTATION, PRAYER OR MEDITATION SPACE**

National Harbor 14 and 15 of the Gaylord National Resort & Convention Center are designated as quiet rooms, used for lactation, prayer, or meditation. These rooms are locked, but a key is available at the nearby ASE Registration Desk on Ballroom Level. The rooms will have standard AC power outlets. Access to a refrigerator is available at the ASE Registration Desk.

## **CHILDREN RULES AND REGULATIONS**

All children ages 16 and under must be accompanied at all times by their parent or guardian while in the Gaylord National Resort & Convention Center. Children ages 12 and older should be registered as an ASE Guest, and wear their official ASE name badge at all times while at the meeting. Parents or guardians assume all responsibility for their children and their behavior. Children of any age, in strollers, or infant carriers are permitted in the Echo Expo while under the supervision of a parent or guardian. However, please note that for their safety, children are not allowed in the Echo Expo during set up or tear down hours.

Due to limited seating capacity and the highly technical nature of the program, children are not encouraged to attend the educational sessions. However, ASE recognizes that in some cases, some children may need to remain with their parent at all times. If this is the case and you bring your child into the educational sessions, please be conscientious of your fellow attendees' learning experiences by attempting to minimize distractions. As with all attendees, those exhibiting disruptive behavior may be asked to leave these sessions for the benefit of the other attendees.

## ACCREDITATION AND DESIGNATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Society of Echocardiography (ASE) and the ASE Foundation. ASE is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

ASE designates this live, in-person activity for a maximum of **29.75 AMA PRA Category 1 Credit(s)<sup>™</sup>**, and the virtual activity for a maximum of **24.25 AMA PRA Category 1 Credit(s)<sup>™</sup>**. Participants should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn MOC points in the **American Board of Internal Medicine's** (ABIM) Maintenance of Certification (MOC) program, the **American Board of Pediatrics** (ABP) MOC program, and/or the **American Board of Anesthesiology's** (ABA) Maintenance of Certification in Anesthesiology Program<sup>®</sup> or MOCA 2.0<sup>®</sup>. It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM and ABP MOC points and/or ABA MOCA 2.0<sup>®</sup>. Participants should claim only the credit commensurate with the extent of their participation in the activity. Physicians will earn MOC and/or MOCA 2.0 points equivalent to the amount of CME credits claimed for the activity.

The ASE 34<sup>th</sup> Annual Scientific Sessions has been reviewed by the **American Academy of Physician Assistants** (AAPA) Review Panel and is compliant with AAPA CME Criteria. The in-person activity is designated for a maximum of 29.75 AAPA Category 1 CME credits, and the virtual activity is designated for a maximum of 24.25 AAPA Category 1 CME credits. PAs should only claim credit commensurate with the extent of their participation. Approval is valid from June 23, 2023, to June 26, 2023. AAPA reference number: CME-208806.

The ASE 34<sup>th</sup> Annual Scientific Sessions has been reviewed by the **British Society of Echocardiography** and is approved for up to 18 BSE Points (5 for full day; 3 for half day).

The ACCME and the **European Board of Accreditation in Cardiology** (EBAC) recognize each other's accreditation systems as substantially equivalent. To obtain EBAC credit for participation in this activity, submit evidence of participation directly to EBAC (ebac-cme.org).

The **European Union of Medical Specialists** (UEMS)-**European Accreditation Council for Continuing Medical Education** (EACCME) has an agreement of mutual recognition of CME credit with the American Medical Association (AMA). European physicians interested in converting *AMA PRA Category 1 Credit<sup>™</sup>* into European CME credit (ECMEC) should contact the UEMS (uems.eu).

The **National Board of Echocardiography<sup>™</sup>** (NBE) requires 15 hours of echocardiography specific CME for both ReASCE<sup>®</sup> and RePTE<sup>®</sup> recertification. This activity contains up to 29.75 *AMA*

*PRA Category 1 Credits<sup>™</sup>* that can be used toward recertification requirements.

All or a portion of this educational activity may meet the CME requirement for **Intersocietal Accreditation Commission** (IAC) Echocardiography accreditation. Per IAC standards, at least 15 hours of CME relevant to echocardiography are required over a period of three years.

This activity is eligible for Section 1 credits in the **Royal College of Physicians and Surgeons of Canada's** Maintenance of Certification (MOC) Program. Participants must log into MAINPORT to claim this activity.

## CLAIMING CME CREDIT

To claim your CME/MOC/CEU credit for the 34<sup>th</sup> Annual ASE Scientific Sessions, please visit [ASEScientificSessions.org/CME-2](https://ASEScientificSessions.org/CME-2) for instructions. The CME evaluation will be available **June 26, 2023**. Attendees must claim credit by July 26, 2023.

## ASE 2023 IN-PERSON CME

Registration includes up to 29.75 CME/MOC credits (see the breakdown of daily, in-person hours below). In-person registrants receive unlimited access to recordings (audio and PowerPoint only) from six main session rooms for 90 days from Tuesday, July 11, 2023, to Monday, October 9, 2023. Attendees may only claim CME credits for attending sessions in-person.

Friday – 4  
Saturday – 9.25  
Sunday – 8.5  
Monday – 8

## ASE 2023 VIRTUAL CME

Registration includes live streaming from two session rooms, up to 24.25 CME/MOC credits (see the breakdown of daily, live streaming hours below). Virtual registrants will receive unlimited access to recordings (audio and PowerPoint only) from the live-streamed sessions for 90 days from Tuesday, July 11, 2023, to Monday, October 9, 2023. Virtual attendees may claim CME credits for watching the live-streamed and/or recorded sessions.

Friday – 4  
Saturday – 6.5  
Sunday – 6.75  
Monday – 7

## TARGET AUDIENCE

The ASE 2023 Scientific Sessions will benefit all healthcare providers interested in the application of cardiovascular ultrasound imaging in the care of patients and in research. ASE's membership is open to all echo enthusiasts, so this conference is designed to engage a diverse audience. Participants with a wide variety of interests and expertise in cardiovascular imaging will find sessions that meet their needs and help improve their practice. High quality



lectures, debates, case-based presentations, and research poster presentations offer a broad spectrum of educational opportunities. The curriculum is intended to enhance knowledge and performance for adult and pediatric cardiologists, cardiothoracic and vascular surgeons, cardiac anesthesiologists, cardiac sonographers, and emergency and critical care physicians, as well as hospitalists, veterinarians, radiologists, research scientists, primary care practitioners, residents and fellows in training, students, advanced practitioners and nurses. Attendees are encouraged to interact with available faculty using the chat feature in the Whova app, on the conference online platform, in the Arena, and also to take advantage of the opportunity to gain new expertise.

## INTERACTIVE SESSIONS: ASK QUESTIONS

The ASE Courses app, Whova, contains detailed information on each of ASE's live courses. You will find faculty, agendas, exhibitors, networking events, and more. Use the app on-site to create your own event schedule and receive notifications of special activities. You can download the app by searching for Whova in the Apple or Google Play store.

Once you have downloaded the app, you can use the app to ask questions during most sessions.

1. Open the ASE 2023 Scientific Sessions Event
2. Select "Agenda" on the bottom toolbar to access the sessions.
3. Select the Session you are attending.
4. Select the Q&A box.
5. Enter your question and tap Send in the bottom right corner of the screen.

## DISCLAIMER

The information provided during this CME activity is for continuing education purposes only, and is not meant to substitute for the independent medical judgment of a healthcare provider relative to the diagnosis and treatment options of a specific patient's condition.

## COMMERCIAL SUPPORT DISCLOSURE STATEMENT

### Educational Grants

This activity is supported in part by unrestricted educational grants from: GE Healthcare and Abbott. ShowCASE is supported in part by an unrestricted educational grant provided by Elsevier.

### In-Kind Donations

This activity is supported in part by in-kind donations from: Canon Medical Systems, USA Inc, FUJIFILM Healthcare, GE Healthcare, Philips Healthcare, and Siemens Healthineers.

## CONFERENCE OBJECTIVES

This program has been designed to allow attendees to access a broad overview of topics, or delve deeply into one or two topics. In addition, particular care has been taken to incorporate ASE guidelines into talks to demonstrate how and why they should be applied in your daily practice. Upon completion of this course, participants should be better able to:

1. Demonstrate improved performance regarding the foundational elements of cardiac and vascular ultrasound.
2. Examine emerging and innovative technologies in the application of echocardiography and vascular ultrasound.
3. Recognize the role of multimodality imaging in detecting and directing therapies for multiple different forms of cardiomyopathy, including hypertrophic, infiltrative (amyloid), valvular, ischemic, familial, metabolic, systemic, infectious, etc.
4. Demonstrate an understanding of the quality performance of echocardiographic and vascular imaging modalities in a variety of settings and patient presentations.
5. Recognize the advantages and importance of quality in cardiac POCUS and critical care echocardiography.
6. Discuss key elements of recent ASE Guidelines.
7. Discuss the important elements of transesophageal echocardiography in the perioperative and interventional procedural settings.
8. Describe the key applications of echocardiography, including advanced modalities and quantification, in pediatric and adult patients with congenital heart disease.
9. Summarize the future of imaging of children and adults with heart disease including innovations in imaging technology, artificial intelligence, therapeutic ultrasound, and novel applications of existing technology.
10. Apply hands-on practical experience to scanning and/or interpretation.

## DISCLOSURE

ASE is committed to ensuring that its educational mission, and all accredited continuing educational programs provide a protected space to learn, teach, and engage in scientific discourse free from influence from organizations that may have an incentive to insert commercial bias into education.

While a monetary or professional affiliation with an ineligible company does not necessarily influence a speaker's presentation, the Standards for Integrity and Independence in Accredited Continuing Education and policies of the ACCME require that all financial relationships with ineligible companies\* be identified and mitigated prior to engaging in an accredited CE activity. In accordance with these policies, ASE actively identified relevant financial relationships between faculty in control of this accredited CE activity and ineligible companies and implemented mitigation strategies to eliminate any potential influence from persons or organizations that may have an incentive to insert commercial bias in this activity. (\*Companies that are ineligible to be accredited in the ACCME System ("ineligible companies") are those whose primary business is producing, marketing, selling, reselling, or distributing healthcare products used by or on patients.) Disclosure information is referenced and can be found beginning on page 19 of this program.

ACCME defines an ineligible company as an entity whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. For specific examples of ineligible companies visit [accme.org/standards](http://accme.org/standards). ACCME does not consider providers of clinical services directly to patients to be a commercial interest.



- or dangers that outweigh the benefits or are known to be ineffective in the treatment of patients.
- Not to accept any payment or reimbursement for their content from any commercial interests.
- Provide content material that is balanced information on all available options for pharmaceutical identification, trade name of drugs and devices to avoid the appearance of commercial bias.
- Disclose to the program audience when products/services are not labeled for the use under discussion or when the products are still under investigation.
- Comply with patient confidentiality requirements as outlined in the Health Insurance Portability and Accountability Act (HIPAA), by removing all patient and hospital identifiers from all content materials, including presentation slides and handouts.

## RELATIONSHIP CODES

1. SPEAKER/SPEAKERS' BUREAU
2. CONSULTANT, ADVISOR
3. STOCKHOLDER (NOT INCLUDING DIVERSIFIED MUTUAL FUNDS)
4. RESEARCH FUNDING (INCLUDES PRINCIPAL OR NAMED INVESTIGATOR EVEN IF MANAGED BY INSTITUTION)
5. COMPANY RELATIONSHIP (OWNER, EMPLOYEE)
6. ROYALTIES/PATENT BENEFICIARY
7. OTHER (EDUCATOR OR HONORARIA)

It is the policy of ASE to ensure balance, independence, objectivity, and scientific rigor in all its educational activities. All speakers at the 34<sup>th</sup> Annual Scientific Sessions have agreed to the following:

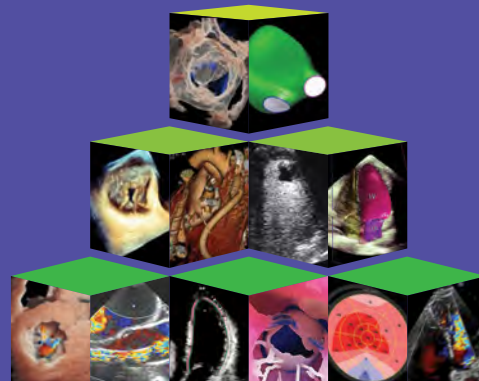
- Present recommendations for patient care that are based on current science, evidence, and clinical reasoning, while giving a fair and balanced view of diagnostic and therapeutic options.
- Refer, report, or use in accredited education scientific research in support or justification of a patient care recommendation that conforms to the generally accepted standards of experimental design, data collection, analysis, and interpretation.
- Not present content that advocates for unscientific approaches to diagnosis or therapy, or if the education promotes recommendations, treatment, or manners of practicing healthcare that are determined to have risks

# ASE 2023 SPEAKER DISCLOSURES

Aday, A.	OptumCare, CRC Oncology, Aeglea (2)
Agarwal, V.	Abbott Vascular, Moray Medical, Reniva (1)
Akhter, N.	Abbott (4)
Appadurai, V.	Abbott Medical (1)
Asch, F.	Ultrasonics (1)
Aurigemma, G.	TOMTEC (1); GE Healthcare (2)
Bae, R.	Abbott Structural (2)
Becher, H.	Lantheus (2); Bracco Diagnostics (1); Ultrasonics (4)
Bhatt, H.	Neochord, LLC (2)
Bierig, M.	Medtronic (5)
Bourque, D.	Lantheus (1)
Branch, K.	Bayer, Janssen, Amgen (2)
Carvalho, Y.	Bracco Diagnostics, Lantheus (1)
Cavalcante, J.	4C Medical, Edwards Lifesciences, Medtronic, Abbott Structural, Anteris (2)
Chen, T.	Intrinsic Imaging, LLC (2)
Choi, A.	Siemens Healthineers (2); Cleerly (3)
Clavel, M.	Edwards Lifesciences, Medtronic (4)
Crandall, I.	Bracco Diagnostics (1); Lantheus (2)
Cuddy, S.	Pfizer (4); Ionis (1); Bridgebio, Astra Zeneca (2)
Davidson, B.	GE Healthcare (2)
Doldt, B.	Lantheus (1)
Dversdal, R.	Vave Health (5)
Fleishman, C.	Braun (2)
Gillam, L.	Medtronic, Edwards Lifesciences, Philips Healthcare (2)
Hahn, R.	Abbott Vascular, Boston Scientific, Edwards Lifesciences, Medtronic, Philips Healthcare (1; 2)
Harb, S.	Abbott, Boston Scientific, Mitria LLC (2)
Hill, J.	Philips Healthcare (1)
Hoit, B.	Philips Medical (1)
Horton, K.	Caption Health (2)
Jain, R.	Medtronic (1)
Jankowski, M.	Echo IQ, Caption Health, Bristol Myers Squibb (2)
Kelly, N.	Abbott Pharmaceuticals, Edwards Lifesciences (1)
Khalique, O.	Edwards, Croivalve, Abbott Structural (2)
Kimura, B.	Blue Earth (7)
Klein, A.	Kiniksa, Cardiol Therapeutics, Pfizer (4); Kiniksa, Cardiol Therapeutics, Pfizer (2)
Koenig, S.	Fuji Sonosite (1)
Kort, S.	Medtronic (2)
Koulogiannis, K.	Edwards Lifesciences, Abbott (2); 4C Medical (3)
Kraushaar, M.	Epsilon Imaging (1)
Lang, R.	Philips Healthcare, TOMTEC (2); Ultrasight (4)
Lee, D.	Abbott Laboratories, Axon Therapies, Rivos Pharmaceuticals (4)
Leyboldt, J.	Lantheus (1)
Lindner, J.	Lantheus (4)
Linker, D.	Cardiac Insight, Inc. (3)
Liu, J.	Johnson and Johnson (4); Caelum Biosciences (7); Philips Healthcare (1)
Liu, R.	Philips Healthcare (2)
Martin, R.	Caption Healthcare/AI Software (3); Edward Lifesciences (1)
Martinez, m.	Bristol Myers Squibb, Cytokinetics (2)
McCartney, S.	Humacyte Inc. (2)
Meece, R.	Philips Healthcare (1); Intershunt Technologies, Inc. (2)
Michelena, H.	Artivion, Inc. Science, Biostable Engineering (2)
Michos, E.	Amgen, Amarin, AstraZeneca, Pfizer, Edwards Lifesciences, Medtronic, Boehringer Ingelheim, Esperion (2)
Minhas, A.	AMAG Pharmaceuticals (4)
Mitchell, C.	Davies Publishing Inc., Elsevier (7); W.L. Gore & Associates (4); Acoustic Range Estimates US (2)
Miyasaka, R.	Abbott (1)
Morris, S.	Aytu Biopharma (2)
Mulvagh, S.	Lantheus, Novo Nordisk (2)
Nesbitt, G.	Bristol Myers Squibb (1)
Orsinelli, D.	Siemens Healthineers (2)
Ouyang, D.	AstraZeneca, EchoIQ, Ultrasonics, Pfizer (2); Alexion (4); InVision (3)
Panebianco, N.	Butterfly Network (4)
Park, M.	Lantheus Medical Imaging (1)
Parthiban, A.	Edwards Lifesciences (4)
Parwani, P.	Medtronic (2); Astrazeneca (1)
Patel, A.	GE Healthcare (1, 4); Circle CVI, Neosoft (4)
Pedrizzetti, G.	Medis Medical Imaging (2)
Pellikka, P.	Edwards Lifesciences, GE Healthcare, Ultrasonics (4)
Perry, R.	TOMTEC Imaging Systems, GE Healthcare, Philips Medical (1)
Petersen, S.	Circle Cardiovascular Imaging, Inc. (2)
Phelan, D.	Bristol Myers Squibb, Pfizer (1); Caption Health (2)
Philip, R.	Abbott (1)
Piazza, G.	Bristol Myers Squibb/Pfizer, Janssen, Alexion, Bayer, Amgen, BSC, Esperion (4); BSC, Amgen, Bristol Myers Squibb, Pfizer, Alexion, Bayer, Janssen (2)
Pruetz, J.	ProLacta Science Inc., Vitaro Biomedical (2)
Puthumana, J.	Abbott Structural (1); Edwards Lifesciences (2)
Quader, N.	Abbott (1)
Quaife, R.	Philips Medical (4)
Rigolin, V.	Amgen, AstraZeneca, Bristol Myers Squibb, Edwards Lifesciences, Merck, Pfizer, Regeneron, Viatris (3)
Robich, M.	Sorin Biomedica Cardio S.R.L. (2)
Robinson, J.	Siemens Medical Solutions USA, Inc (2); Doximity, Inc., Teladoc Health, Inc. (3)
Rudski, L.	General Electric (3)
Salinas, P.	General Electric, Echonous (2)
Saric, M.	Abbott, Boston Scientific, Medtronic (1)
Sarma, A.	Pfizer (2)
Scherer, M.	Abbott, Boston Scientific, Edwards Lifesciences (1)
Sengupta, P.	Echo IQ, RCE Technologies (2)
Shah, S.	GE Healthcare (1)
Shah, S.	General Electric (2)
Slivnick, J.	IONIS (4)
Stefanescu, A.	Medtronic (7); Occlutech (4)
Stout, J.	Bracco Diagnostics (1)
Strom, J.	Edwards Lifesciences, EchoIQ, Ultrasonics, Bracco Diagnostics, GE Healthcare (2); Edwards Lifesciences, Ultrasonics, HeartSciences, Inumana, EchoIQ, Lantheus (4)
Swaminathan, M.	US2.ai (2)
Thaden, J.	Medtronic (2)
Thomas, J.	Abbott, Caption Health, egnite, EchoIQ (2)
Tower-Rader, A.	Cytokinetics, Bristol Myers Squibb (4)
Truong, D.	Pfizer (4)
Tsang, W.	Philips Healthcare, Siemens Healthineers (4); UpToDate (6); Abbott (1)
Vainrib, A.	Micro Interventional Devices, Inc. (2)
Vannan, M.	Abbott, GE Healthcare, Medtronic, Philips Healthcare, Siemens Healthineers (4); Abbott, Medtronic (1)
Voigt, J.	GE Healthcare, TOMTEC/Philips Healthcare (1; 4)
Walling, S.	Lantheus (1)
Wei, K.	Bracco Diagnostics (1)
Woodward, G.	Ultrasonics Ltd (5)
NO FINANCIAL RELATIONSHIPS	
Abe, Y.; Abraham, T.; Acevedo, J.; Adams, D.; Addetia, K.; Akhter, N.; Altman, C.; Aly, D.; Andrikopoulou, E.; Aragam, J.; Armour, A.; Arnaut, R.; Aronson, L.; Arora, B.; Arya, B.; Ayres, N.; Banchs, J.; Banerjee, A.; Barac, A.; Barker, P.; Belani, K.; Bernard, S.; Betz, J.; Bhat, A.; Blissett, S.; Borowski, J.; Bourque, J.; Boyle, A.; Brady, M.; Bregadze, C.; Bremer, M.; Brook, M.; Brown, A.; Buddhe, S.; Bullock-Palmer, R.; Burgess, P.; Byrd, B.; Campbell, M.; Canessa, R.; Cassidy, C.; Chamsi-Pasha, M.; Cohen, J.; Cohen, M.; Cole, S.; Collier, P.; Collins, K.; Cordio, M.; Cote, E.; Coutinho, T.; Co-Vu, J.; Crowley, J.; Cuneo, B.; Damewood, S.; Davis, A.; DeCara, J.; Delgado, V.; Dellling, F.; Diaz-Gomez, J.; DiMaria, M.; Doan, T.; Donal, E.; Donofrio, M.; Dorfman, A.; Doucet, A.; Drant, S.; Dudzinski, D.; Dunbar, C.; Durham, A.; Edvardsen, T.; Edwards, N.; Eidem, B.; Enger, N.; Ensing, G.; Faloye, A.; Farooqi, K.; Feigenbaum, H.; Ferrari, V.; Forsha, D.; Forshaw, T.; France, R.; Freed, B.; Friedberg, M.; Friend, L.; Frye, C.; Furtun, B.; Gaitonde, M.; Garcia-Sayan, E.; Gardner, A.; Garg, R.; Gearheart, A.; Geva, T.; Gibson, K.; Gill, E.; Goldenberg, G.; Grimm, R.; Groves, A.; Guthrie, J.; Hake, J.; Halavina, N.; Harrild, D.; Hauck, A.; Hays, A.; Heath, D.; Henkin, S.; Hodovan, J.; Hollon, M.; Hong, G.; Hong-Zohlman, S.; Howard-Quijano, K.; Hua, L.; Huang, G.; Hundley, G.; Huntington, C.; Ignatowski, D.; Imbrogno, M.; Janardhanan, R.; Jensen, S.; Johnson, B.; Johnson, D.; Johnson, K.; Jolley, M.; Jone, P.; Katz, W.; Keane, M.; Keuster, K.; Khoo, N.; Khurshid, S.; Kim, E.; Kim, J.; Kirkpatrick, J.; Knoll, P.; Kovalchin, J.; Kramer, C.; Krishnan, A.; Kruse, E.; Kuester, K.; Kwan, I.; Labovitz, A.; Laguna, K.; Lai, W.; Landeck, B.; Lebehn, M.; Lefebvre, B.; Lefevre, M.; LeLeiko, R.; Lester, S.; Levine, R.; Lichtenberger, J.; Little, S.; Lopez, L.; Lopez-Mattei, J.; Lu, J.; Mackensen, G.; Maganti, K.; Mah, M.; Main, M.; Mankad, R.; Mankad, S.; Markowitz, J.; Martin, R.; Maskatia, S.; Mayer, S.; Mayo, P.; McFarland, C.; Mcllwain, E.; Mediratta, A.; Meganti, K.; Mensah, G.; Mercandetti, J.; Mercer-Rosa, L.; Mertens, L.; Meyer, J.; Michelfelder, E.; Miglioranza, M.; Migner, J.; Miklasz, E.; Mohsin, S.; Molossi, S.; Moon-Grady, A.; Moore, R.; Mukherjee, M.; Munsey, N.; Nagata, Y.; Nagueh, S.; Nakatani, S.; Nanda, N.; Narang, A.; Narula, N.; Natarajan, S.; Nero, B.; Nguyen, H.; Nguyen, M.; Niaz, T.; Nicoara, A.; Nikravan, S.; Obase, K.; Ohye, R.; Olivieri, L.; Orsinelli, M.; Owens, D.; Palma, R.; Pandian, N.; Parashar, S.; Parikh, R.; Parker, M.; Parra, D.; Patel, A.; Patil, P.; Pearlman, A.; Pellett, A.; Phillips, S.; Picard, P.; Pinto, F.; Pinto, N.; Poh, K.; Polsen, C.; Poston, S.; Potter, B.; Powell, A.; Prado, A.; Prengaman, Z.; Pressman, G.; Printz, B.; Puchalski, M.; Qureshi, M.; Qureshi, Y.; Rahman, F.; Ramzy, R.; Rashedi, N.; Rassi, D.; Rastelli, M.; Reddy, C.; Rhinehart, Z.; Richards, B.; Riley, A.; Rivas, C.; Rogers, L.; Rosborough, T.; Rose, G.; Rosen, D.; Rosenthal, S.; Ryan, T.; Sachdev, V.; Sachdeva, R.; Sade, L.; Safi, L.; Sahu, A.; Samples, S.; Sanborn, D.; Saurers, D.; Scansani, S.; Schafz, J.; Scherrer-Crosbie, M.; Schwaegler, B.; Senior, R.; Shea, E.; Sheehan, J.; Sheu, R.; Smetish, O.; Sohn, J.; Soni-Patel, N.; Soriano, B.; Sorrell, V.; Srivastava, S.; Stainback, R.; Strachan, G.; Strange, K.; Sugeng, L.; Sullivan, A.; Supe, M.; Tacy, T.; Taub, C.; Taylor, A.; Taylor, C.; Thamman, R.; Thomas-Mohtat, R.; Thompson, T.; Thorson, K.; Tierney, E.; Tomlinson, S.; Truong, U.; Tseng, S.; Tucay, E.; Umland, M.; Urbas, C.; Vadlamudi, R.; Vilner, A.; Vogel-Bass, E.; Vorsanger, M.; Wang, Z.; Warmsbecker, J.; Wasserman, M.; Weissman, N.; Wibhuti, I.; Wiegers, S.; Wiener, D.; Wood, S.; Xu, B.; Yamamoto, K.; Yamat, M.; Yilmaz, B.; Yim, J.; Young, L.; Yucel, E.; Zhao, Q.; Zimmerman, K.; Zoeller, B.; Zoghbi, W.; Zybella, A.	

# ASE2023

## Foundations and the Future of Cardiovascular Ultrasound



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# SCHEDULE AT A GLANCE

## FRIDAY, JUNE 23

FRIDAY

REGISTRATION OPEN 12:00 PM - 5:30 PM						
ROOMS	CHERRY BLOSSOM	WILSON A	WILSON BCD	ANNAPOLIS	BALTIMORE 3-5	BALTIMORE 1
1:00 – 2:30 PM	Cardio-Oncology Building Blocks Bootcamp	Emerging Advances in Cardiac Imaging: Creating a Framework for the Future	Introduction to Interventional Imaging: Not Just About the Intervention	IAC Bootcamp: Foundations of Quality		
2:30 – 2:45 PM	REFRESHMENT BREAK					
2:45 – 4:00 PM	Reaching the Values Summit with Legislative Luminary	Pediatric POCUS	Just Relax: Diastolic Dysfunction	Help I Need Somebody! TTE Diagnosis of Complications Following Structural Procedures	Peripheral Vascular Potpourri	
4:00 – 4:15 PM	BREAK					
4:15 – 5:30 PM	Artificial Intelligence: Tips for Data Mining Echo Reports and EMR	Pediatric & Congenital Heart Disease Council Open Business Meeting and Nomenclature Fest	Hypertrophic Cardiomyopathy: What's New in Guidelines	Sonography Council Open Business Meeting (4:15 - 4:45 PM) Critical Care Council Open Business Meeting (5:00 - 5:30 PM)	COPE Council Open Business Meeting (4:15-4:45 PM) Circulation & Vascular Council Open Business Meeting (5:00 - 5:30 PM)	Interventional Echo Council Open Business Meeting (5:00 - 5:30 PM)
6:00 – 9:30 PM	WELCOME RECEPTION AND COUNCIL NETWORKING – BOBBY MCKEY'S PIANO BAR					

**ACHD (A)**   **CIRCULATION (C)**   **CRITICAL CARE (CC)**   **EARLY CAREER (EC)**   **IMAGING FUNDAMENTALS (F)**   **INNOVATION/TECHNOLOGY (IT)**  
**INTERVENTIONAL ECHO (IE)**   **ISCHEMIA (I)**   **MULTIMODALITY (MM)**   **MYOCARDIUM/FUNCTION (M)**   **PEDIATRIC/CONGENITAL (PC)**   **PERIOPERATIVE (P)**  
**POINT OF CARE (POC)**   **RESEARCH (R)**   **SPECIAL SESSIONS (S)**   **VALVES & STRUCTURAL HEART DISEASE (V)**

Schedule subject to change. For detailed information, please download the ASE Courses app.

1:00 PM – 2:30 PM

**S Cardio-Oncology Building Blocks Bootcamp – Cherry Blossom**

Setting up a cardio-oncology practice is a question that we get asked more and more often as the specialty grows. The bootcamp will answer the questions asked by providers who want to set-up cardio-oncology practices in echo, both adult and pediatric, will detail what to know in cardio-oncology for sonographers and MDs, when to order additional imaging modalities, and show cases.

*Chairs: A. Barac, M. Scherrer-Crosbie*

*Panelists: J. DeCara, V. Ferrari, A. Gardner*

**Guideline Directed Echocardiographic Assessment of Cancer Therapy Related Cardiac Dysfunction**

*J. Plana*

**Cardio-Essentials: Linking Cancer Therapeutics to Echo Protocols**

*A. Barac, J. Liu*

**What Does the Sonographer Need to Know?**

*A. Taylor*

**Considerations in Setting Up a Pediatric Cardio-Oncology Echo Practice**

*D. Heath*

**When to Call the Multimodality Imager**

*B. Lefebvre*

**Question & Answer**

1:00 PM – 2:30 PM

**PC Emerging Advances in Cardiac Imaging: Creating a Framework for the Future – Wilson A**

This session showcases recent technologic advances in cardiac imaging in congenital heart disease and applications to clinical practice.

*Chairs: P. Barker, M. Wasserman*

**Novel Ways to Assess Vascular Function in CHD**

*L. Mertens*

**Myocardial Work: A Complement to Strain in Assessing Function?**

*S. Kutty*

**Utility of Myocardial Deformation to Assess Diastolic Function**

*M. Friedberg*

**Digital Twins and Extended Reality for CHD Interventions**

*R. Moore*

**3D ICE Imaging**

*P. Jone*

**Going Beyond Structure - Insights from 3D Valve Modeling**

*M. Jolley*

**What Is the Future of Pediatric Quantification - How Do We Get There?**

*A. Powell*

**Question & Answer**

1:00 PM – 2:30 PM

**IE Introduction to Interventional Imaging: Not Just About the Intervention – Wilson BCD**

This session covers the important new roles defining the Interventional Imager on the Structural Heart Disease Team: diagnosis of complex valvular heart disease, pre-procedural planning for SHD procedures, intra-procedural guidance and post-procedural follow-up.

*Chairs: R. Hahn, S. Little*

**Overview of the New Roles for the Interventional Imager**

*S. Little*

**Diagnosis of Complex Valvular Heart Disease I: Difficult Scenarios of Low Flow and Mixed Valve Disease**

*M. Clavel*

**Diagnosis of Complex Valvular Heart Disease II: New Imaging Modalities for Prognostication**

*J. Puthumana*

**Discussion****Pre-Procedural Decision-Making: The Role of Echocardiography**

*N. Kelly*

**Pre-Procedural Decision-Making: The Role of CT and CMR**

*F. Pinto*

**Discussion****Intra-Procedural Guidance: Are We Still Needed for TAVR?**

*M. Saric*

**Intra-Procedural Guidance Overview: Mitral Valve Procedures**

*L. Safi*

**Discussion****Post-Procedural Assessment: Normal Device Function**

*C. Taub*

**Post-Procedural Assessment: Structural Valve Deterioration**

*T. Chen*

**Discussion**

1:00 PM – 2:30 PM

**S IAC Bootcamp: Foundations of Quality – Annapolis**

The IAC Accreditation Boot Camp workshop is a mix of lecture, panel discussion, breakout sessions with content experts, and live Q&A. The session will end with a fun interactive audience participation Standards IQ Quiz.

*Chairs: P. Burgess, K. Gibson*

**IAC Accreditation Simplified**

*A. Groves, S. Jensen*

**Quality Improvement in the Echo Lab**

*M. Bremer*

**Ask the Experts: Panel Discussion and Audience Q&A**

*E. Garcia-Sayan, C. Kramer, L. Lopez, A. Nicoara*

2:45 PM – 4:00 PM

**S Reaching the Values Summit with Legislative Luminary – Cherry Blossom**

In this special session, which is sponsored by the ASE Advocacy Committee, we will hear from leaders on Capitol Hill about governmental issues which impact all practitioners of cardiac ultrasound. With representation from opposite sides of the aisle, offering a refreshingly balanced, and substantive look at today's top issues. We will delve into the dynamics of healthcare policies and their effect on you and your patients.

*Chair: M. Picard*

*Panelists: L. Aronson, D. Rosen*

2:45 PM – 4:00 PM

**PC Pediatric POCUS – Wilson A**

This session focuses on the recent pediatric POCUS guidelines, applications of POCUS in various pediatric care settings as well key components of a comprehensive pediatric POCUS program

*Chairs: M. DiMaria, B. Soriano*

**Value of Cardiac POCUS in the Pediatric Ed**

*R. Thomas-Mohtat*

**Application of POCUS in the Various Pediatric Healthcare Settings**

*S. Shah*

**Key Components of POCUS Education and Credentialing Pathways**

*L. Mercer-Rosa*

**Mechanisms for Assuring Quality**

*J. Lu*

**Looking Beyond the Heart – Lung POCUS in the Circulation**

*A. Riley*

**Question & Answer**

2:45 PM – 4:00 PM

**M Just Relax: Diastolic Dysfunction – Wilson BCD**

From the basics to advanced diastology, this session will review the must know facts with the masters.

*Chairs: J. Oh, N. Rashedi*

**So Easy! ABC's of Diastolic Physiology and Its Assessment**

*C. Kramer*

**Chill with the Master: Expert Clinician Approach to Assessing Diastology**

*S. Nagueh*

**Chill with the Other Master: Expert Clinician Approach to Assessing Diastology**

*J. Oh*

**When Diastology Goes Bad: HFpEF**

*B. Hoit*

**Stress Echo for Diastology Assessment**

*P. Pellikka*

**Test Your Knowledge**

**Question & Answer**

2:45 PM – 4:00 PM

**IE Help I Need Somebody! TTE Diagnosis of Complications Following Structural Procedures – Annapolis**

This session will focus on transthoracic imaging of complications post-structural heart disease interventions. The cases will be presented by a sonographer/physician pair and focus on diagnosis of these complications.

*Chairs: R. Meece, F. Pinto*

**Session Introduction**

*R. Meece*

**Case 1: Is That Supposed to Move Like That?**

*F. Silvestry*

**Case 1: Complications of TEER**

*L. Safi*

**Question & Answer**

**Case 2: Where Did That Come From?**

*I. Crandall*

**Case 2: Complications of TAVR**

*M. Scherer*

**Question & Answer**

**Case 3: What Happened to the Apex?**

*M. Imbrogno*



## Case 3: Acute Complications of TAVR

*S. Harb*

### Question & Answer

## Case 4: Why Is There Tricuspid Regurgitation?

*L. Friend*

## Case 4: Complications of Membranous VSD Closure

*N. Quader*

### Question & Answer

## Case 5: Whose Obstructing My LVOT

*E. Vogel-Bass*

## Case 5: Complications of TMVR

*V. Agarwal*

### Question & Answer

## Case 6: Who Let the Device Out!

*J. Warmsbecker*

## Case 6: Complications of Device Embolization

*F. Pinto*

### Question & Answer

## 2:45 PM – 4:00 PM

### **C** **R** Peripheral Vascular Potpourri – Baltimore 3-5

This session will review clinical peripheral vascular diseases using a case-based approach.

*Chair: S. Henkin*

## High Velocity and Low Resistance: Sonographic Assessment of Dialysis Access

*K. Strange*

### Case

*A. Sullivan*

## The “Vein” Event: Intervention for Acute and Chronic Venous Thrombotic Disease

*M. Vorsanger*

### Case

*A. Sullivan*

## Pulseless On the Potomac: Acute Limb Ischemia

*R. LeLeiko*

### Case

*A. Sullivan*

## Carotids Outside the Box: Cardiac and Non-Atherosclerotic Pathology

*M. Vorsanger*

### Question & Answer

## 4:15 PM – 5:30 PM

### **IT** **R** Artificial Intelligence: Tips for Datamining Echo Reports and Electronic Medical Records – Cherry Blossom

By the end of this session, you will understand how newer technologies can make the echo lab more efficient and accurate to understand how databases can enhance the role of echo labs

*Chairs: E. Andrikopoulou, D. Ouyang*

### Reproduction of Full Echocardiographic Report Using Machine Learning from Large-scale Echocardiogram Database

*R. Sandler*

### Clusters and Disease Characterization: Detecting Cardiac Dysfunction

*P. Pellikka*

### Question & Answer

### Debate: The Concerns

*D. Ouyang*

### Debate: The Potential

*P. Sengupta*

### Question & Answer

## 4:15 PM – 5:30 PM

### **PC** Pediatric and Congenital Heart Disease Council Open Business Meeting & Nomenclature Fest – Wilson A

Learn all about the PCHD Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal. The business meeting will be followed by fun and energetic debates regarding nomenclature and correct terminology of complex congenital heart disease cases.

*Chairs: C. Altman, C. Fleishman*

### Nomenclature Fest

Fun and energetic debates regarding nomenclature and correct terminology of complex congenital heart disease cases.

*Case Presenters: D. Harrild, D. Parra*

### Team #1

*N. Ayres, B. Printz, M. Puchalski*

### Team #2

*T. Geva, L. Lopez, C. Taylor*

# FRIDAY, JUNE 23 SCHEDULE

**4:15 PM – 5:30 PM**

**MM HCM: What's New in the Guidelines – Wilson BCD**

This session will focus on the most recent HCM guidelines and specifically on how to use multimodality imaging for diagnosis, management, and treatment.

*Chairs: T. Abraham, K. Poh*

**Session Introduction**

*K. Poh*

**How Do I Use Advanced Echo Techniques to Confirm Diagnosis?**

*A. Woo*

**What Are the 3 Most Common Mimickers of HCM?**

*A. Armour*

**How to Use Imaging for Risk Stratification?**

*D. Owens*

**Imaging HCM During Treatment: Which Modality(s) and How Often?**

*G. Hong*

**Intraprocedural Imaging for Treatment: Septal Ablation, Sesame**

*O. Khalique*

**Question & Answer**

**4:15 PM – 4:45 PM**

**Cardiovascular Sonography Council Open Business Meeting – Annapolis**

Learn more about the Cardiovascular Sonography Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal.

*Chairs: A. Boyle, G. Strachan*

**4:15 PM – 4:45 PM**

**Perioperative Echocardiography Open Council Business Meeting – Baltimore 3-5**

Learn more about the Perioperative Echocardiography Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal.

*Chairs: S. Cole, G. Mackensen*

**5:00 PM – 5:30 PM**

**Critical Care Echocardiography Open Business Meeting – Annapolis**

Learn more about the Critical Care Echocardiography Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal.

*Chairs: A. Labovitz, P. Mayo*

**5:00 PM – 5:30 PM**

**Circulation & Vascular Ultrasound Council Open Business Meeting – Baltimore 3-5**

Learn more about the Circulation & Vascular Ultrasound Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal.

*Chairs: F. Shamoun, M. Vorsanger*

**5:00 PM – 5:30 PM**

**Interventional Echocardiography Council Open Business Meeting – Baltimore 1**

Learn more about the Interventional Echocardiography Council and observe an open steering committee meeting. Members can join one or more councils free through their ASE Member Portal.

*Chairs: N. Quader, M. Saric*

What We Do Changes The World



A Department Of Firsts



**First medical center awarded accreditation in perioperative transesophageal echocardiography by the Intersocietal Accreditation Commission**

Alina Nicoara, MD, FASE



**Three Duke anesthesiologists earned ASE's Outstanding Achievement in Perioperative Echocardiography Award**

Madhav Swaminathan, MD, MMCI, FASE  
Solomon Aronson, MD, MBA, FASE  
Jonathan Mark, MD



**Four Duke anesthesiologists served as chairs of ASE's Council on Perioperative Echocardiography**

Joseph Mathew, MD, MHSc, MBA  
Solomon Aronson, MD, MBA, FASE  
Alina Nicoara, MD, FASE  
Madhav Swaminathan, MD, MMCI, FASE



**First anesthesiologist elected president of ASE**

Madhav Swaminathan, MD, MMCI, FASE

# SCHEDULE AT A GLANCE

## SATURDAY, JUNE 24

SATURDAY

REGISTRATION OPEN 6:00 AM – 6:30 PM ~ ECHO EXPO OPEN 12:00 PM – 6:30 PM						
ROOMS	MARYLAND	CHERRY BLOSSOM	WILSON A	WILSON BCD	ANNAPOLIS	BALTIMORE 3-5
7:00 – 7:50 AM		<b>LIVE STREAM</b> Cases: The Good, The Bad, and The Ugly	Cases: You Won't Believe What I Saw	<b>LIVE STREAM</b> <b>PC</b> <b>R</b> Pediatric and Congenital Heart Disease Case & Abstract Session	<b>CC</b> <b>POC</b> <b>R</b> Abstracts: Critical Care/POCUS	Case Studies: Echo to the Rescue
8:00 – 10:00 AM	<b>LIVE STREAM</b> <b>S</b> STATE OF ASE, 2023 AWARDS PRESENTATION, FASE RECOGNITION, INCOMING PRESIDENT'S ADDRESS, AND 34 <sup>TH</sup> ANNUAL EDLER LECTURE by Raymond Stainback, MD, FASE – Maryland					
10:00 – 10:45 AM	REFRESHMENT BREAK					
10:45 AM – 12:00 PM	<b>LIVE STREAM</b> <b>IT</b> 3D Echocardiography: Things You Should Do Daily, but Probably Do Not! (ASE/EACVI Joint Session)	<b>LIVE STREAM</b> <b>M</b> <b>MM</b> <b>R</b> When Protein Goes Bad: The Constantly Evolving Landscape of Cardiac Amyloid	<b>I</b> Emerging Techniques in Stress Echo	<b>F</b> <b>R</b> The Aortic Valve Rocks! Essentials of Aortic Stenosis	<b>P</b> Much Ado About Aortic Valve Regurgitation	<b>MM</b> <b>PC</b> Multimodality Imaging Assessment for Transcatheter Intervention on Pulmonary Valves
12:00 – 1:30 PM	LUNCH BREAK – VISIT THE ECHO EXPO					
12:15 – 1:15 PM	SCIENCE AND TECHNOLOGY THEATER 1: LANTHEUS					
12:45 – 1:45 PM	SCIENCE AND TECHNOLOGY THEATER 2: JANSSEN					
1:30 – 2:45 PM	<b>LIVE STREAM</b> <b>I</b> <b>R</b> Approach to Chest Pain in the Modern Era	<b>LIVE STREAM</b> <b>F</b> Coming to Consensus in Mixed Valve Disease	<b>PC</b> Echogenomics	<b>MM</b> Foundations of Multimodality Imaging: What Every Echocardiographer Should Know	<b>P</b> Challenging Mitral Valve Cases with Experts: What Would You Do?	<b>M</b> <b>R</b> CardiOB: Pregnancy & the Myocardium
2:45 – 3:15 PM	REFRESHMENT BREAK – VISIT THE ECHO EXPO					
3:15 – 4:30 PM	<b>LIVE STREAM</b> Right Time for Right Ventricle	<b>LIVE STREAM</b> <b>P</b> The Tricuspid Regurgitation Primer: Tools for Imaging and Managing Tricuspid Valve Disease	<b>S</b> ShowCASE (3:00 – 4:30 PM)	<b>PC</b> Quality Improvement Collaborative	<b>F</b> Structural Heart for the Sonographer	<b>CC</b> Small, Fast, Efficient: The Value of POCUS in the Inpatient & Outpatient Setting
4:30 – 6:30 PM	PRESIDENT'S RECEPTION ECHO EXPO					
4:45 – 5:45 PM	SCIENCE AND TECHNOLOGY THEATER 1: BRACCO DIAGNOSTICS INC.					
5:15 – 6:15 PM	SCIENCE AND TECHNOLOGY THEATER 2: BRISTOL MYERS SQUIBB					

ACHD (A) CIRCULATION (C) CRITICAL CARE (CC) EARLY CAREER (EC) IMAGING FUNDAMENTALS (F) INNOVATION/TECHNOLOGY (IT)  
 INTERVENTIONAL ECHO (IE) ISCHEMIA (I) MULTIMODALITY (MM) MYOCARDIUM/FUNCTION (M) PEDIATRIC/CONGENITAL (PC) PERIOPERATIVE (P)  
 POINT OF CARE (POC) RESEARCH (R) SPECIAL SESSIONS (S) VALVES & STRUCTURAL HEART DISEASE (V)

Schedule subject to change. For detailed information, please download the ASE Courses app.

# SCHEDULE AT A GLANCE

## SATURDAY, JUNE 24

REGISTRATION OPEN 6:00 AM – 6:30 PM ~ ECHO EXPO OPEN 12:00 PM – 6:30 PM						
ROOMS	ARENA IN THE ECHO EXPO	BALTIMORE 1	BALTIMORE 2	CHESAPEAKE 12	DIY ACQUISITION* CHESAPEAKE 7-9	LEARNING LAB* CHESAPEAKE A-C
8:00 – 10:00 AM					Strain Echocardiography (9:00 – 9:50 AM)	
10:00 – 10:45 AM			The Champagne of Echo: Basics of Bubbles Ischemia (10:10 – 10:40 AM)		Strain Echocardiography (10:00 – 10:50 AM)	
10:45 AM – 12:00 PM		<b>CC</b> Construction of Clinical Ultrasound Fellowships: A Collaborative Multidisciplinary Approach (11:00 AM – 12:00 PM)	Guideline Review Echocardiography in Evaluation of Rheumatic Heart Disease (10:45 – 11:15 AM)	How to Build Your CV		Introductory 3D Cropping (9:30 – 11:30 AM)
12:00 – 1:30 PM	<b>IE</b> Heart Team in Action: Experts' Best Cases (12:15 – 1:15 PM)		Educator Summit: Creating an ACS Program: What You Need to Know (11:30 AM – 12:30 PM)			3D Cropping for Valve Interventions (12:30 – 2:30 PM)
1:30 – 2:45 PM	<b>IT</b> Artificial Intelligence and the Workflow of the Echo Lab	<b>C</b> Guidelines and Consensus: Learn from the Experts	Guideline Review Cardiac POCUS in Children (1:30 – 2:00 PM)	Building the Workforce: Sonographers and Echocardiographers	3D Echocardiography (1:00 – 1:50 PM)	
3:15 – 4:30 PM	<b>C</b> Great Debates in Circulation: Elect a Winner!	<b>F</b> Sonographer Career Pathways: Welcome to My "TED" Talk	Guideline Review Multimodality Cardiovascular Imaging in Patients with HCM (3:15 – 3:45 PM)	Leadership Academy Application: "What Do I Need To Do to Be a Good Candidate?"	3D Echocardiography (2:00 – 2:50 PM)	Basic Myocardial Strain Imaging (LV, RV, LA) (3:00 – 5:00 PM)
4:30 – 6:30 PM	Everything You Need to Know About Aortic Stenosis (5:00 – 5:45 PM)				Pediatric Congenital Heart Disease (4:00 – 4:50 PM)	

**ACHD (A)**    **CIRCULATION (C)**    **CRITICAL CARE (CC)**    **EARLY CAREER (EC)**    **IMAGING FUNDAMENTALS (F)**    **INNOVATION/TECHNOLOGY (IT)**  
**INTERVENTIONAL ECHO (IE)**    **ISCHEMIA (I)**    **MULTIMODALITY (MM)**    **MYOCARDIUM/FUNCTION (M)**    **PEDIATRIC/CONGENITAL (PC)**    **PERIOPERATIVE (P)**  
**POINT OF CARE (POC)**    **RESEARCH (R)**    **SPECIAL SESSIONS (S)**    **VALVES & STRUCTURAL HEART DISEASE (V)**

Schedule subject to change. For detailed information, please download the ASE Courses app.

**\*DIY Acquisition and Learning Labs are ticketed events and require an additional fee. Please see the Registration Desk for availability.**

# SATURDAY, JUNE 24 SCHEDULE

7:00 AM – 7:50 AM

## Cases: The Good, The Bad and The Ugly – Cherry Blossom

Opportunity for authors of high scoring case submissions to deliver oral presentations describing amazing pathology seen with imaging.

*Chairs: J. Betz, R. Senior*

### The Late Bloomer: A Very Late Presentation of Large Device-Related Thrombus after Left Atrial Appendage Closure Despite Oral Anticoagulation

*B. Lee*

### Carney Syndrome - A Rare Complex of Recurrent Cardiac Myxomas

*M. Haider*

### Role of Echocardiography in Identification of a Mediastinal Mass

*E. Aligholizadeh*

### Pan-valvular Radiation-associated Valvular Disease: A Rare Insidious Cause of Rapidly Progressive Heart Failure

*S. Hussain*

#### Discussion

7:00 AM – 7:50 AM

## Cases: You Won't Believe What I Saw – Wilson A

Opportunity for authors of high scoring case submissions to deliver oral presentations describing rare imaging findings.

*Chairs: E. Donal, N. Nanda*

### Right Coronary Artery to Superior Vena Cava Fistula Diagnosed on Transesophageal Echocardiography with Unusual Right Sided Infectious Endocarditis at Fistula Turbulence

*N. Syed*

### Subvalvular Thrombosis of the Mitral Valve: A Rare Cause of Cardioembolic Stroke

*H. Messiha*

### Aortic Root to Right Ventricular Outflow Tract Fistula After a Transcatheter Aortic Valve Replacement

*M. Wahoud*

### “The Great Masquerader” Myopericarditis Presents as ST-Elevated Myocardial Infraction

*H. Bashir*

#### Discussion

7:00 AM – 7:50 AM

## PC R Pediatric and Congenital Heart Disease: Case & Abstract Session – Wilson BCD

*Chairs: J. Acevedo, C. Fleishman*

### Impact of Abnormal Right Ventricular Free Wall Motion Pattern on Tricuspid Annular Plane Systolic Excursion in Repaired Tetralogy of Fallot

*K. Sanada*

### Fetal Echo from 10-15 Weeks of Gestation: Reliability, Genetic Associations and Outcomes

*L. Rittey*

### Acute Cardiac Remodeling and Abnormal Mechanics Recover In Multisystem Inflammatory Syndrome Related Myocarditis But Persist In Viral Myocarditis On Long Term Follow Up

*S. Bhatia*

### Changes in Echocardiographic Measures of Pediatric Pulmonary Hypertension During Acute Vasoreactivity Testing

*C. Simpkin*

#### Discussion

7:00 AM – 7:50 AM

## POC R Abstracts: Critical Care/POCUS – Annapolis

Opportunity for authors of high scoring abstracts to deliver oral presentations of their work.

*Chairs: C. Cassidy, P. Collier*

### Reduction in Basal Right Ventricular Free Wall Strain is Associated with Increased Mortality in Submassive Pulmonary Embolism

*S. Eguchi*

### Additional Diagnostic Accuracy of Lung Ultrasound Views During Echocardiography or POCUS for Decompensated Congestive Heart Failure

*M. Camacho*

### Right Heart Recovery Following Lung Transplantation in Patients with COVID-19 Associated ARDS

*K. Maganti*

### Comparison of Global Longitudinal Strain Among College Athletes Diagnosed with Mild to Moderate SARS-CoV-2 Infection

*P. Tipnis*

#### Discussion

**7:00 AM – 7:50 AM****Cases: Echo to the Rescue – Baltimore 3-5**

Opportunity for authors of high scoring case submissions to deliver oral presentations describing the key role of echocardiography in patient care.

*Chairs: B. Schwaegler, O. Smiseth*

**A Rare Case of Platypnea-Orthodeoxia Syndrome Caused by Patent Foramen Ovale after Esophageal Dilatation**

*J. Yim*

**Finding A Way: Laceration of Anterior Mitral Leaflet to Prevent Outflow Obstruction To Prevent Mortality in Transcatheter Mitral Valve Repair**

*A. Shah*

**A Stent Too Far: Iliac Stent Migrates to Right Atrium**

*S. Damito*

**Real-time 3D Transesophageal Echocardiography Assisted Repair of Previously Inadequate Left Atrial Appendage Closure**

*H. Cheng*

**Discussion****8:00 AM – 10:00 AM****S ASE Awards Presentations, Announcements, FASE Recognition, 30<sup>th</sup> Annual Edler Lecture – Maryland**

*Chair: S. Little*

**State of ASE**

*S. Little*

**Board of Directors Induction and Announcements**

*S. Little*

**FASE Recognition**

*S. Little, J. Warmsbecker*

**Edler Lecture: The Living History of Echocardiography for Mechanical Circulatory Support Devices**

*R. Stainback*

**ASE Award Presentations and Recognitions**

*S. Little*

**ASE Foundation Award Presentations and Recognitions**

*J. Kirkpatrick*

**Incoming President's Address**

*B. Eidem*

**9:00 AM – 9:50 AM****DIY Acquisition: Strain Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This DIY session will provide hands-on learning experiences for all registered to learn how to acquire left ventricular, right ventricular, and left atrial strain data sets. During the session, participants will have the opportunity to perform hands-on scanning.

*Chair: C. Mitchell*

**Right Ventricular Strain**

*C. Frye, M. Kraushaar*

**Left Ventricular Strain**

*A. Durham, K. Horton*

**Left Atrial Strain**

*R. Perry*

**9:30 AM – 11:30 AM****Learning Lab: Introductory 3D Cropping – Chesapeake A-C**

*(Ticketed Event. Additional Fee Required.)*

Get started in 3D with cropping for the views you want and try your hand at tools for 3D measurements.

*Chairs: E. Kruse, R. Lang*

*Lab Assistants: C. Bregadze, Y. Carvallo, I. Crandall, K. Laguna, A. Vilner*

**10:00 AM – 10:50 AM****DIY Acquisition: Strain Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

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*C. Frye, M. Kraushaar*

**Left Ventricular Strain**

*A. Durham, K. Horton*

**Left Atrial Strain**

*R. Perry*

# SATURDAY, JUNE 24 SCHEDULE

10:10 AM – 10:40 AM

## **IT** The Champagne of Echo – Baltimore 2

### Basics of Bubbles

*K. Wei*

10:45 AM – 12:00 PM

## **IT** 3D Echocardiography: Things You Should Do Daily, but Probably Do Not! – Maryland

(ASE/EACVI Joint Session)

By the end of this session, you will refresh your knowledge on the clinical significance of basic 3D concepts.

*Chairs: K. Collins, S. Petersen*



### Session Introduction

*S. Petersen*

### 3D Beginner Course - The Basics from an Expert

*V. Delgado*

### 3D Multiplanar Reconstruction – What It Is, Why and When?

*W. Tsang*

### Easy 3D Cropping: How Do I Make It Worth My Time?

*M. Saric*

### 3D Pitfalls and Trouble Shooting

*L. Sade*

### Case Presentation: When 3D Saved My Exam

*A. Vainrib*

10:45 AM – 12:00 PM

## **M MM** When Protein Goes Bad: The Constantly Evolving Landscape of Cardiac Amyloid – Cherry Blossom

This session focuses on the current management of cardiac amyloid with a specific focus on the role of multimodality imaging.

*Chairs: S. Cuddy, J. DeCara*

### Session Introduction

*J. DeCara*

### Amyloid Overview: Types, Epidemiology, Prognosis

*R. Parikh*

### Can't Miss Echo Findings

*S. Cuddy*

### Sonographer Key Points in Scanning for Cardiac Amyloid

*A. Vilner*

### MRI, PYP, Biopsy: Which Test Is Best and When?

*P. Parwani*

## Current and Potential Future Therapies

*J. DeCara*

## A Rare Case of Concomitant Transthyretin Cardiac Amyloidosis and Multiple Myeloma

*R. Goel*

## Question & Answer

10:45 AM – 12:00 PM

## **I** Emerging Techniques in Stress Echo – Wilson A

The focus of this session will be on applying newer techniques such as strain imaging during stress echocardiography, and incremental value for diagnosis and prognosis using novel stress imaging techniques.

*Chairs: A. Brown, S. Mayer*

## Added Value of Strain Imaging and Advanced Imaging Techniques During Stress

*J. Meyer*

## Stress Echo After Transplant: Read with Experts

*R. Grimm*

## Diastolic Stress Testing: When, Why, and How: Read with Experts or Quiz

*S. Nagueh*

## Read with Expert: Stress Imaging After Revascularization: Fellow and Experts, Case-Based

*P. Pellikka*

## Read with Experts: Contrast Perfusion

*B. Davidson*

10:45 AM – 12:00 PM

## **F R** The Aortic Valve Rocks! Essentials of Aortic Stenosis – Wilson BCD

After this session, attendees will have a better understanding of scanning techniques and quantification of aortic stenosis in different patient populations.

*Chairs: B. Arora, A. Pellett*

### Session Introduction

*A. Pellett*

### Aortic Stenosis Case or Discordant Values

*N. Enger*

### Aortic Stenosis Image Acquisition Pearls and Pitfalls

*T. Thompson*

### Panel Discussion: What Do You Do When Values Don't Match?

### Low Dose Dobutamine for Aortic Stenosis

*K. Maganti*



**Aortic Stenosis Quantification in Multivalve Disease**

*V. Rigolin*

**Stenosis Post SAVR**

*J. Hodovan*

**Prognostic Value of Myocardial Work Indices in Aortic Stenosis**

*A. Pedersen*

**Panel Discussion of Image Acquisition Pearls**

**10:45 AM – 12:00 PM**

**P Much Ado About Aortic Valve Regurgitation – Annapolis**

Comprehensive discussion of aortic valve replacement, from preoperative multimodality imaging and treatment options, to intraoperative incidental findings, to discovery and diagnosis of post-operative residual pathology.

*Chairs: L. Gillam, M. Keane*

**SAVR vs TAVR vs Homograft, The Right Valve for the Right Patient**

*D. Ramzy*

**Multimodality Imaging and Surgical Management of Concurrent Aortic Disease**

*J. Cavalcante*

**Assessing the Left Ventricle in Aortic Stenosis, the Ejection Fraction and Beyond**

*Q. Zhao*

**A Practical Diagnostic Approach for Increased Gradients Post-AVR**

*L. Gillam*

**Chronic Perivalvular Regurgitation, How to Assess and Manage?**

*S. Mankad*

**Perioperative Incidentalomas, What to Do with the PFO in My AVR Patient?**

*R. Sheu*

**Question & Answer**

**10:45 AM – 12:00 PM**

**PC Multimodality Imaging Assessment for Transcatheter Intervention on Pulmonary Valves – Baltimore 3-5**

This session addresses the use of multimodality imaging in guiding patient selection, device placement, post-implantation monitoring and management.

*Chairs: J. Kovalchin, D. Saurers*

**Patient Selection: Use of Echo and MRI to Assess the Right Ventricular Outflow Tract**

*L. Olivieri*

**What the Interventionalist Needs to Know**

*R. Garg*

**Post Implantation Assessment by Device and Potential Complications**

*M. Mah*

**Transcatheter Pulmonary Valve Endocarditis by TTE, TEE and ICE Imaging**

*A. Dorfman*

**Remodeling of the Right Ventricle Post Intervention**

*L. Mertens*

**Question & Answer**

**10:45 AM – 11:15 AM**

**Guideline Review: Echocardiography in Evaluation of Rheumatic Heart Disease – Baltimore 2**

Review the guidelines with the authors and get your questions answered!

*J. Kim, N. Pandian*

**10:45 AM – 12:00 PM**

**How to Build Your CV – Chesapeake 12**

Attendees will learn from experts, lab directors, and ASE luminaries how to make and market a desirable skillset that will land you the job of your dreams!

*P. Knoll, G. Strachan*

# SATURDAY, JUNE 24 SCHEDULE

11:00 AM – 12:00 PM

**CC Construction of Clinical Ultrasound Fellowships: A Collaborative Multidisciplinary Approach – Baltimore 1**

This is a high-level discussion of clinical ultrasound fellowship training from a multi-disciplinary standpoint, including development of a multi-disciplinary training program, the role of the echo lab in education, competency assessment, the role of Artificial Intelligence in education, and certification options.

*Chairs: G. Nesbitt, N. Panebianco*

**Anesthesia**

*J. Diaz-Gomez*

**Cardiology**

*Z. Rhinehart*

**Internal Medicine**

*R. Dversdal*

**Emergency Medicine**

*S. Damewood*

**International Perspective**

*E. Tucay*

**Question & Answer**

11:30 AM – 12:30 PM

**F Educator Summit: Creating an ACS Program – What You Need to Know – Baltimore 2**

During this session, ideas will be shared for starting an Advanced Cardiac Sonography program. Tips will include how to piggyback on existing ultrasound program resources, innovative methods for curriculum delivery, and CAAHEP accreditation requirements. A panel discussion will address questions raised by the audience.

*Chairs: M. Bierig, M. Umland*

**Tips from the West Coast**

*J. Guthrie*

**Tips from the Midwest**

*M. Bremer*

**Question & Answer**

12:15 PM – 1:15 PM

**IE The Heart Team in Action – Arena**

This session explores new devices to treat heart failure. Cases from the Heart Team.

*Chairs: G. Mackensen, L. Safi*

*Panelists: P. Lam, N. Quader, F. Rahman*

**Case 1: Mitral**

*R. Miyasaka*

**Discussion By Heart Team**

**Case 1: Resolution**

*R. Miyasaka*

**Case 2: Aortic**

*E. Gill*

**Discussion By Heart Team**

**Case 2: Resolution**

*E. Gill*

**Case 3: Tricuspid**

*E. Ho*

**Discussion By Heart Team**

**Case 3: Resolution**

*E. Ho*

12:30 PM – 2:30 PM

**Learning Lab: 3D Cropping for Valve Interventions – Chesapeake A-C**

*(Ticketed Event. Additional Fee Required.)*

Use 3D workstations to plan structural heart interventions and simulate cropping for optimal intra-procedure views.

*Chair: R. Hahn*

*Lab Assistants: V. Appadurai, A. Brown, B. Doldt, K. Johnson, M. Lefevre*

1:00 PM – 1:50 PM

**DIY Acquisition: 3D Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This session will provide attendees an opportunity to learn how to acquire 3D volumes of the left ventricle and calculate an ejection fraction with an expert. The workshop will also review how to assess the quality of the 3D volume. During the session, participants will have the opportunity to perform hands-on scanning or observe the data acquisition. Attendees will have the opportunity to interact with different vendors for data acquisition

to acquire 3D left ventricular volumes and use software to calculate an ejection fraction.

*Chair: C. Mitchell*

*DIY Assistants: E. Kruse, C. Huntington, E. McIlwain, M. Park, T. Thompson*

## 1:30 PM – 2:00 PM

### **Guideline Review: Cardiac Point of Care Ultrasound (POCUS) in Children – Baltimore 2**

Review the guidelines with the authors and get your questions answered!

*J. Lu*

## 1:30 PM – 2:45 PM

### **I Approach to Chest Pain in the Modern Era – Maryland**

This session will focus on a multimodality imaging approach for the diagnosis and work up of chest pain in the modern era, and will include incorporate non-invasive imaging techniques with review of the recent Chest Pain guidelines.

*Chairs: R. Jain, T. Ryan*

### **Called to the ED for Chest Pain: Sonographer Tips and Tricks**

*A. Taylor*

### **Non-Traditional Causes of Chest Pain**

*R. Jain*

### **Ischemia/Reperfusion Injury Enhanced Perfluoropropane Droplets Retention**

*C. Chen*

### **My Favorite Imaging Modality for Stable IHD (Anatomic vs. Functional Imaging)**

*T. Ryan*

### **Panel Discussion**

*A. Choi*

## 1:30 PM – 2:45 PM

### **F Coming to Consensus in Mixed Valve Disease – Cherry Blossom**

After this session, attendees will be able to better quantify mixed valve disease and learn scanning techniques to aid in more accurate diagnosis.

*Chairs: M. Bremer, C. Taub*

### **Session Introduction**

*M. Bremer*

### **Loading Conditions and Remodeling in Mixed Aortic Valve Disease**

*M. Parker*

### **The Incontinuities of Mixed Mitral Valve Disease**

*P. Burgess*

### **Understanding Mitral Regurgitation Associated Low Gradient Aortic Stenosis**

*A. Pellett*

### **Compliance Factors in Concomitant Aortic and Mitral Regurgitation**

*C. Taub*

### **Secondary Tricuspid Valve Disease**

*M. Yamat*

### **Question & Answer**

## 1:30 PM – 2:45 PM

### **PC Echogenomics – Wilson A**

An interactive session with case presentations and audience poll highlighting genetic conditions and associated echocardiographic findings as well appropriate testing.

*Chairs: S. Morris, L. Young*

### **Pattern Recognition in Aortopathies**

*E. Tierney*

### **Imaging Guided Differential Diagnosis and Testing for Cardiomyopathy**

*A. Banerjee*

### **Case Presentation/Discussion**

*S. Morris*

### **Case Presentation/Discussion**

*S. Drant*

### **Case Presentation/Discussion**

*T. Niaz*

### **Question & Answer**

## 1:30 PM – 2:45 PM

### **MM Foundations of Multimodality Imaging: What Every Echocardiographer Must Know – Wilson BCD**

This session reviews the fundamentals of various imaging modalities that every echocardiographer should know. The session will provide an overview of the utility in using MRI, CT, and nuclear imaging in every day practice.

*Chairs: T. Chen, V. Ferrari*

### **Session Introduction**

*T. Chen*

### **Put On Your SSFP and Head to Lake Louise: Cardiac MR Basics**

*A. Patel*

# SATURDAY, JUNE 24 SCHEDULE

## Putting the “See” in Cardiac CT: What CT Can Teach Echocardiographers

*K. Branch*

## A Little Radiation Never Hurt Anyone: Nuclear Imaging for Cardiomyopathies

*R. Quaife*

## Beyond Stress Echo: When to Consider Alternative Imaging Modalities to Stress

*D. Lee*

## Question & Answer

1:30 PM – 2:45 PM

## **P** Challenging Mitral Cases with the Experts; What Would You Do? – Annapolis

Multidisciplinary examination of treatment options for real-life mitral valve cases.

*Chairs: D. Ramzy, W. Zoghbi*

*Panelists: S. Mankad, A. Nicoara*

## Recurrent Mitral Regurgitation After Surgical Repair

*K. Belani*

## Recurrent Mitral Regurgitation After Transcatheter Repair

*H. Bhatt*

## What to Do with My MAC Patient?

*J. Thaden*

## Strategies to Prevent LVOTO in TMVR

*R. Sheu*

## Mitral Regurgitation in My Patient with Shock

*J. Puthumana*

1:30 PM – 2:45 PM

## **M** R CardioOB: Pregnancy & the Myocardium – Baltimore 3-5

This session reviews the hemodynamic consequence of pregnancy and cardiac obstetric complications.

*Chairs: E. Michos, A. Sarma*

## All Natural: Normal Echo Changes in Pregnancy

*A. Sarma*

## Plan to Scan the Pregnant Patient

*K. Billick*

## Pump Problems: Peripartum Cardiomyopathy

*K. Addetia*

## Under Pressure: Preeclampsia and the Heart

*A. Minhas*

## Not So Sweet: Gestational Diabetes’ Impact on Cardiac Function

*E. Michos*

## Echocardiographic Structure, Function and Obstetric Outcomes in Obese Pregnant Women

*A. Gubala*

## A Large Retrospective Cohort Study of Normal Peripartum Echocardiographic Parameters

*P. Cook*

## Question & Answer

1:30 PM – 2:45 PM

## **IT** Artificial Intelligence and the Workflow in the Echo Lab – Arena

By the end of this session, you will understand how newer technologies can make the echo lab more efficient and accurate.

*Chairs: E. Andrikopoulou, B. Popescu*

## Session Introduction

*B. Popescu*

## Enhancing Patient Comprehension of Echocardiography Reports Through Artificial Intelligence-Powered Chat Interactions

*J. Kassab*

## Image Acquisition: Who Needs Help from a Machine?

*A. Davis*

## Image Analysis and Reporting: Will I Be Better If Assisted by a Machine?

*J. Thomas*

## Workflow in Specific Diseases: Amyloid

*J. Slivnick*

## Soapbox Debate: Will Artificial Intelligence Replace the Echocardiographer and Sonographer?

*Pro: S. Lester*

*Con: G. Aurigemma*

1:30 PM – 2:45 PM

**C Guidelines and Consensus: Learn from the Experts – Baltimore 1**

A presentation of the most important vascular guidelines published in the last few years, presented by the authors themselves.

Chair: M. Vorsanger

**Assessment of Carotid Arterial Plaque by Ultrasound**

H. Becher

**Interpretation of Peripheral Arterial and Venous Doppler Waveforms**

E. Kim

**Aorta Guideline**

M. Keane

**Question & Answer**

1:30 PM – 2:45 PM

**S Building the Workforce: Sonographers and Echocardiographers – Chesapeake 12**

This discussion-format, highly interactive session will present and elicit questions and answers about addressing the current workforce shortage in echocardiography.

Chairs: M. Orsinelli

Panelists: D. Orsinelli, D. Phelan, E. Shea

2:00 PM – 2:50 PM

**DIY Acquisition: 3D Echocardiography – Chesapeake 7-9**

(Ticketed Event. Additional Fee Required.)

This session will provide attendees an opportunity to learn how to acquire 3D volumes of the left ventricle and calculate an ejection fraction with an expert. The workshop will also review how to assess the quality of the 3D volume. During the session, participants will have the opportunity to perform hands-on scanning or observe the data acquisition. Attendees will have the opportunity to interact with different vendors for data acquisition to acquire 3D left ventricular volumes and use software to calculate an ejection fraction.

Chair: C. Mitchell

DIY Instructors: E. Kruse, E. McIlwain, M. Park, T. Thompson, S. Walling

3:00 PM – 5:00 PM

**Learning Lab: Basic Myocardial Strain Imaging (LV, RV, LA) – Chesapeake A-C**

(Ticketed Event. Additional Fee Required.)

Hands-on measurement of left ventricular, right ventricular, and left atrial strain using normal and abnormal case examples. Targeted for those just starting with strain imaging.

Chairs: G. Aurigemma, J. Hill

Lab Assistants: Y. Carvallo, I. Crandall, C. Kramer, I. Kwan, K. Laguna

3:00 PM – 4:30 PM

**S ShowCASE Competition – Wilson A**

Chairs: M. Makhoul, V. Sorrell

**Opening Comments**

V. Sorrell

**Incidental Diagnosis of Anomalous Origin of Right Coronary Artery From the Contralateral (Left) Sinus of Valsalva in a Child: Sonographer and Physician Perspectives**

S. Chandra Reddy

**Left Atrial Tachycardia and Third-Degree Atrioventricular Block in a Middle-Aged Adult**

E. Côté

**Extrinsic Circumflex Coronary Artery Compression and Occlusion by Mycotic Aneurysm of Left Aortic Sinus**

R. Bansal

**Multimodality Imaging of Sinus Venosus Atrial Septal Defect: A Challenging Diagnosis in Adults**

M. Saric

**Five-Chambered Heart With Double-Chambered Left Ventricle Diagnosed by Multimodality Imaging**

N. Marzlin

**MACH-1: Sonographer Rapid Fire Cases****Wrap Up and Award Presentation**

V. Sorrell

3:15 PM – 3:45 PM

**Guideline Review: Multimodality Cardiovascular Imaging in Patients with HCM – Baltimore 2**

Review the guidelines with the authors and get your questions answered!

S. Nagueh, D. Phelan

3:15 PM – 4:30 PM

## **M** Right Time for the Right Ventricle – Maryland

This session reviews echocardiographic imaging of the right ventricle, specifically the new right heart guidelines.

*Chairs: M. Mukherjee, L. Rudski*

### **Test Your Knowledge**

*L. Rudski*

### **Plan to Scan: Right Ventricle**

*M. Mukherjee*

### **The Right Guidelines**

*L. Rudski*

### **Question & Answer**

### **Right Ventricular Strain: Coming into Its Own?**

*M. Scherrer-Crosbie*

### **The Right Ventricular from Every Angle: Multimodality Imaging for the Right Ventricle**

*B. Freed*

### **Question & Answer**

3:15 PM – 4:30 PM

## **P** The Tricuspid Regurgitation Primer: Tools for Imaging and Managing Tricuspid Valve Disease – Cherry Blossom

Uncover multimodality approaches to tricuspid valve assessment and underlying principles that guide therapy.

*Chairs: E. Donal, G. Mackensen*

### **A Complex Case of Tricuspid Regurgitation**

*K. Collins*

### **Comprehensive 2D and 3D Echocardiography of the Tricuspid Valve**

*G. Mackensen*

### **Multimodality Imaging for Tricuspid Regurgitation Mechanism and Severity**

*J. Cavalcante*

### **Multimodality Imaging for Epstein Anomaly and Congenital Tricuspid Regurgitation**

*M. Qureshi*

### **Imaging the Right Heart for Tricuspid Valve Surgery**

*A. Vainrib*

### **Surgical Management of Tricuspid Valve Disease**

*M. Robich*

### **Transcatheter Tricuspid Valve Interventions: Lesson's Learned from Tricuspid Valve Surgery**

*R. Hahn*

### **Question and Answer**

3:15 PM – 4:30 PM

## **PC** QI Collaborative – Wilson BCD

Quality improvement townhall featuring panelist views on key workflow and quality concerns in the echo lab with audience engagement as well as featured presentations with a global emphasis.

*Chairs: A. Bhat, R. Sachdeva*

### **Multicenter Approach to Decreasing Diagnostic Error in Pediatric Echo Lab**

*S. Natarajan*

### **Developing An Echo Lab QI Program in a Resource Limited Setting**

*S. Mohsin*

### **Improving Quality: From Metrics to Outcomes**

*T. Tacy*

### **Panel Discussion: Moderator Introduction and Questions**

*S. Maskatia*

### **Pros and Cons of Protocol Based Scanning and Implementation**

*A. Doucet*

### **Processes to Improve Efficiency in Echo Lab**

*B. Richards*

### **How Can Sonographers Engage in QI?**

*D. Parra*

### **Question & Answer**

3:15 PM – 4:30 PM

## **F** Structural Heart for the Sonographer – Annapolis

This session helps to demonstrate the sonographers role in evaluating patients for structural heart interventions.

*Chairs: K. Horton, K. Zimmerman*

### **Session Introduction**

*K. Zimmerman*

### **Mitral Valve Pre-Percutaneous Intervention**

*C. Frye*

### **Mitral Valve Post Percutaneous Intervention**

*B. Schwaegler*

### **The Sonographer's Role in the TAVR Suite**

*K. Horton*

### **Post TAVR Assessment**

*M. Lefevre*

### **Tricuspid Valve Interventions**

*N. Edwards*

### **Question & Answer**

**3:15 PM – 4:30 PM**

**CC Small, Fast, Efficient: The Value of POCUS in the Inpatient / Outpatient Setting – Baltimore 3-5**

How is outpatient POCUS different than in patient? Review of hand-held ultrasound machines and middleware software. How to integrate ultrasound in a brutal clinical schedule, CMS guidelines and billing practices.

*Chair: W. Katz*

**The Why's of POCUS**

*S. Nikravan*

**Small But Complex: Issues Around Hand-Held Devices**

*N. Panebianco*

**Great Saves in Cardiac POCUS**

*S. Kort*

**Question & Answer**

**3:15 PM – 4:30 PM**

**C Great Debates in Circulation: Elect a Winner! – Arena**

This session will feature lively debates of hotly contested topics in vascular medicine, argued by the experts.

*Chairs: T. Thompson, M. Vorsanger*

**Anatomic Measurements of the Aorta Are Sufficient to Guide Intervention**

*Pro: T. Coutinho*

*Con: S. Phillips*

**Debate! (Question & Answer)**

**Asymptomatic Carotid Stenosis Should Be Medically Managed**

*Pro: S. Henkin*

*Con: A. Aday*

**Debate! (Question & Answer)**

**3:15 PM – 4:30 PM**

**F Sonographer Career Pathways - Welcome to My "TED" Talk – Baltimore 1**

In this session, sonographers from all scopes of sonography practice will address potential career pathways.

*Chairs: D. Adams, P. Knoll*

**Session Introduction**

*P. Knoll*

**Echo Lab Manager**

*A. Davis*

**Educator**

*R. Palma*

**Advanced Cardiac Sonographer**

*M. Umland*

**Research**

*C. Cassidy*

**The Sonographer in the OR/Interventional Space**

*R. Meece*

**Sonographer in the C Suite**

*M. Rastelli*

**Question & Answer**

*D. Adams*

**3:15 PM – 4:30 PM**

**Leadership Academy Application: What Do I Need To Do – Chesapeake 12**

The nuts and bolts of the ASE Leadership Academy. Tips for developing yourself into a top tier candidate.

*Moderators: E. Garcia-Sayan, E. Kruse, L. Safi, M. Wasserman, N. Weissman*

# SATURDAY, JUNE 24 SCHEDULE

4:00 PM – 4:50 PM

## DIY Acquisition: Pediatric Congenital Heart Disease – Chesapeake 7-9

*(Ticketed Event. Additional Fee Required.)*

This DIY hands-on scanning session is dedicated to pediatric patients with congenital heart disease. It will provide the opportunity for participants to scan pediatric patients with congenital heart disease. Expert sonographers and physicians will provide assistance and education to participants and observers and will discuss the type of congenital heart disease present in the model and how the ultrasound protocol needs to be tailored to answer the clinical question.

*Chairs: C. Mitchell, M. Nies*

*DIY Instructors: N. Halavina, E. Miklasz, N. Munsey, Z. Prengaman, S. Wood, A. Zybell*

5:00 PM – 5:45 PM

## Everything You Need to Know About Aortic Stenosis – Arena

### Part 1

*W. Zoghbi*

### Part 2

*V. Rigolin*

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MD, FASE



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# SCHEDULE AT A GLANCE

## SUNDAY, JUNE 25

REGISTRATION OPEN 6:30 AM – 6:00 PM ~ ECHO EXPO OPEN 10:00 AM – 6:00 PM

ROOMS	MARYLAND	CHERRY BLOSSOM	WILSON A	WILSON BCD	ANNAPOLIS	BALTIMORE 3-5
7:00 – 7:50 AM		<b>LIVE STREAM</b> <b>R</b> Abstracts: Cardio-Oncology and Amyloid Disease	<b>PC</b> Fetal Symposium (7:00 – 8:30 AM)	<b>LIVE STREAM</b> Classic Case Studies: Remember this One?	Cases: I Still Don't Believe It	<b>V</b> <b>R</b> Abstracts: Valvular Heart Disease
8:00 – 8:45 AM	<b>LIVE STREAM</b> <b>GARDIN LECTURE</b> by George Mensah, MD – Maryland					
8:50 – 10:05 AM	<b>LIVE STREAM</b> <b>M</b> <b>R</b> The Architecture of Hypertrophic Cardiomyopathy	<b>IT</b> Engineering in the Echo Lab: Building the Future <i>Kalmanson Lecture</i> by Gianni Pedrizzetti, PhD	<b>F</b> The Sonographer and the Mitral Valve: Blueprints for Success	<b>LIVE STREAM</b> <b>I</b> <b>R</b> Non-Invasive Evaluation of Women's Heart Disease: Ischemia and Beyond	<b>PC</b> Congenitally Corrected Transposition of the Great Arteries Untangled	<b>CC</b> The Cutting Edge of POCUS Training
10:05 – 10:45 AM	<b>REFRESHMENT BREAK: VISIT THE ECHO EXPO AND POSTERS</b>					
10:45 AM – 12:00 PM	<b>LIVE STREAM</b> <b>S</b> Cardiovascular Multimodality Imaging in Cardiomyopathies <i>(ASE/EACVI Joint Session)</i>	<b>C</b> The Cityscape of Pulmonary Embolism	<b>MM</b> <b>R</b> Multimodality Imaging Saves the Day	<b>LIVE STREAM</b> <b>PC</b> Artificial Intelligence and Machine Learning	<b>P</b> <b>R</b> Heart Failure & Mechanical Circulatory Support: Putting in the Plumbing	<b>A</b> <b>R</b> Chambers and Goals Misalignment
12:00 – 1:30 PM	<b>LUNCH BREAK: VISIT THE ECHO EXPO</b>					
12:15 – 1:15 PM	<b>SCIENCE AND TECHNOLOGY THEATER 1: PHILIPS</b>					
12:45 – 1:45 PM	<b>SCIENCE AND TECHNOLOGY THEATER 2: PFIZER</b>					
1:30 – 2:45 PM	<b>LIVE STREAM</b> <b>CC</b> Advantages and Limitations of Cardiac POCUS: A CASE Series	<b>F</b> <b>R</b> Brian Haluska Sonographer Research Award Competition (1:30 – 3:00 PM)	<b>PC</b> Unique Issues to the Premature Infant	<b>LIVE STREAM</b> <b>C</b> <b>R</b> The Aorta: Seeing is Believing	<b>P</b> <b>R</b> Intraoperative TEE to Guide Decision-Making and Improve Patient Outcomes	<b>M</b> The Unique Architectures of Cardiomyopathies: Form Doesn't Always Follow Function
2:45 – 3:15 PM	<b>REFRESHMENT BREAK: VISIT THE ECHO EXPO AND POSTERS</b>					
3:15 – 4:30 PM	<b>LIVE STREAM</b> <b>S</b> Multimodality Imaging of Valvular Heart Diseases <i>(ASE/JSE Joint Session)</i>		<b>PC</b> Pediatric Jeopardy	<b>LIVE STREAM</b> <b>S</b> Top Echo Research of the Year: Today's Science for Tomorrow's Patients	<b>MM</b> <b>R</b> Multimodality Imaging Builders: Seeing the Structures in Structural Heart Interventions (3:15 – 4:45 PM)	Women in Echo: Tips and Tricks: How to Work in Unfavorable Environments
4:30 – 6:00 PM	<b>VISIT THE ECHO EXPO AND POSTERS</b>					
6:30 – 11:00 PM	<b>ASE FOUNDATION RESEARCH AWARDS GALA</b> <i>(Ticketed Event. Additional Fee Required)</i>					

**ACHD (A)**   **CIRCULATION (C)**   **CRITICAL CARE (CC)**   **EARLY CAREER (EC)**   **IMAGING FUNDAMENTALS (F)**   **INNOVATION/TECHNOLOGY (IT)**  
**INTERVENTIONAL ECHO (IE)**   **ISCHEMIA (I)**   **MULTIMODALITY (MM)**   **MYOCARDIUM/FUNCTION (M)**   **PEDIATRIC/CONGENITAL (PC)**   **PERIOPERATIVE (P)**  
**POINT OF CARE (POC)**   **RESEARCH (R)**   **SPECIAL SESSIONS (S)**   **VALVES & STRUCTURAL HEART DISEASE (V)**

Schedule subject to change. For detailed information, please download the ASE Courses app.

# SCHEDULE AT A GLANCE

## SUNDAY, JUNE 25

REGISTRATION OPEN 6:30 AM – 6:00 PM ~ ECHO EXPO OPEN 10:00 AM – 6:00 PM

ROOMS	ARENA IN THE ECHO EXPO	BALTIMORE 1	BALTIMORE 2	CHESAPEAKE 12	DIY ACQUISITION* CHESAPEAKE 7-9	LEARNING LAB* CHESAPEAKE A-C
8:50 – 10:05 AM		<b>MM</b> Mixing Multimodality Imaging into Your Practice: Unmet Needs, Challenges, and Promises of Multimodality Imaging	Read with Me University of Washington: Artifacts and Imaging Pitfalls (9:00 – 9:30 AM) Read with Me UCSF (9:45 – 10:15 AM)		Strain Echocardiography (9:00 – 9:50 AM) Strain Echocardiography (10:00 – 10:50 AM)	Advanced Myocardial Strain Imaging (LV, RV, LA) (9:00 – 11:00 AM)
10:05 – 10:45 AM	BREAK					
10:45 AM – 12:00 PM	<b>F</b> Echo in the Wild: Case Studies from Outside the Echo Lab (10:30 - 11:45 AM)	Guideline Review: Use of Multimodality CV Imaging in Young Adult Competitive Athletes (10:45 – 11:15 AM) Guideline Review: TEE to Assist in Surgical Decision Making in OR (11:30 AM – 12:00 PM)	Read with Me Northwestern (10:45 – 11:15 AM) Read with Me University of Alabama (11:30 AM – 12:00 PM)	Building ASE Cares		
12:00 – 1:30 PM	<b>S R</b> Moderated Poster Session 1		Read with Me European Union (1:30 – 2:00 PM)		3D Echocardiography (1:00 – 1:50 PM)	
1:30 – 2:45 PM	<b>S</b> Echo Heard Around the World	<b>IT R</b> Cutting Edges and Sharp Angles in Interventional Echo	Read with Me Philippines (2:15 – 2:45 PM)	Equity, Diversity, Inclusion, and Echo (1:30 – 2:30 PM)	3D Echocardiography (2:00 – 2:50 PM)	Dealing with Discrepant Data: Hands-on Hemodynamics (1:30 – 3:30 PM)
2:45 – 3:15 PM	<b>C</b> Gaps and Future Directions in the Assessment of the Aorta (2:50 – 3:10 PM)		Read with Me Duke Pediatrics (3:00 – 3:30 PM)			
3:15 – 4:30 PM	<b>I</b> Expect the Unexpected: Post MI Complications and Cardiogenic Shock	<b>A</b> Where Should I Image My Patient with ACHD: Adult or Pediatric Lab?	Read with Me University of Chicago (3:45 – 4:15 PM)	<b>R</b> Veterinary Abstract Showcase (3:15 – 4:15 PM)	Adult Congenital Heart Disease (4:00 – 4:50 PM)	
4:30 – 6:00 PM	<b>CC</b> Practical and Reliable Echo Evaluation of Right Heart Function (4:45 – 5:30 PM)					

ACHD (A) CIRCULATION (C) CRITICAL CARE (CC) EARLY CAREER (EC) IMAGING FUNDAMENTALS (F) INNOVATION/TECHNOLOGY (IT)  
 INTERVENTIONAL ECHO (IE) ISCHEMIA (I) MULTIMODALITY (MM) MYOCARDIUM/FUNCTION (M) PEDIATRIC/CONGENITAL (PC) PERIOPERATIVE (P)  
 POINT OF CARE (POC) RESEARCH (R) SPECIAL SESSIONS (S) VALVES & STRUCTURAL HEART DISEASE (V)

Schedule subject to change. For detailed information, please download the ASE Courses app.

\*DIY Acquisition and Learning Labs are ticketed events and require an additional fee. Please see the Registration Desk for availability.

# SUNDAY, JUNE 25 SCHEDULE

7:00 AM – 7:50 AM

## **R Abstracts: Cardio-Oncology and Amyloid Disease – Cherry Blossom**

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work

*Chairs: S. Buddhe, B. Hoit*

### **Serial Echocardiographic Assessment of Diastolic Function in Women with Early-Stage Breast Cancer and Association with Cardiotoxicity**

*F. Huang*

### **Comprehensive Analysis of Right Ventricular Function in Cardiac Amyloidosis by 3D Speckle Tracking Echocardiography**

*F. Meng*

### **Clustering of Whole Heart Function Changes During Breast Cancer Therapy**

*P. Jayadeva*

### **Novel Echocardiographic Pixel Density Quantification Method for Differentiating Transthyretin Cardiac Amyloidosis from Light Chain Cardiac Amyloidosis and Other Phenocopies**

*V. Appadurai*

#### **Discussion**

7:00 AM – 8:30 AM

## **PC Fetal Symposium – Wilson A**

A two-hour session dedicated to fetal cardiology featuring recent advances, complex decision making, and interesting case presentations.

*Chairs: B. Arya, M. Donofrio*

### **Advanced Imaging to Assess Fetal Myocardial Function**

*J. Pruetz*

### **Pulse Check on Fetal Bradycardia**

*B. Cuneo*

### **Universal Prenatal Detection: How to Make a Dream Become a Reality**

*A. Krishnan*

### **Ethical Considerations in Fetal Cardiac Counseling**

*A. Patel*

#### **Question & Answer**

### **Long QT Syndrome**

*Presenter: S. Samples*

*Discussant: B. Arya*

### **Vascular Ring**

*Presenter: C. McFarland*

*Discussant: N. Pinto*

### **Coronary Artery Fistula**

*Presenter: S. Tseng*

*Discussant: E. Michelfelder*

### **TAPVR**

*Presenter: M. Gaitonde*

*Discussant: B. Yilmaz*

### **Fetal Masses**

*Presenter: B. Zoeller*

*Discussant: A. Moon-Grady*

#### **Question & Answer**

7:00 AM – 7:50 AM

## **Classic Case Studies: Remember This One? – Wilson BCD**

Opportunity for authors of high scoring case submissions to deliver oral presentations featuring memorable clinical scenarios.

*Chairs: K. Horton, H. Nguyen*

### **Transcatheter Edge-to-Edge Mitral Valve Repair in an Adult with Tricuspid Atresia**

*M. Chevenon*

### **Not All Heart Failure Gets Better with Diuresis: A Lesson in LVAD Physiology**

*S. Mazzone*

### **Resting Myocardial Contrast Echocardiography: Is it Time to Reconsider Use for Ischemia Evaluation?**

*O. Okasha*

### **Application of Longitudinal Strain in Timely Identification of Cardiac Amyloidosis**

*J. Peterson*

#### **Discussion**

7:00 AM – 7:50 AM

## **Cases: I Still Don't Believe It – Annapolis**

Opportunity for authors of high scoring case submissions to deliver oral presentations highlighting unbelievable clinical cases.

*Chairs: J. Borowski, N. Pandian*

### **A Bleeding Heart: A Case Series of Acquired Coronary Cameral Fistula**

*M. Ashraf*

### **Multimodality Approach to a Severe Case of Eosinophilic Myocarditis**

*C. Frederiksen*

### **The Tamponade's Tale: Infective MRSA Endocarditis with Tricuspid Valve Vegetation Leading to Purulent Cardiac Tamponade**

*B. Lee*

## “Ace of Spades with a Full House” An Atypical Case of Giant Left Atrium

*H. Bashir*

### Discussion

7:00 AM – 7:50 AM

## **V** Abstracts - Valvular Heart Disease – Baltimore 3-5

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work.

*Chairs: J. Banchs, K. Maganti*

## High Versus Low Gradient Aortic Stenosis: Is Our Evaluation Limited by the Aorto-Mitral Angle and Left Ventricular Outflow Tract Shape?

*D. Hur*

## Low Gradient Severe Aortic Stenosis with Normal Ejection Fraction and Normal Stroke Volume Index: Is this “True” Severe Aortic Stenosis?

*A. Rosario*

## Image-Based Predictive Simulations of Transcatheter Edge-to-Edge Repair in Humans

*N. Simonian*

## Cardiac Implantable Electronic Device-Related Interference with the Tricuspid Valve Apparatus and Impact on Tricuspid Regurgitation

*L. Lee*

### Discussion

8:00 AM – 8:45 AM

## **S** Keynote Speaker: Gardin Lecture – Maryland

Dr. George Mensah, Director of The Center for Translation Research and Implementation Science (CTRIS) at the National Heart, Lung, and Blood Institute (NHLBI) is an expert in cardiovascular medicine. His primary focus is on the application of implementation and systems science approaches to maximize health impact in the prevention and treatment of heart, lung, and blood diseases and the elimination of health inequities.

*Chair: J. Kirkpatrick*

## Echocardiography and the Global Burden of Cardiovascular Disease: The Crucial Role of Implementation Science

*G. Mensah*

8:50 AM – 10:05 AM

## **M** Abstracts - The Architecture of Hypertrophic Cardiomyopathy – Maryland

*Chairs: M. Jankowski, D. Phelan*

## Hypertrophic Cardiomyopathy from the Ground Up: Genetics to (Pharmacologic) Treatment

*D. Owens*

## Plan to Scan: Imaging Patients with Hypertrophic Cardiomyopathy

*M. Jankowski*

## Septal Makeover: Alcohol Septal Ablation and Sesame

*D. Sanborn*

## More Than Myocardium: The Role of the Mitral Valve in Hypertrophic Cardiomyopathy

*D. Phelan*

## Blueprints for Exercise and Sports Participation in Hypertrophic Cardiomyopathy

*M. Martinez*

### Case Presentation

*H. Wang*

### Case Review: A Sonographer’s Perspective

*E. Vogel-Bass*

## Sex-Related Differences on the Impact of Left Atrial Strain Mechanics on Exercise Capacity in Hypertrophic Cardiomyopathy

*B. Xu*

### Question & Answer

8:50 AM – 10:05 AM

## **IT** Engineering in the Echo Lab: Building the Future – Cherry Blossom

By the end of this session, you will embrace research coming from collaborations between academia and industry.

*Chairs: P. Pellikka, J. Thomas*

### Session Introduction

*P. Pellikka*

### Why Do I Need to Partner with Academic Scientists?

*G. Woodward*

### Why Do I Need to Partner with Industry Scientists?

*R. Lang*

### Potential Pitfalls for Partnerships: Ethics and Regulatory Issues

*M. Main*

### We Can’t Do It on Our Own: Academia Within Industry

*N. Weissman*

### Kalmanson Lecture: Vorticity: From First Principles to Clinical Application in Cardiology

*G. Pedrizzetti*

### Question & Answer

# SUNDAY, JUNE 25 SCHEDULE

8:50 AM – 10:05 AM

**F** **The Sonographer and the Mitral Valve: Blueprints for Success – Wilson A**

With sonographers becoming an increasingly crucial part of the Valve Team, learn how to best assess the mitral valve pre and post interventional therapy.

*Chairs: D. Orsinelli, M. Park*

**Session Introduction**

*M. Park*

**Challenging Case Presentation**

*M. Orsinelli*

**Mitral Regurgitation Type and Classification: Does It Matter?**

*B. Doldt*

**Quantitation of Mitral Regurgitation in the Real World**

*D. Bourque*

**When the Basic Echo Isn't Enough: Stress and Strain in Mitral Regurgitation**

*M. Kraushaar*

**Fixing Mitral Regurgitation: What the Sonographer Needs to Know**

*B. Schwaegler*

**Question and Answer**

8:50 AM – 10:05 AM

**I R Non-Invasive Evaluation of Women's Heart Disease: Ischemia and Beyond – Wilson BCD**

*Chairs: A. Minhas, V. Sachdev*

**Acute Coronary Syndrome in Women: Including Case and Quiz (SCAD)**

*K. Maganti*

**Chest Pain Guidelines: Workup of Inoca**

*E. Michos*

**How Do I Diagnose Microvascular Disease? Multimodality Approach**

*M. Salerno*

**Stress Cardiomyopathy: Is This Ischemia?**

*L. Gillam*

**Application of Global Longitudinal Strain with Treadmill Exercise in Detecting Coronary Artery Disease**

*A. Chum*

8:50 AM – 10:05 AM

**PC Congenitally Corrected Transposition of the Great Arteries Untangled – Annapolis**

This session focuses on the imaging of congenitally corrected transposition of the great arteries (CC-TGA) through the lifespan and highlights the varied approaches to decision making.

*Chairs: C. Altman, B. Eidem*

**Keys to Prenatal Diagnosis**

*J. Cohen*

**Pathology Defined**

*L. Rogers*

**Imaging Pearls for Neonatal Assessment**

*R. France*

**CC-TGA with Large Ventricular Septal Defect and No Pulmonary Stenosis: Physiologic Repair Is the Best (Debate)**

*M. Cohen*

**CC-TGA with Large Ventricular Septal Defect and No Pulmonary Stenosis: Anatomic Repair Is the Best (Debate)**

*A. Dorfman*

**Tailoring the Surgical Approach in CC-TGA**

*R. Ohye*

**Multimodality Imaging in Clinical Decision Making**

*S. Buddhe*

**Question & Answer**

8:50 AM – 10:05 AM

**CC The Cutting Edge of POCUS Training – Baltimore 3-5**

This session aims to describe the echo lab's role in training the house of medicine cardiac POCUS. Additionally, it will provide contemporary insight into competency assessment tools, the potential role of artificial intelligence in POCUS training, and the enhanced capability of handheld ultrasound devices.

*Chair: S. Koenig*

**What Is the Role of the Echo Lab in Training the House of Medicine?**

*A. Labovitz, S. Mulvagh*

**Artificial Intelligence and POCUS: A Good Match?**

*R. Liu*

**Testing, Testing, Testing: Competency Assessment**

*B. Kimura*

**Beam Me Up Scotty: Evolution of Machine Portability Through Capability**

*J. Sohn*

**Question & Answer**

**8:50 AM – 10:05 AM**

**MM Mixing Multimodality Imaging into Your Practice: Unmet Needs, Challenges, and Promises of Multimodality Imaging – Baltimore 1**

This session covers various aspects of multimodality imaging including appropriate use, training, and building a multimodality imaging lab in your institution.

*Chairs: M. Chamsi-Pasha, P. Parwani*

**Session Introduction**

*M. Chamsi-Pasha*

**Advanced Cardiac Imaging: High Value but High Cost?**

*B. Freed*

**AUC: When Is Multimodality Imaging Appropriate?**

*M. Chamsi-Pasha*

**From Evidence to Practice Guidelines for Heart Failure**

*P. Parwani*

**Training in Multimodality Imaging: The Ins and Outs**

*A. Narang*

**Building a Patient-Centered Multimodality Imaging Lab of the Future**

*G. Hundley*

**Question & Answer**

**9:00 AM – 9:30 AM**

**Read with Me: University of Washington: Artifacts and Imaging Pitfalls – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

**Artifacts and Imaging Pitfalls**

*D. Linker*

**9:00 AM – 9:50 AM**

**DIY Acquisition: Strain Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This DIY session will provide hands-on learning experiences for all registered to learn how to acquire left ventricular, right ventricular, and left atrial strain data sets. During the session, participants will have the opportunity to perform hands-on scanning.

*Chair: C. Mitchell*

*DIY Instructors: J. Betz, K. Collins, N. Edwards, T. Forshaw, J. Stout*

**9:00 AM – 11:00 AM**

**Learning Lab: Advanced Myocardial Strain Imaging (LV, RV, LA) – Chesapeake A-C**

*(Ticketed Event. Additional Fee Required.)*

After a brief review of strain measurements, hone your strain skills with hands-on analysis of cases where strain makes the diagnosis. Targeted for those already doing strain imaging or in addition to the Basic Strain Imaging Learning Lab.

*Chairs: R. Jain, B. Johnson*

*Lab Assistants: A. Davis, R. Palma, T. Rosborough, A. Vilner, S. Walling*

**9:45 AM – 10:15 AM**

**Read with Me: University of California – San Francisco – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*T. Abraham, G. Strachan*

**10:00 AM – 10:50 AM**

**DIY Acquisition: Strain Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This DIY session will provide hands-on learning experiences for all registered to learn how to acquire left ventricular, right ventricular, and left atrial strain data sets. During the session, participants will have the opportunity to perform hands-on scanning.

*Chair: C. Mitchell*

*DIY Instructors: J. Betz, K. Collins, N. Edwards, T. Forshaw, J. Stout*

# SUNDAY, JUNE 25 SCHEDULE

10:30 AM – 11:45 AM

**F** **Echo in the Wild: Case Studies from Outside the Echo Lab – Arena**

Have you ever wondered where else you can do an echo? Echo in the Wild will illustrate some of the other settings you can find sonographers.

*Chairs: R. Martin, E. McIlwain*

**Session Introduction**

*E. McIlwain*

**Veterinary Medicine: Case Study 1**

*J. Migner*

**Veterinary Medicine: Case Study 2**

*J. Lichtenberger*

**Scanning in the Field: Global Health**

*B. Byrd*

**Scanning in the Water: Scuba**

*J. Leypoldt*

**Scanning in the Water: Hyperbaric Chamber**

*A. Armour*

**Scanning in the Zoo**

*J. Schaaf*

**Scanning in Basic Research**

*C. Cassidy*

**Scanning in Space**

*J. Lindner*

**Question & Answer**

10:45 AM – 12:00 PM

**S R Cardiovascular Multimodality Imaging in Cardiomyopathies – Maryland**

*(ASE/EACVI Joint Session)*

Diagnosis, risk stratification and guiding patient management are important roles of multimodality cardiovascular imaging in cardiomyopathies. This session will discuss multimodality imaging in important types of inherited and acquired forms of cardiomyopathy.

*Chairs: B. Arora, V. Delgado*

**Session Introduction**

*V. Delgado*

**Excessive Trabeculation With and Without Cardiomyopathy: Key Messages from an Expert Consensus**

*S. Petersen*

**Imaging in Hypertrophic Cardiomyopathy: When to Use Which Modality**

*D. Owens*

**Importance of Multimodality Imaging in Arrhythmogenic Cardiomyopathy**

*T. Edvardsen*

**Multimodality Imaging in Inflammatory Cardiomyopathies**

*A. Hays*

**Question & Answer**

10:45 AM – 12:00 PM

**C The Cityscape of Pulmonary Embolism – Cherry Blossom**

This session discusses the challenges of imaging during therapeutics. Stepwise approach to pulmonary embolism, reviewing various treatment approaches. Reviewed and discussed by a multidisciplinary panel.

*Chair: R. Zebadua*

*Panelist: G. Huang*

**Assessment of Undifferentiated Dyspnea**

*N. Panebianco*

**Sonographic Assessment for Suspected Pulmonary Embolism/Right Ventricular Assessment**

*L. Friend*

**Semi-Quantitative Echocardiography for Right Ventricular Function**

*J. Diaz-Gomez*

**Case #1 Present to the PERT! Approach to Multidisciplinary Pulmonary Embolism Assessment and Intervention**

*I. Crandall*

**Case #1 PERT Discussion**

**Case #2 Present to the PERT! Approach to Multidisciplinary Pulmonary Embolism Assessment and Intervention**

*S. Nikravan*

**Case #2 PERT Discussion**

**The Aftermath: Workup and Management of Dyspnea After Pulmonary Embolism**

*S. Henkin*

**Question & Answer**





10:45 AM – 12:00 PM

**MM R Multimodality Imaging Saves the Day – Wilson A**

This session will showcase five outstanding cases where multimodality imaging was essential to patient care.

*Chairs: B. Freed, N. Rashedi*

**Session Introduction**

*B. Freed*

**An Atypical Presentation of a Calcified Atrial Myxoma Identified by Multimodality Imaging**

*P. Covas*

**Multimodality Imaging to Detect an Intracardiac Bronchogenic Cyst**

*K. Fell*

**Transcatheter Septal Myotomy for the Treatment of Hypertrophic Cardiomyopathy Using Multimodality Cardiac Imaging**

*C. O'Brien*

**Correlation Case 4**

*A. Boyle*

**Geriatric Case 5**

*J. Strom*

**Question & Answer**

10:45 AM – 12:00 PM

**PC Artificial Intelligence and Machine Learning – Wilson BCD**

This session provides a primer to artificial intelligence and machine learning for the pediatric cardiologist and sonographer and highlights original research in this area published in the past year.

*Chairs: B. Landeck, A. Powell*

**Artificial Intelligence: Primer for the Pediatric Cardiac Imager**

*S. Kutty*

**Utility of Artificial Intelligence in Cardiac Imaging**

*C. Reddy*

**Getting Closer: Artificial Intelligence Based View Classification Model for Pediatric Echo**

*A. Gearheart*

**Diastolic Function in Pediatrics: Is It Time to Turn to Machine?**

*M. Nguyen*

**Artificial Intelligence for Prognostication: Hope or Hype?**

*M. Friedberg*

**Question & Answer**

10:45 AM – 12:00 PM

**P R Heart Failure and Mechanical Circulatory: Putting in the Plumbing – Annapolis**

Deep dive into imaging considerations for both ventricular assist devices and extracorporeal membrane oxygenation support.

*Chairs: S. Cole, R. Stainback*

**Refractory Cardiogenic Shock Due to Acute Papillary Muscle Rupture After Blunt Chest Trauma**

*D. Melendez*

**Imaging for Temporary Percutaneous Left and Right Ventricular Assist Devices**

*R. Vadlamudi*

**AR in My LVAD Patient, How to Quantify and Manage?**

*R. Stainback*

**Moderate Tricuspid Regurgitation with LVAD Implant, What Should I Do?**

*A. Faloye*

**How Do I Quantify Right Ventricular Function in My Heart Failure Patient?**

*K. Howard-Quijano*

**Imaging for ECMO; Guiding the Cannulas and Beyond**

*S. Cole*

**Question & Answer**

10:45 AM – 12:00 PM

**A R Chambers and Goals Misalignment – Baltimore 3-5**

This session will illustrate how to image D and L-looped transposition of the great vessels in adulthood through cases.

*Chairs: R. Canessa, A. Stefanescu*

**Introduction**

*A. Stefanescu*

**How to Tell D-Loop and L-Loop: Sweeping Is Key**

*L. Hua*

**Imaging Atrial Switch**

*R. Canessa*

**Imaging Arterial Switch**

*S. Shah*

**Imaging LTGA**

*A. Sahu*

**Quantifying Pulmonary Regurgitation in Young Adults with Congenital Heart Disease: Comparison of Echocardiography and Cardiac Magnetic Resonance Imaging**

*J. Cohen*

**Question & Answer**

# SUNDAY, JUNE 25 SCHEDULE

10:45 AM – 12:00 PM

**S Building ASE Cares – Chesapeake 12**

Historical foundations of ASE Cares and how the ASE is addressing cutting edge issues in the practice of cardiac ultrasound from a humanistic perspective.

*Chair: M. Swaminathan*

**Introduction/History of ASE Cares**

*M. Swaminathan*

**Foundations of Self Care**

*N. Soni-Patel*

**Moral Distress in Healthcare**

*J. Kirkpatrick*

**Institutional Structures and Burnout**

*D. Wiener*

**Creating a Supportive Lab Environment**

*P. Knoll*

**What Can Professional Societies Do?**

*S. Wieggers*

10:45 AM – 11:15 AM

**Guideline Review: Use of Multimodality Cardiovascular Imaging in Young Adult Competitive Athletes – Baltimore 1**

Review the guidelines with the authors and get your questions answered!

*M. Martinez, J. Mercandetti*

10:45 AM – 11:15 AM

**Read with Me: Northwestern – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*J. Thomas*

11:30 AM – 12:00 PM

**Guideline Review: TEE to Assist in Surgical Decision Making in the Operating Room – Baltimore 1**

Review the guidelines with the authors and get your questions answered!

*A. Nicoara*

11:30 AM – 12:00 PM

**Read with Me: University of Alabama – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*N. Nanda*

12:00 PM – 1:30 PM

**S R Moderated Poster Session 1 – Arena**

*Chairs: A. DeMaria, N. Akhter*

**On the Interplay of Loading, Myocardial Stiffness and Contractility in Transthoracic Acoustic Radiation Force Induced Shear Wave Measurements in Pigs**

*A. Caenen*

**Low Flow Severe Aortic Stenosis with Low Gradients, Normal Ejection Fraction and Normal Stroke Volume Index: Anatomical Considerations**

*A. Rosario*

**Indexed Aortic Valve Area Using Multimodality Imaging for Assessing the Severity of Bicuspid Aortic Stenosis**

*N. Yagi*

**Prognostic Outcomes of Aortic Stenosis with Anaemia in Asian Patients**

*J. Ong*

**Characteristics and Clinical Outcomes of Low-Flow Very Low-Gradient Aortic Stenosis**

*L. Chopra*

**Insights into Left Ventricular Wall Thickness at Cardiac Amyloidosis Diagnosis**

*M. Chedid El Helou*

**Global Longitudinal Strain and Ejection Fraction have Superior Sensitivity to Wall Motion Assessment for Detection of Coronary Artery Disease in End Stage Liver Disease**

*M. Al-Gibbawi*

**Right Ventricular Strain as a Predictor of Tricuspid Regurgitation Improvement After Transcatheter Aortic Valve Replacement**

*C. Gonzalez*

**Reduced Pulmonary Artery Distensibility in Systemic Sclerosis Predicts Right Ventricular Dysfunction and Increased Mortality**

*E. Knight*

**1:00 PM – 1:50 PM**

## **DIY Acquisition: 3D Echocardiography – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This session will provide attendees an opportunity to learn how to acquire 3D volumes of the left ventricle and calculate an ejection fraction with an expert. The workshop will also review how to assess the quality of the 3D volume. During the session, participants will have the opportunity to perform hands-on scanning or observe the data acquisition. Attendees will have the opportunity to interact with different vendors for data acquisition to acquire 3D left ventricular volumes and use software to calculate an ejection fraction.

*Chair: C. Mitchell*

*DIY Instructors: J. Betz, C. Huntington, J. Schaaf, J. Warmbecker, M. Yamat*

**1:30 PM – 2:00 PM**

## **Read with Me: European Union – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*E. Donal*

**1:30 PM – 2:30 PM**

## **S Equity, Diversity, Inclusion, and Echo – Chesapeake 12**

This session explores barriers to equity and roles that cardiac ultrasound can play in reducing disparities.

*Chair: N. Weissman*

### **DEI: A Personal Journey**

*J. Diaz-Gomez*

### **Diversity in the Echo Workforce**

*T. Thompson*

### **Promoting Echo Access for Underserved Patients**

*M. Rastelli*

### **Confronting Sexism, Racism and Bias**

*P. Parwani*

**1:30 PM – 2:45 PM**

## **CC Advantages and Limitations of Cardiac POCUS: A CASE Series – Maryland**

A case review of ultrasound saves and areas for improvement.

*Chairs: V. Sorrell, K. Zimmerman*

### **Overview of the Case Special POCUS Issue**

*V. Sorrell*

## **Cases Where POCUS Was Critical in the Diagnosis of a Patient**

*L. Sade*

## **Cases Where POCUS Was Critical in the Management of a Patient**

*S. Nikravan*

## **Challenges in POCUS: Cases of Limited Documentation, Confusion About Scope**

*G. Rose*

## **Question & Answer**

**1:30 PM – 3:00 PM**

## **FR The Brian Haluska Sonographer Research Award Competition – Cherry Blossom**

This award competition celebrates the best of sonographer-led research.

*Chair: F. Asch*

*Judges: C. Cassidy, E. Kruse, J. Lindner, G. Strachan*

### **Welcome and Introduction of Judges**

*F. Asch*

### **SIA-1: Early Assessment of Global Circumferential Strain from 3D Echocardiography Predicts Late Left Ventricle Remodeling in a Chronic Porcine Model of Reperfused Myocardial Infarction**

*N. Guerrero*

### **SIA-2: Prognostic Value of Echocardiographic Derived Right Ventricular to Pulmonary Arterial Coupling in Patients with ATTR Cardiac Amyloidosis**

*M. Jankowski*

### **SIA-3: Comprehensive Assessment of Effect of Transcutaneous Device Closure of Patent Ductus Arteriosus on Left Ventricle Function**

*G. Kadiu*

### **SIA-4: Use of Definity in Repaired Adult Congenital Population for Enhancement of Ventricular Function**

*S. Poston*

### **Introduction of Guest Speaker**

*F. Asch*

### **Inspirational Research**

*R. Perry*

### **Recognition of Competition Finalists, Announcement of Winner**

*F. Asch*

# SUNDAY, JUNE 25 SCHEDULE

1:30 PM – 2:45 PM

**PC Unique Issues to The Premature Infant – Wilson A**

This session focuses on the use of echocardiography to assess patent ductus arteriosus (PDA) anatomy and hemodynamics pre- and post-closure, as well as complicating features unique to the premature infant.

*Chairs: M. Cohen, M. Puchalski*

**PDA Assessment and Hemodynamics**

*R. Phillip*

**Device Closure with PDA**

*A. Bhat*

**Post PDA Ligation Syndrome**

*G. Goldenberg*

**BPD and Pulmonary Hypertension**

*A. Hauck*

**Pulmonary Vein Stenosis with Bronchopulmonary Dysplasia**

*M. Campbell*

**Question & Answer**

1:30 PM – 2:45 PM

**C R The Aorta: Seeing is Believing – Wilson BCD**

This session will offer a comprehensive review of aortic pathology, culminating in a case-based, multimodality talk.

*Chairs: A. Aday, R. LeLeiko*

**Acute Aortic Syndromes**

*A. Aday*

**Beyond the Arch: Imaging and Management of Descending and Abdominal Aortic Pathology**

*R. LeLeiko*

**Not Just Aneurysm and Dissection: Aortitis and Other Vasculitides**

*N. Narula*

**Augmented Characterization of Aortic Valvulopathy Using 4D Modeling of Transesophageal Echocardiography**

*N. Tran*

**I Once Saw an Aorta \*This\* Big!**

*B. Arya*

**Question & Answer**

1:30 PM – 2:45 PM

**P R Intraoperative TEE to Guide Decision-Making and Improve Patient Outcomes – Annapolis**

Learn how intraoperative TEE may help predict surgical success/failure, identify risks, and ultimately improve patient outcome.

*Chairs: A. Nicoara, M. Swaminathan*

**Preoperative Right Atrial Strain and Volume Predict Short-Term Outcome in Patients Undergoing Concomitant Tricuspid Valve Surgery**

*B. Chen*

**Can Echo Tell Me Whether This Mitral Valve Is Repairable?**

*K. Belani*

**Risk and Management of Sam Post-Mitral Valve Repair**

*H. Bhatt*

**Key Anatomic Measurements for Aortic Valve Repair and Replacement**

*H. Michelena*

**What to Do with Incidental Concurrent Moderate Mitral Regurgitation/Tricuspid Regurgitation Discovered on Intraoperative TEE?**

*M. Swaminathan*

**Septal Myectomy for Hypertrophic Obstructive Cardiomyopathy: How Much Myectomy Is Enough?**

*A. Nicoara*

**When to Go Back on Cardiopulmonary Bypass, How Much Paravalvular Leak Is Too Much?**

*S. Shernan*

**Question & Answer**

1:30 PM – 2:45 PM

**M The Unique Architectures of Cardiomyopathies: Form Doesn't Always Follow Function – Baltimore 3-5**

This session reviews cardiomyopathies and their unique echocardiographic work up.

*Chairs: E. Donal, A. Hays*

**Sarcoid: At the Heart of a System Problem**

*R. Janardhanan*

**It's Getting Infiltrative in Here**

*M. Miglioranza*

**COVID and Vaccine Related Myocarditis**

*A. Hays*

**Plan to Scan: Constriction/Restriction**

*K. Johnson*

## Takotsubo Cardiomyopathy: The Shape of Things

*S. Nakatani*

## Building Muscle: The Athletic Heart

*M. Martinez*

## Question & Answer

**1:30 PM – 2:45 PM**

### **S** Echo Heard Round the World – Arena

Fast, economical, accurate, safe, and powerful: echocardiography's unparalleled global application is highlighted.

*Chairs: D. Linker, H. Nguyen*

## Echo Research in LMIC

*H. Nguyen*

## Echo in Chagas

*D. Rassi*

## Echo in Rheumatic Heart Disease

*I. Wibhuti*

## Echo in Tuberculosis

*M. Supe*

## When Echo Is All There Is

*S. Scansani*

## Xeno-Echo: The University of Maryland Experience with Strain in Xenotransplantation

*S. Hong-Zohlman*

## Discussion

**1:30 PM – 2:45 PM**

### **IE R** Cutting Edges and Sharp Angles in Interventional Echo – Baltimore 1

This research symposium will feature the latest research and innovations in imaging for structural heart disease interventions.

*Chairs: E. Garcia-Sayan, F. Silvestry*

## Opti-Mitra-Score: A Predictive Score for Optimal Procedural Success After Transcatheter Edge-to-Edge Repair for Mitral Regurgitation

*M. Claeys*

## Abstract Q&A

## Predicting Success & Avoiding Pitfalls of Mitral TEER in Cardiomyopathy

*K. Koulogiannis*

## Holographic Imaging Display for Structural Interventions

*M. Lebehn*

## 3D Intracardiac Echocardiography in Transcatheter Tricuspid Interventions

*L. Wang*

## Abstract Q&A

## Totally Cool or Slippery Slope? 3D/4D ICE for Mitral Intervention

*A. Narang*

## Totally Cool or Slippery Slope? 3D/4D ICE for Tricuspid Intervention

*F. Silvestry*

## Totally Cool or Slippery Slope? 3D/4D ICE for Left Atrial Appendage Occlusion

*T. Chen*

## Question & Answer

**1:30 PM – 3:30 PM**

## Learning Lab: Dealing with Discrepant Data: Hands-on Hemodynamics – Chesapeake A-C

*(Ticketed Event. Additional Fee Required.)*

Hands-on analysis of cases with discrepant aortic valve area and Doppler gradient data and application of advanced tools to diagnose aortic stenosis.

*Chairs: D. Bourque, M. Parker*

*Lab Assistants: B. Byrd, N. Enger, J. Leyboldt, J. Migner, R. Palma*

**2:00 PM – 2:50 PM**

## DIY: Acquisition: 3D Echocardiography – Chesapeake 7-9

*(Ticketed Event. Additional Fee Required.)*

This session will provide attendees an opportunity to learn how to acquire 3D volumes of the left ventricle and calculate an ejection fraction with an expert. The workshop will also review how to assess the quality of the 3D volume. During the session, participants will have the opportunity to perform hands-on scanning or observe the data acquisition. Attendees will have the opportunity to interact with different vendors for data acquisition to acquire 3D left ventricular volumes and use software to calculate an ejection fraction.

*Chair: C. Mitchell*

*DIY Instructor: J. Betz, J. Schaaf, S. Walling, J. Warmbecker, M. Yamat*

**2:15 PM – 2:45 PM**

## Read with Me: Philippines – Baltimore 2

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*E. Tucay*

# SUNDAY, JUNE 25 SCHEDULE

2:50 PM – 3:10 PM

**C** **Gaps and Future Directions in the Assessment of the Aorta – Arena**

Join this Ted Talk style discussion about the gaps and future directions in the assessment of the aorta.

*T. Coutinho, M. Keane, J. Markowitz*

3:00 PM – 3:30 PM

**Read with Me: Duke University Pediatrics – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*P. Barker, C. Dunbar*

3:15 - 4:15 PM

**R Veterinary Abstract Showcase – Chesapeake 12**

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work.

*Chairs: E. Côté, S. Rosenthal*

**2D Quantitative Methods for Evaluation of Mitral Regurgitation Severity in Canine Degenerative Mitral Valve Disease**

*B. Del Nero*

**Feasibility Clinical Study of Transcatheter Edge-to-Edge Repair in Dogs with the Canine Mitral V-Clamp Device**

*B. Potter*

**Oral Rapamycin Therapy in Feline Subclinical Hypertrophic Cardiomyopathy: Results of the RAPACAT Clinical Trial**

*J. Stern*

**Transseptal Puncture in the Horse Using Intracardiac Ultrasound Guidance: First Results with Follow-Up**

*I. Vernemmen*

**Discussion**

3:15 PM – 4:30 PM

**S Multimodality Imaging of Valvular Heart Diseases – Maryland**

*(ASE/JSE Joint Session)*

This session will explore the advancements in multimodality imaging that allow diagnosis and characterization of valvular heart disease.



*Chairs: Y. Abe, W. Zoghbi*

**Role of Echo and Cardiac CT in Aortic Valve Repair Surgery**

*K. Obase*

**Emerging Role of Strain in Valvular Heart Disease Prognostication**

*J. Voigt*

**Exercise Stress Echocardiography in Valvular Heart Disease**

*M. Izumo*

**MRI and Valve Disease**

*S. Blissett*

**Cases**

*J. Hill*

**Question & Answer**

3:15 PM – 4:30 PM

**PC Pediatric Jeopardy – Wilson A**

East, Central, and West teams engage in lively competition to answer imaging questions of varying complexity.

*Chair: M. Brooks*

*Team A - East: J. Co-Vu, K. Farooqi, D. Saurers*

*Team B - Central: J. Acevedo, D. Aly, M. DiMaria*

*Team C - West: J. Hake, S. Maskatia, N. Pinto*

3:15 PM – 4:30 PM

**S R Top Echo Research of the Year: Today's Science for Tomorrow's Patients – Wilson BCD**

Echocardiography continues to be a technology in evolution. This session highlights some of the scientific achievements that will be impacting the future care for adults, children, and animals with cardiovascular disease.

*Chairs: J. Hung, J. Lindner*

**Emerging Technologies**

*P. Collier*

**Something New for the Kids**

*D. Forsha*

## Hemodynamics and Heart Failure

*G. Aurigemma*

## Beyond Bipedals: Veterinary Echo Science

*E. Côté*

## Question & Answer

### 3:15 PM – 4:30 PM

#### **MM R Multimodality Imaging Builders: Seeing the Structures in Structural Heart Interventions – Annapolis**

This session focuses on the role of multimodality imaging in structural heart interventions.

*Chairs: T. Chen, P. Patil*

#### Session Introduction

*T. Chen*

#### CT-TEE Fusion for Percutaneous Closure of Paravalvular Leak

*Z. Meili*

#### Role of CT in Pre-Procedural Planning

*A. Narang*

#### Role of CT in Post-Procedural Follow Up

*P. Patil*

#### Debate: CMR Is Required for Ventricular Hypertrophy Procedures

*M. Salerno*

#### Debate: CMR Is Redundant for Ventricular Hypertrophy Procedures

*J. Strom*

#### ACC Multimodality Imagers Document Discussion

*O. Khaliq*

## Question & Answer

### 3:15 PM – 4:30 PM

#### **S Tips and Tricks: How to Work in Unfavorable Environments – Baltimore 3-5**

Brought to you by ASE's Women in Echo Forum, this session helps you understand how to work in unfavorable environments, identify and manage "Passive bullying," and develop techniques on how to come through tough experiences as a winner not as a quitter.

*Chair: R. Thamman*

*Panelists: R. Bullock-Palmer, P. Jone, E. Michos, P. Parwani*

#### Tips and Tricks: How to Work in Unfavorable Environments

*T. Henshaw*

## Question & Answer

### 3:15 PM – 4:30 PM

#### **I Expect the Unexpected: Post MI Complications and Cardiogenic Shock – Arena**

*Moderators: J. Borowski, D. Sanborn*

#### Acute Mitral Regurgitation

*J. Meyer*

#### Acute Ventricular Septal Defect/Left Ventricular Rupture

*N. Kelly*

#### Left Ventricular Aneurysm and Pseudoaneurysm/Pericardial Effusion

*J. Borowski*

#### Echo Assessment of Support Devices: ECMO and VAD

*S. Bernard*

#### Perioperative Echo in the Acute Setting: Interesting Cases

*J. Crowley*

### 3:15 PM – 4:30 PM

#### **A Where Should I Image My Patient with ACHD: Adult or Peds Lab? – Baltimore 1**

Imaging children and adults is not the same! This session will illustrate the strengths and challenges of imaging adult congenital heart disease patients in a pediatric echo lab vs. adult echo lab, highlighting the clinical expertise and equipment needed.

*Chairs: C. Fleishman, M. Wasserman*

#### Introduction

*M. Wasserman*

#### Pediatric Lab is the Best Place

*L. Lopez*

#### Adult Lab is the Best Place

*A. Sahu*

#### Rebuttal

*Pediatrics: L. Lopez*

*Adult: A. Sahu*

#### What I Learned from the Pediatric Lab

*S. Poston*

#### What I Learned about the Adult Lab

*C. Urbas*

#### Bridging the Two Labs: Building a Lab That Has the Best of Both Worlds

*V. Duarte*

## Question & Answer

# SUNDAY, JUNE 25 SCHEDULE

**3:45 PM – 4:15 PM**

## **Read with Me: University of Chicago – Baltimore 2**

In this flipped classroom learning format, attendees in small groups will review and interpret echocardiograms with experts, similar to the format used in many training programs to teach echocardiography.

*R. Lang*

**4:00 PM – 4:50 PM**

## **DIY Acquisition: Adult Congenital Heart Disease – Chesapeake 7-9**

*(Ticketed Event. Additional Fee Required.)*

This DIY hands-on scanning session is dedicated to adult patients with congenital heart disease. It will provide the opportunity for congenital and non-congenital participants alike to master the assessment of lesions commonly encountered in ACHD clinics.

*Chair: C. Mitchell*

## **Levo-Transposition of the Great Arteries**

*M. Wasserman*

## **DTGA Atrial Switch**

*N. Soni-Patel*

## **Tetralogy of Fallot with Focus on Pulmonary Valve Images**

*J. Sheehan*

## **Fontan Single Ventricle**

*B. Schwaegler*

**4:45 PM – 5:30 PM**

## **CC Practical and Reliable Echo Evaluation of Right Heart Function in Distinct Hospital Settings – Arena**

*N. Panebianco, P. Salinas*

American Society  
of Echocardiography

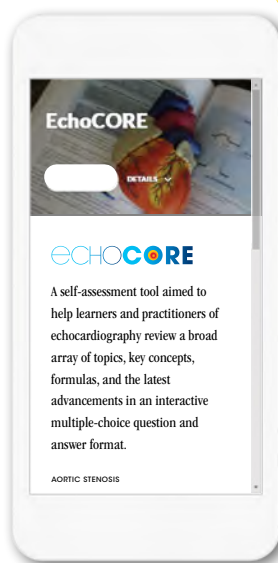
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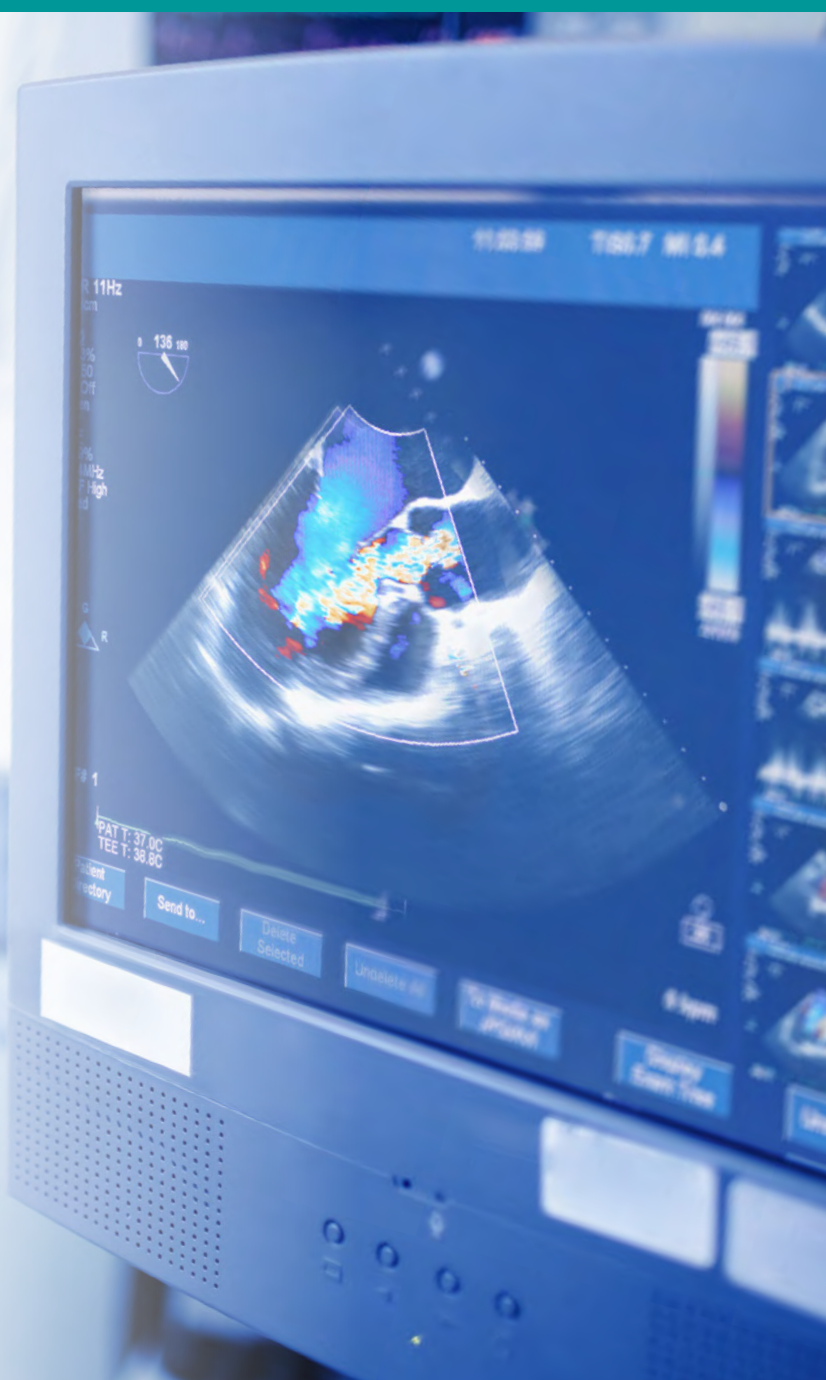
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- **One of the Southeast's most extensive echocardiogram programs**, with accredited echocardiography & nuclear imaging labs by the Intersocietal Accreditation Commission
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- **Sonographer career development pioneer**, offering advanced skillset training and a nationally renowned wellness program

Learn more about our approach at  
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MONDAY

# SCHEDULE AT A GLANCE

## MONDAY, JUNE 26

REGISTRATION OPEN 6:30 AM – 4:30 PM ~ ECHO EXPO OPEN 10:00 AM – 2:00 PM

ROOMS	MARYLAND	CHERRY BLOSSOM	WILSON A	WILSON BCD	ANNAPOLIS	BALTIMORE 3-5
7:00 – 7:50 AM		<b>R</b> Cases: Foundational Congenital Teaching	<b>R</b> Cases: Foundational Adult Teaching	<b>R</b> Abstracts: Artificial Intelligence and Machine Learning	<b>R</b> Cases: Head Scratchers	<b>R</b> Veterinary Abstract Showcase
8:00 – 10:00 AM	<b>S</b> <b>R</b> <b>ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION AND 24<sup>TH</sup> ANNUAL FEIGENBAUM LECTURE by Rima Arnaout, MD, FASE – Maryland</b>					
10:00 – 10:30 AM	<b>REFRESHMENT BREAK: VISIT THE ECHO EXPO AND POSTERS</b>					
10:30 – 11:45 AM	<b>IE</b> Newer Structural Interventions Guided by Echocardiography	<b>MM</b> <b>R</b> The Pyramid of Endocarditis Imaging in 2023	<b>PC</b> Coronary Anomalies: Imaging Challenges and Risk Stratification	<b>C</b> Tiny Bubbles	<b>P</b> Aortic Aneurysmal Disease and Acute Aortic Syndromes	Echo Lab Medical and Technical Directors Forum (10:30 AM – 12:00 PM)
11:45 AM – 1:15 PM	<b>LUNCH BREAK: VISIT THE ECHO EXPO</b>					
1:15 – 2:30 PM	 Clinical Pathologic Conference: Case Record of the Massachusetts General Hospital (1:15 – 2:45 PM)	<b>MM</b> When Tumor is the Rumor, Tissue is the Issue	<b>F</b> <b>R</b> 3D Imaging	<b>PC</b> <b>R</b> Year In Review and Research Highlights	<b>A</b> <b>MM</b> <b>R</b> Multimodality Imaging: Variants of Tetralogy of Fallot through Lifespan	<b>IE</b> Interventional Echocardiography: Building a New Subspecialty
2:30 – 3:00 PM	<b>REFRESHMENT BREAK</b>					
3:00 – 4:30 PM		<b>F</b> <b>M</b> <b>R</b> Strain Imaging: From Basics to Beyond	<b>PC</b> Decision-Making Challenges in Biventricular Repair	<b>I</b> Pericarditis and Pericardial Imaging	<b>IE</b> Advanced Intra-Procedural Guidance of Structural Heart Interventions	

**ACHD (A)**   **CIRCULATION (C)**   **CRITICAL CARE (CC)**   **EARLY CAREER (EC)**   **IMAGING FUNDAMENTALS (F)**   **INNOVATION/TECHNOLOGY (IT)**  
**INTERVENTIONAL ECHO (IE)**   **ISCHEMIA (I)**   **MULTIMODALITY (MM)**   **MYOCARDIUM/FUNCTION (M)**   **PEDIATRIC/CONGENITAL (PC)**   **PERIOPERATIVE (P)**  
**POINT OF CARE (POC)**   **RESEARCH (R)**   **SPECIAL SESSIONS (S)**   **VALVES & STRUCTURAL HEART DISEASE (V)**

Schedule subject to change. For detailed information, please download the ASE Courses app.

# SCHEDULE AT A GLANCE

## MONDAY, JUNE 26

REGISTRATION OPEN 6:30 AM – 4:30 PM ~ ECHO EXPO OPEN 10:00 AM – 2:00 PM					
ROOMS	ARENA IN THE ECHO EXPO	BALTIMORE 1	BALTIMORE 2	DIY ACQUISITION* CHESAPEAKE 7-9	LEARNING LAB* CHESAPEAKE A-C
7:00 – 7:50 AM		<b>R</b> Abstracts: Practice Improvement	Guideline Review: Adult Cardiac Sonographer Performing Echocardiography to Screen for Critical Congenital Heart Disease in the Newborn (7:15 – 7:45 AM)		
8:00 – 10:00 AM				Vascular (9:00 – 9:50 AM)	3D Pediatric Echocardiography
10:00 – 10:30 AM	<b>IT</b> ABC on Imaging for TAVI Valve Sizing (10:00 – 10:45 AM)				
10:30 – 11:45 AM		Guideline Review: Non-Invasive Imaging in Coronary Syndromes (10:30 – 11:00 AM)	Guideline Review: Recommendations for Performance of the Fetal Echocardiogram (10:30 – 11:00 AM)	POCUS (11:00 – 11:50 AM)	Pediatric Strain Echocardiography (10:30 AM – 12:00 PM)
12:00 PM – 1:15 PM	<b>S R</b> Moderated Poster Session 2				

**ACHD (A)**   **CIRCULATION (C)**   **CRITICAL CARE (CC)**   **EARLY CAREER (EC)**   **IMAGING FUNDAMENTALS (F)**   **INNOVATION/TECHNOLOGY (IT)**  
**INTERVENTIONAL ECHO (IE)**   **ISCHEMIA (I)**   **MULTIMODALITY (MM)**   **MYOCARDIUM/FUNCTION (M)**   **PEDIATRIC/CONGENITAL (PC)**   **PERIOPERATIVE (P)**  
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Schedule subject to change. For detailed information, please download the ASE Courses app.

**\*DIY Acquisition and Learning Labs are ticketed events and require an additional fee. Please see the Registration Desk for availability.**

# MONDAY, JUNE 26 SCHEDULE

7:00 AM – 7:50 AM

## Cases: Foundational Congenital Teaching Cases – Cherry Blossom

Opportunity for authors of high scoring case submissions to deliver oral presentations highlighting classic congenital cases or imaging findings.

*Chairs: S. Blissett, M. Wasserman*

### Surgical Melody Valve for Left Atrioventricular Valve Disease in an Infant with Complete Atrioventricular Septal Defect

*K. Lipps*

### The Sword and the Crown: Echocardiography for the Detection of a Rare Combination of Congenital Heart Disease

*O. Akingbade*

### Echocardiography for the Detection of a Rare Adult Presentation of Congenital Heart Disease

*S. Mazzone*

### Importance of Multimodality Imaging in the Diagnosis of Left Ventricular Non-Compaction Cardiomyopathy with Ventricular Aneurysm

*M. Shehadeh*

## Discussion

7:00 AM – 7:50 AM

## Cases: Foundational Adult Teaching Cases – Wilson A

Opportunity for authors of high scoring case submissions to deliver oral presentations highlighting classic adult cases or imaging findings.

*Chairs: G. Huang, G. Pressman*

### Importance of Echocardiographic Imaging in a Patient with Amyloidosis

*C. Merrin*

### Cheyne-Stokes Breathing and Mitral Regurgitation

*A. Jerman*

### Using Ultrasound Enhancing Agent and Collaboration Live to Confirm Right Ventricle Perforation

*S. Lubowicki*

### The Critical Role of Echocardiography in Cryptogenic Stroke Evaluation

*J. Peterson*

## Discussion

7:00 AM – 7:50 AM

## R Abstracts: Artificial Intelligence and Machine Learning – Wilson BCD

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work.

*Chairs: E. Andrikopoulou, A. Pearlman*

### Automated Echocardiographic Detection of Heart Failure with Preserved Ejection Fraction Using Artificial Intelligence

*P. Pellikka*

### Fully Automated Echocardiographic Estimation of Right Atrial Pressure

*G. Zamzmi*

### Enhancement of Left Ventricular Ejection Fraction with Endocardial Viability Ratio Trajectories Using Machine Learning Improves Prediction of Clinical Outcomes in Heart Failure

*J. Lamp*

### Automated Transcranial Doppler Ultrasound Coupled with A Deep Learning Algorithm for Identification and Grading of Patent Foramen Ovale

*C. Thibeault*

## Discussion

7:00 AM – 7:50 AM

## R Cases: Head Scratchers – Annapolis

Opportunity for authors of high scoring case submissions to deliver oral presentations detailing complex scenarios.

*Chairs: A. Boyle, J. Sheehan*

### Incidentally Discovered *Forme Fruste* Cor Triatriatum Sinister: To Resect, or Not to Resect?

*J. Buck*

### The Use of Multimodality Imaging to Diagnose a Rare Complication: Intramyocardial Dissection

*K. Saleb*

### Multimodality Imaging Showing a Huge Invasive Thymoma Extending into Right Atrium Through Superior Vena Cava

*W. Zuo*

### Left Atrial Septal Pouch Thrombus Prohibiting Direct-Current Cardioversion in a Patient with Tachycardia-Induced Cardiomyopathy

*K. Dhar*

## Discussion

**7:00 AM – 7:50 AM**

**R Veterinary Abstract Showcase – Baltimore 3-5**

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work.

*Chairs: E. Côté, S. Rosenthal*

**2D Quantitative Methods for Evaluation of Mitral Regurgitation Severity in Canine Degenerative Mitral Valve Disease**

*B. Del Nero*

**Feasibility Clinical Study of Transcatheter Edge-to-Edge Repair in Dogs with the Canine Mitral V-Clamp Device**

*B. Potter*

**Oral Rapamycin Therapy in Feline Subclinical Hypertrophic Cardiomyopathy: Results of the RAPACAT Clinical Trial**

*J. Stern*

**Transseptal Puncture in the Horse Using Intracardiac Ultrasound Guidance: First Results with Follow-Up**

*I. Vernemmen*

**Discussion**

**7:00 AM – 7:50 AM**

**S Abstracts - Practice Improvement – Baltimore 1**

Opportunities for authors of high scoring abstracts to deliver oral presentations of their work.

*Chair: M. Mukherjee, M. Park*

**Maintaining Skills with Visual Estimation of Ejection Fraction Requires Regular Visual “Recalibration”**

*T. Johnson*

**Establishing an Exercise Stress Echocardiography Program in a Pediatric Heart Center: Review of the Initial Year**

*P. Doctor*

**Low Mechanical Index Reduces Detection of Pulmonary Edema Using Echo Devices: Balancing Safety with Accuracy and Outcomes**

*D. Mittelstein*

**A Pathway for Improving Performance and Interpretation of Strain in a Pediatric Echocardiography Laboratory**

*S. Patel*

**Discussion**

**7:15 AM – 7:45 AM**

**Guideline Review: Adult Cardiac Sonographer Performing Echocardiography to Screen for Critical Congenital Heart Disease in the Newborn – Baltimore 2**

Review the guidelines with the authors and get your questions answered!

*B. Landeck, M. Wasserman*

**8:00 AM – 10:00 AM**

**S R Arthur E. Weyman Young Investigator’s Award Competition and 24<sup>th</sup> Annual Feigenbaum Lecture – Maryland**

*Chair: J. Kirkpatrick*

*Judges: J. Lindner, S. Little, L. Lopez, S. Petersen, V. Sachdev, K. Yamamoto*

**Welcome and Introduction**

*J. Kirkpatrick*

**YIA-1: Assessing the Accuracy of Fetal Aortic Valve Range Phantom Measurements**

*S. Collins*

**YIA-2: Noninvasive Assessment of Left Ventricular Filling Pressure Using Machine Learning Derived Phasic Left Atrial Strain**

*M. Gruca*

**YIA-3: Incidence, Risk Factors, and Outcomes of Atrial Functional Mitral Regurgitation in Atrial Fibrillation and Sinus Rhythm**

*J. Naser*

**YIA-4: Deep Learning Analysis of Echocardiographic Images for Automated Classification of Regional Wall Motion**

*J. Slivnick*

**Concluding Remarks**

*J. Kirkpatrick*

**Introduction to the Feigenbaum Lecturer**

*J. Kirkpatrick*

**Feigenbaum Lecture: ChatGPT Helped Me Write This Talk Title, But Can It Read an Echocardiogram?**

*R. Arnaout*

**Recognition of Feigenbaum Lecture, Presentation of Plaque, Concluding Remarks**

*J. Kirkpatrick*

**Introduction of ASEF Research Award Lecture**

*J. Lindner*

**ASEF Research Lecture: Heart Share the Foundation for the National Institutes of Health**

*V. Sachdev*

# MONDAY, JUNE 26 SCHEDULE

## ASEF Lecturer Concluding Remarks

*J. Lindner*

## Recognition of the TOMTEC Innovator Research Travel Grant Recipient, Presentation of Plaque

*R. Baumann*

## Presentation of YIA Plaques and Winner Announcement

*J. Kirkpatrick*

## 8:00 AM – 10:00 AM

### Learning Lab: 3D Pediatric Echocardiography – Chesapeake A-C

*(Ticketed Event. Additional Fee Required.)*

Focus on the architecture of structural heart disease using 3D workstations to learn cropping of simple and more complex lesions for pre-procedural planning.

*Chair: P. Jone*

### Basic Cropping Tools

*C. Polsen*

### Atrioventricular Septal Defect: Focus on Preop and Postop Common Atrioventricular Valve

*P. Jone*

### Mitral and Tricuspid Valve Abnormalities

*D. Aly*

### Complex Left Ventricular Outflow Tract Obstruction

*D. Truong*

### Double Outlet Right Ventricle, Complex Ventricular Septal Defect

*N. Khoo*

## 9:00 AM – 9:50 AM

### DIY Acquisition: Vascular– Chesapeake 7-9

*(Ticketed Event. Additional Fee Required.)*

Participants will have the opportunity to perform and observe ultrasound imaging of the carotid artery, abdominal aorta, and lower extremity veins. B-mode, color Doppler, and spectral Doppler techniques.

*Chair: M. Jankowski*

### Carotid

*C. Mitchell, T. Thompson*

### Abdominal Aorta

*A. Brown, M. Cordio*

### Venous Imaging (Rule Out DVT)

*K. Keuster*

## 10:00 AM – 10:45 AM

### IT ABC on Imaging for TAVI Valve Sizing – Arena

Chalk Talk: By the end of this session, you will have a deep dive into the role of multimodality imaging in the Heart team selecting patients for TAVR.

*K. Branch, R. Hahn*

## 10:00 AM – 10:50 AM

### DIY Acquisition: POCUS – Chesapeake 7-9

*(Ticketed Event. Additional Fee Required.)*

POC bedside vascular ultrasound techniques for the cardiologist and cardiology fellow. POCUS/CCE includes rapid identification of abdominal aortic aneurysm, deep venous thrombosis, vascular access complications after coronary angiogram (radial/femoral), lower extremity arterial flow assessment in the advanced mechanical support device patient. All participants registered for this session will get hands-on scanning at each station.

*Chair: C. Mitchell*

### Lung Ultrasound: Interpretation of Pulmonary Edema/Pneumothorax

*N. Panebianco*

### Hepatic Veins and Portal Vein Doppler

*J. Diaz-Gomez, P. Salinas*

### Abdominal POCUS

*R. Liu*

### Gastric POCUS

*R. Dversdal*

### Diaphragmatic POCUS

*P. Mayo*

## 10:30 AM – 11:00 AM

### Guideline Review: Non-Invasive Imaging in Coronary Syndromes – Baltimore 1

Review the guidelines with the authors and get your questions answered!

*V. Delgado*

## 10:30 AM – 11:00 AM

### Guideline Review: Recommendations for Performance of the Fetal Echocardiogram – Baltimore 2

Review the guidelines with the authors and get your questions answered!

*A. Moon-Grady*

**10:30 AM – 11:45 AM**

**IE Newer Structural Interventions Guided by Echocardiography – Maryland**

This session with focus on advanced imaging for uncommon structural heart disease interventions.

*Chairs: W. Katz, F. Silvestry*

**Debate: Will TMVR Become the Preferred Intervention for Functional Mitral Regurgitation?**

*Pro: J. Thaden*

*Con: F. Asch*

**Discussion**

**How to Attack MAC**

*N. Quader*

**Tricuspid Regurgitation: T-TEER, TVR (Replacement) and Beyond**

*F. Silvestry*

**Closing Small Spaces: Case-Based Learnings for Para-valvular Leak and Pseudoaneurysm Closure**

*M. Scherer*

**Entering the Yellow Zone: Case-Based Learnings for M-TEER**

*W. Katz*

**Mixed Valve Disease: Concomitant or Sequential Therapy?**

*R. Miyasaka*

**When Should I Close the Latrogenic Atrial Septal Defect?**

*F. Pinto*

**When AngioVac Sucks: Case-Based Mass Extraction for Management of Endocarditis**

*M. Lebehn*

**10:30 AM – 11:45 AM**

**MM R The Pyramid of Endocarditis Imaging in 2023 – Cherry Blossom**

This session highlights the current role of multimodality imaging in the management of endocarditis. The session will focus on echo as well as CT, FDG-PET, and WBC scanning.

*Chairs: M. Parker, S. Shah*

**Session Introduction**

*M. Parker*

**Use of Transesophageal Echocardiography to Guide Percutaneous AngioVac Embolectomy of Subvalvular Tricuspid Endocarditis**

*Z. Meili*

**The Base: How to Leverage Clinical Criteria, TTE, TEE**

*S. Kort*

**The Next Level: FDG-PET for Prosthetic Valves and Implantable Devices**

*R. Quaife*

**The Next Level: White Blood Cell Scanning for Pocket Infections, LVAD Infections**

*J. Bourque*

**The Next Level: What Is the Role of Cardiac CT?**

*P. Patil*

**Question & Answer**

**10:30 AM – 11:45 AM**

**PC Coronary Anomalies: Imaging Challenges and Risk Stratification – Wilson A**

This session offers a guided approach to imaging the coronary arteries and a better understanding of the impact of coronary anomalies on surgical decision in congenital heart disease.

*Chairs: M. Brook, C. Dunbar*

**Using a Stepwise Approach to Coronary Artery Imaging**

*B. Richards*

**Incidental Findings: When Are They a Concern?**

*S. Srivastava*

**Impact of Coronary Anatomy in Surgical Approaches for Congenital Heart Disease**

*B. Soriano*

**A Multimodality Approach to Risk-Stratification for Coronary Anomalies**

*S. Shah*

**Comprehensive Coronary Programs: The Way of the Future?**

*S. Molossi*

**Question & Answer**

**10:30 AM – 11:45 AM**

**C Tiny Bubbles... – Wilson BCD**

A review of basic as well as novel uses of contrast and agitated saline.

*Chair: J. Lindner*

**Agitated Saline: Basics**

*L. Friend*

**Agitated Saline: Novel/Advanced**

*S. Bernard*

**Ultrasound Enhancing Agents: Basics**

*T. Forshaw*

**Ultrasound Enhancing Agents: Novel/Advanced**

*S. Mulvagh*

**Ultrasound Enhancing Agents: Clinical Applications**

*B. Davidson*

**Question & Answer**

# MONDAY, JUNE 26 SCHEDULE

10:30 AM – 11:45 AM

**P** **Aortic Aneurysmal Disease and Acute Aortic Syndromes – Annapolis**

Perioperative imaging and management of acute aortic syndrome and in-depth discussion of associated valvular and sinus pathology.

*Chairs: K. Howard-Quijano, R. Mankad*

**Multimodality Imaging in Aneurysmal Disease and Acute Aortic Syndromes**

*Z. Wang*

**Echocardiographic Elucidation of Mechanisms of Aortic Regurgitation in Type A Dissection**

*B. Arora*

**Imaging for Sinus of Valsalva Aneurysms**

*B. Xu*

**Cased-Based Complications and Management of Acute Aortic Dissection**

*R. Vadlamudi*

**Perioperative Imaging Keys for Success in Aortic Surgery**

*R. Mankad*

**Question & Answer**

10:30 AM – 11:45 AM

**S** **Echo Lab Medical and Technical Directors Forum – Baltimore 3-5**

Join us to discuss pain points in running an echo lab. There will be a roundtable discussion with echo lab directors. Topics include Improving Workflow Throughout the Echo Lab; Sonographer Career Paths; and Echoes Outside of the Lab (POCUS, Critical Care, ED): Who Oversees Quality?

*Chair: J. Hung*

*Panelists: A. Hays, M. Park, S. Nagueh, G. Strachan, K. Thorson*

**Introduction of Moderator and Panel**

*J. Hung*

**Registry**

*J. Strom*

**Membership**

*K. Maganti*

10:30 AM – 12:00 PM

**Learning Lab: Pediatric Strain Echocardiography – Chesapeake A-C**

*(Ticketed Event. Additional Fee Required.)*

Hands-on measurement of left ventricular, right ventricular, and left atrial strain using normal and abnormal case examples.

*Chair: D. Forsha*

*Lab Assistant: A. Doucet*

**Left Ventricular Strain**

*D. Forsha*

**Right Ventricular Strain**

*D. Aly*

**Left Atrial Strain**

*T. Doan*

**How to Trouble Shoot Strain Analysis**

*R. France*

12:00 PM – 1:15 PM

**S R** **Moderated Poster Session 2 – Arena**

*Chairs: K. Addetia, J. Strom*

**Left Atrial Stiffness and Strain are Novel Indices of Left Ventricular Diastolic Function in Children with Multisystem Inflammatory Syndrome in Children Due to COVID-19**

*D. Matsubara*

**Scavenger Receptor-A Targeted Nanobubbles-Induced Sonodynamic Therapy Ameliorates Atherosclerosis by Mediating Macrophages Polarization**

*Q. Zhou*

**Validation of Echocardiographic Left Atrial Stiffness Against Left Atrial Operating Chamber Stiffness by Cardiac Catheterization**

*I. Mathias*

**The Prognostic Implication of Left Ventricular Ejection Fraction Reduction After Transcatheter Edge-to-Edge Repair for Primary Mitral Regurgitation**

*A. Shechter*

**Association between Tricuspid Annulus and Effective Regurgitant Orifice Dynamics in Atrial and Ventricular Types of Tricuspid Regurgitation**

*F. Meng*

**3D Tricuspid Annular Dimension Predicts In-hospital Adverse Events of Isolated Tricuspid Valve Surgery**

*Y. Liu*



## Associated Factors of Atrial Functional Tricuspid Regurgitation Severity: A Comprehensive 3D Echocardiographic Study

*K. Kim*

## Novel Right Ventricular 3D Strain Parameters Predict In-hospital Adverse Events of Isolated Tricuspid Valve Surgery

*Y. Wu*

## High Framerate Contrast-Enhanced 4D Echocardiography for Right Ventricle Flow Visualization

*A. Kheradvar*

**1:15 PM – 2:45 PM**

## **S** Clinical Pathologic Conference: Case Record of the Massachusetts General Hospital – Maryland

*Chairs: D. Dudzinski, J. Hung*

*Expert Panel: S. Khurshid, R. Levine, Y. Nagata, A. Tower-Radar*

### Introduction

*D. Dudzinski*

### Case History

*S. Khurshid*

### Differential Diagnosis

*F. Delling*

### Summary

*J. Kirkpatrick*

### Wrap Up with Question & Answer

*D. Dudzinski*

**1:15 PM – 2:30 PM**

## **MM** When Tumor is the Rumor, Tissue is the Issue – Cherry Blossom

This session will take the audience through a fascinating cardiac mass case and showcase the significant contributions of imaging modalities such as CT, PET-CT, CMR.

*Chairs: J. Aragam, J. Liu*

### Session Introduction

*J. Aragam*

## TTE Case of an Incidental Cardiac Mass (Jaw-Dropping Fascinoma) and Differential Diagnosis

*A. Prado*

## Maximizing Clues from TTE/TEE: Role of Ultrasound Enhancing Agents

*E. Andrikopoulou*

## Cardiac MRI Strengths and Limitations

*A. Patel*

## Cardiac CT/PET CT Strengths and Limitations

*J. Lopez-Mattei*

### Question & Answer

**1:15 PM – 2:30 PM**

## **F R** 3D Imaging – Wilson A

This session aims to help sonographers and echocardiographers better understand optimization of imaging and the utility of 3D echo.

*Chairs: C. Frye, N. Kelly*

### Session Introduction and Poll Introduction

*C. Frye*

### How to Optimize My 3D Image for the Ventricles

*S. Walling*

### How to Optimize My 3D Image for the Valves

*I. Kwan*

### Lost in Space: How to Get Your Bearings in 3D

*N. Kelly*

### Multimodality Imaging Correlation for 3D

*W. Tsang*

### 3D in the Interventional Lab for the Sonographer

*M. Yamat*

## Detailed 3D Echocardiographic Phenotyping of Changes in Left Ventricular Systolic Function Following Contemporary Radiation Therapy for Breast Cancer, Lung Cancer, and Lymphoma

*M. Barrett*

### Question & Answer

**1:15 PM – 2:30 PM**

## **PC R** Year In Review and Research Highlights – Wilson BCD

Top five abstracts submitted will be presented along with a review of highlighted science over the past year.

*Chairs: J. Robinson, R. Sachdeva*

### Year in Review

*S. Srivastava*

### PRIISM

*K. Farooqi*

## Mitral Annular Disjunction in Pediatric Marfan Syndrome: An Echocardiographic and Cardiac Magnetic Resonance Study

*A. Iturralde*

# MONDAY, JUNE 26 SCHEDULE

## Assessing the Accuracy of Fetal Aortic Valve Range Phantom Measurements

*S. Collins*

## A Prospective Study of a Novel Artificial Intelligence-Based Software Package for Automated Extraction and Upscaling of Standard 2D Views from 3D Data Sets in Pediatrics

*D. Aly*

## Comprehensive Assessment of Effect of Transcatheter Device Closure of Patent Ductus Arteriosus on Left Ventricle Function

*G. Kadiu*

## Question & Answer

## 1:15 PM – 2:30 PM

### **A** **MM** **R** **Multimodality Imaging: Variants of Tetralogy of Fallot through Lifespan – Annapolis**

This combined adult congenital heart disease and multimodality imaging session walks through a multimodality approach to imaging patients with Tetralogy of Fallot through their lifespan.

*Chairs: A. Mediratta, N. Soni-Patel*

#### Introduction

*N. Soni-Patel*

#### Echo Imaging Neonates Surgical Vs Percutaneous Palliation

*J. Robinson*

#### Multimodality Imaging for Surgical Planning in Infancy

*U. Truong*

#### Leaking Pulmonary Valve in Adulthood - Imaging to Understand Hemodynamics (4D MRI)

*A. Mediratta*

#### Sizing for PVR: Utilization of CT and MRI

*H. Wilson*

#### Intraprocedural Imaging: Examples and Lessons Learned

*A. Stefanescu*

#### Tête-à-tête: Tetralogy of Fallot Type Double Outlet Right Ventricle in Thoracopagus Twins

*D. Barris*

## Question & Answer

## 1:15 PM – 2:30 PM

### **IE** **Interventional Echocardiography: Building a New Subspecialty – Baltimore 3-5**

This session is intended to give an overview of the background of interventional echo, current challenges and opportunities for the specialty. It will also cover the latest training guideline as well as the evolution of the IE SIG into a Council.

*Chairs: S. Little, V. Rigolin*

*Panelists: M. Brady, K. Collins, R. Hahn*

#### Session Introduction

*S. Little*

#### Introducing the Interventional Echocardiography Council

*M. Saric*

#### Guidelines for Training in Interventional Echocardiography: Competencies Defined

*E. Garcia-Sayan*

#### Challenging Case #1

*N. Quader*

#### “Breaking the ICE:” Challenges and Opportunities of a New Modality

*T. Chen*

#### Interventional Echocardiography: Anesthesiologist’s Perspective

*G. Mackensen*

#### Challenging Case #2

*R. Sheu*

## Question & Answer

## 3:00 PM – 4:30 PM

### **F** **M** **R** **Strain Imaging from Basic to Beyond – Cherry Blossom**

Attend this session to up your strain game and address the technical aspects as well as the future of strain imaging.

*Chairs: N. Akhter, J. Hill*

#### Session Introduction

*N. Akhter*

#### Pretest: Strain What Do We Know?

*J. Hill*

#### Imaging for Strain: Tips and Tricks for Acquisition

*N. Edwards*

#### Left Ventricular/Right Ventricular Strain: How to Interpret

*R. Thamman*

#### Strain Pattern Recognition (Case Based)

*A. Armour*

## Strain for Cardio-Oncology

*J. Lopez-Mattei*

### The Diagnostic Value of Left Atrial Reservoir Strain during Exercise in Heart Failure with Preserved Ejection Fraction

*T. Shiina*

### What's Next for Strain?

*B. Hoit*

### Post Test: What Did We Learn?

*J. Hill*

### Question & Answer

## 3:00 PM – 4:30 PM

### **PC** Decision-Making Challenges in Biventricular Repair: Cased Based Learning – Wilson A

Using case-based presentation and discussion, this session will highlight various anatomic factors that play an important role in decision making for complex biventricular repairs.

*Chairs: G. Ensing, W. Lai*

### Straddling Valve

*N. Khoo*

### Remote Ventricular Septal Defect

*A. Parthiban*

### Systemic and Pulmonary Venous Confounders

*T. Doan*

### Ventricular Hypoplasia

*J. Robinson*

### Question & Answer

## 3:00 PM – 4:30 PM

### **I** Pericarditis and Pericardial Imaging – Wilson BCD

This session offers a practical, multimodality look at pericardial imaging.

*Chairs: A. Barac, S. Songmuang*

### How to Perform a Thorough Evaluation of the Pericardial Hemodynamics: Kahoot Quiz

*A. Brown*

### Echo and Alternative Modalities for Pericardial Assessment

*S. Songmuang*

### How Imaging Is Used to Guide Treatment of Pericarditis

*A. Klein*

### Case Based Presentation: Interesting Cases from Around the World

*S. Parashar*

### How to Evaluate Patients on Immune Checkpoint Inhibitors: Case and Discussion

*J. Liu*

## 3:00 PM – 4:30 PM

### **IE** Advanced Intra-Procedural Guidance of Structural Heart Interventions – Annapolis

This session is intended to give a more in-depth look at procedural guidance of structural heart disease interventions, including tips and tricks to optimize procedural results.

*Chairs: V. Argarwal, M. Vannan*

### Session Introduction

*M. Vannan*

### Case 1: Difficult Transseptal Puncture

*S. Tomlinson*

### Tips and Tricks for Guiding Transseptal Puncture

*Discussant: R. Jain*

### Case 1: Resolution

*S. Tomlinson*

### Case 2: Mitral Transcatheter Edge-To-Edge Repair

*R. Bae*

### Tips and Tricks for Guiding Mitral Transcatheter Edge-To-Edge Repair

*Discussant: F. Silvestry*

### Case 2: Resolution

*R. Bae*

### Case 3: Difficult Tricuspid Procedure

*E. Yucel*

### Tips and Tricks for Guiding Transcatheter Tricuspid Valve Interventions

*Discussant: E. Ho*

### Case 3: Resolution

*E. Yucel*

### Panel Discussion

# MONDAY, JUNE 26 SCHEDULE

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## Case 4: Difficult Paravalvular Leak Closure

*C. Rivas*

## Tips and Tricks for Guiding Paravalvular Leak Closure

*Discussant: E. Gill*

## Case 4: Resolution

*C. Rivas*

## Tips and Tricks for Guiding Left Atrial Appendage Occlusion

*T. Chen*

## Panel Discussion

## Intracardiac Echocardiography: State of Field and the Role of the Echocardiographer

*R. Hahn*

## Question & Answer



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Echo practitioners of all specialty types who demonstrate proficiency and dedication to the field of cardiovascular ultrasound may apply to be a Fellow of the American Society of Echocardiography (FASE). The FASE credential recognizes dedicated ASE members with an extraordinary commitment to the field of cardiovascular ultrasound.

**Visit the ASE Headquarters Booth #423 to learn more about applying for FASE.**



**Alexandra Gardner, RDCS (AE, PE), FASE**

*Sarasota Memorial Health Care System*



Being a FASE has allowed me to meet so many highly intelligent medical professionals from all over to collaborate with and expand my knowledge of the field.



**José L. Díaz-Gómez, MD, FCCM, FASE, NCC (UCNS)**

*Baylor St. Luke's Medical Center*



The FASE credential allows me to collaborate effectively in critical care echocardiography (CCE)/POCUS with the most diverse and talented colleagues representing many medical societies. A distinct blend between critical care medicine and CCE/POCUS!



**Pei-Ni Jone, MD, FASE**

*Children's Hospital Colorado, University of Colorado Anschutz Medical Campus*



As a FASE member, I am committed to the innovation in the field of ultrasound and love collaborating with colleagues around the world to advance the field of echocardiography.



**Muhamed Saric, MD, PhD, FASE**

*New York University*



Being a FASE allows me to learn from and share my knowledge of the amazing world of 3D echocardiography with my colleagues from around the world.



**Lucy M. Safi, DO, FASE**

*Mount Sinai*



Being a FASE highlights my commitment to education and quality in the field of echocardiography. As a FASE I am a member of a community that focuses on education, quality and shows commitment in the field of echocardiography.

## NEW THIS YEAR: FASE Lounge is in the Echo Expo

Saturday, June 24 ..... 12:00 PM – 6:30 PM  
 Sunday, June 25 ..... 10:00 AM – 6:00 PM  
 Monday, June 26 ..... 10:00 AM – 2:00 PM



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# ASE IRT

Partners in Innovation

*Special thanks to our  
Industry Roundtable  
Partners.*

Visit our IRT Partners  
in the Echo Expo on the Atrium Level  
Prince George's Exhibition Hall A & B



BOOTH # 634



BOOTH # 603



BOOTH # 328 & 636



BOOTH # 312



BOOTH # 405



BOOTH # 523



BOOTH # 322



BOOTH # 103



BOOTH # 302



BOOTH # 505

## PHYSICIAN LIFETIME ACHIEVEMENT AWARD



Rebecca Hahn, MD, FASE, has been named the 2023 Physician Lifetime Achievement Award recipient. Dr. Hahn has led the way as interventional echocardiography has evolved over the last 20 years. This includes leading creative applications of novel 3D TEE imaging for valve dysfunction, followed by a

global effort to define the role of echo imaging for TAVI, then highly nuanced teaching of MitraClip™ and other mitral procedures, and teaching about tricuspid valve imaging and intervention. At each major technical and procedural advance, Dr. Hahn has been at the front line defining the field and teaching everyone how to follow. She is currently the Director of Interventional Echocardiography, Center for Interventional Vascular Therapy at Columbia University in New York, NY, and Chief Scientific Officer for the Cardiovascular Research Foundation. Dr. Hahn has served on numerous ASE committees, task forces, and writing groups as well as the Board of Directors and volunteered for ASE Foundation Global Outreach events. Dr. Hahn will be recognized for this award at the ASE Foundation Research Awards Gala on Sunday.

The ASE Lifetime Achievement Award recognizes individuals who have had a lifetime of outstanding achievements in the field of cardiovascular ultrasound, and have served as role models through service, research, and teaching. These individuals have a career in cardiovascular ultrasound spanning at least 25 years and are recognized at local, national, and international levels.

## RICHARD POPP EXCELLENCE IN TEACHING AWARD



Recognized for her profound knowledge in cardiology and echocardiography and as a selfless leader, mentor and teacher, **Cynthia Taub, MD, MBA, FASE**, has been named the 22<sup>nd</sup> annual recipient of the Richard Popp Excellence in Teaching Award. Dr. Taub has mentored over 100 people during her career and been recognized with three other teaching

awards including the Department of Medicine Teaching Award, Dartmouth-Hitchcock Medical Center, in 2021; the Cardiology Fellowship Program Director's Teacher of the Year Award, Division of Cardiology, Montefiore Medical Center, in 2015; and the Teacher of the Year, Division of Cardiology, Montefiore Medical Center, in 2009. Dr. Taub is currently Section Chief in Cardiovascular Medicine Dartmouth-Hitchcock Medical Center and Professor of Medicine Geisel School of Medicine at Dartmouth, Lebanon, NH. This ASE teaching award is given in honor of the Society's second president, Richard L. Popp, MD, FASE, and recognizes physicians who epitomize the ideal qualities possessed by a mentor and role model. Dr. Taub will be recognized for this award at the ASE Foundation Research Awards Gala on Sunday.

## EXCELLENCE IN TEACHING IN PEDIATRICS AWARD



**Peter Frommelt, MD, FASE**, is being honored as the 2023 recipient of the Excellence in Teaching in Pediatrics Award. For over 30 Dr. Frommelt served as the Director of Pediatric Echocardiography at Children's Wisconsin in Milwaukee, WI. He started both the pediatric cardiology fellowship program and the 4<sup>th</sup> year non-invasive imaging fellowship at the

Medical College of Wisconsin and served as the program director of both of these programs. Dr. Frommelt's reputation for excellence and efficiency made him a resource to leaders in the field around the world. He has been a part of many landmark multi-institutional research studies for the pediatric heart network. Dr. Frommelt is the recipient of many teaching awards and has mentees who contribute greatly to the advancement of pediatric cardiology. Established in 2005, this biennial award recognizes ASE members for their exceptional commitment and skill mentoring students, serving as a role model for the profession, and teaching pediatric echocardiography. Dr. Frommelt will be recognized for this award at the ASE Foundation Research Awards Gala on Sunday.

## CARDIOVASCULAR SONOGRAPHER DISTINGUISHED TEACHER AWARD



**Richard Palma, BS, ACS, RCCS, RCS, RDCS, FASE**, is the 2023 recipient of the Cardiovascular Sonographer Distinguished Teacher Award. Mr. Palma has an expert knowledge in echocardiography and concern that all learners understand the information he is presenting. His willingness to share his expertise and experiences to help advance in the

field of echocardiography is unmatched. Mr. Palma is a mentor and role model for both sonographers and physicians and a visionary for the profession of diagnostic medical sonography. He blends a love of teaching with a genuine love and dedication for his students. Mr. Palma is currently the Director and Clinical Coordinator of the Duke School of Medicine Cardiac Ultrasound Certificate Program, Durham, NC. This award is given every other year and recognizes an active sonographer instructor who is attentive to cardiovascular sonography professional values and who exhibits values of leadership and dedication to the field of echocardiography for past, current, and future cardiovascular sonographers. Mr. Palma will be recognized for this award at the ASE Foundation Research Awards Gala on Sunday.

## OUTSTANDING ACHIEVEMENT IN PERIOPERATIVE ECHOCARDIOGRAPHY AWARD



The 10<sup>th</sup> recipient of the Outstanding Achievement in Perioperative Echocardiography Award is **Madhav Swaminathan, MD, MMCI, FASE**. Dr. Swaminathan is recognized for his passion and enthusiasm for the specialties of anesthesiology and echocardiography. He is a highly regarded mentor who has over 100 publications in peer-reviewed journals on the field of perioperative echocardiography. His inclusive approach to echocardiography has been instrumental in engaging not only sonographers and physicians, but also the next generation of perioperative echocardiographers. Dr. Swaminathan was the first anesthesiologist to deliver the Feigenbaum Lecture in 2015 and also to serve as ASE President, 2019-2020. He is currently a Cardiac Anesthesiologist at Duke Medical Center and Professor of Anesthesiology and Vice Chair of Faculty Affairs at Duke University, Durham, NC. The Council recognizes an individual who has made significant clinical, research, or educational contributions to the development of the field of perioperative echocardiography with the presentation of this award. Dr. Swaminathan will be recognized for this award at the ASE Foundation Research Awards Gala on Sunday.

## MENTORSHIP AWARD



The 2023 Mentorship Award recipient is **Allan Klein, MD, FASE**. Dr. Klein's exceptional commitment to mentorship has enabled him to help both physicians and sonographers navigate their careers, and increase their network and collaborations with peers. His mentees describe him as a great listener, generous, approachable, encouraging, and supportive. Dr. Klein has been actively involved with ASE for his entire career serving on many committees and task forces and as the ASE President 2016-2017. His deep understanding of the Society has allowed him to mentor research award finalists, committee chairs, board members, and ASE Leadership Academy members. Dr. Klein currently serves Staff Cardiologist, Heart and Vascular Institute, Director of the Center for the Diagnosis and Treatment of Pericardial Diseases, Cleveland Clinic, and Professor of Medicine Lerner College of Medicine Case Western University, in Cleveland, OH. This award recognizes a physician or sonographer who has demonstrated exceptional commitment to mentorship within ASE. Dr. Klein will be recognized for this award during the opening Plenary on Saturday.

## MERITORIOUS SERVICE AWARD



ASE is pleased to present **William Zoghbi, MD, FASE**, with the 2023 Meritorious Service Award, which recognizes individual members for their substantial and generous efforts to the Society's betterment. Dr. Zoghbi is a world-renowned teacher, researcher, and clinician in cardiology, echocardiography, and cardiac imaging. He has been actively involved with ASE for more than 30 years and served as president 2008-2009. Dr. Zoghbi is a sought-after mentor and has trained over 100 cardiology fellows in advanced cardiovascular imaging, many of whom now hold positions of leadership worldwide. He is a researcher in ischemic heart disease, myocardial function and hibernation, and is also known for his development of echocardiographic techniques to evaluate valvular disease. Dr. Zoghbi is the Elkins Family Distinguished Chair in Cardiac Health, Chairman of the Department of Cardiology at The Houston Methodist DeBakey Heart & Vascular Center, and Professor of Medicine at Weill Cornell Medical College and the Institute of Academic Medicine, Houston, TX. Dr. Zoghbi will be recognized for this award during the opening Plenary on Saturday.



## FRIDAY, JUNE 23

### ASE OPEN COUNCIL STEERING COMMITTEE MEETINGS

4:15 – 5:30 PM

ASE's six Councils will hold open steering committee meetings and networking events on Friday afternoon. These events provide attendees with the opportunity to learn about the Councils as they hold a brief business meeting followed by networking. If you are not currently a member of a Council, please plan to visit several and decide which will be a good match for helping you advance your career. Council membership is open to all active ASE members and is free. See the schedule details for meeting rooms and times.

### WELCOME RECEPTION AT BOBBY MCKEY'S DUELING PIANO BAR

6:00 – 9:30 PM

All attendees and exhibitors are welcome to join us for a Welcome Reception, where complimentary beer and wine, and hors d'oeuvres will be served, to kick off the ASE 2023 Scientific Sessions! The Welcome Reception will take place at Bobby McKey's Dueling Piano Bar, easy walking distance from the Gaylord National at 172 Fleet Street. This reception is for registered attendees only.

### SATELLITE SYMPOSIUM

5:30 – 7:00 PM

WILSON B-D

#### Utilizing Echocardiography in the Diagnosis of HCM: Fine-Tuning Your Approach for the New Era of HCM Management

Register at: [AnswersInCME.com/87276223](https://AnswersInCME.com/87276223)

Presented by Answers in CME

Supported by Bristol Myers Squibb

## SATURDAY, JUNE 24

### ASEF CARDIOVASCULAR CHALLENGE

ASEF BOOTH

MARYLAND BALLROOM LOBBY



Compete with your feet and get moving with the ASE Foundation Cardiovascular Challenge. Sign up to participate at the ASEF Booth in the Maryland Ballroom Lobby, then record your steps taken every day and log them at the booth. The top three steppers will win Amazon gift cards! The person with the most steps overall will receive \$200, second place will receive \$100, and the person with the third highest step count will receive \$75. The winners will be announced Monday, June 26, at 1:00 PM in the Echo Expo. Special thanks to our 2023 Cardiovascular Challenge sponsors, AGFA Healthcare, Bracco Diagnostics, Bristol Myers Squibb, Intersocietal Accreditation Commission (IAC), Mayo Clinic, Siemens Healthineers, and UltraSight.



### IMAGES FROM THE HEART PHOTOGRAPHS

Stop by the ASE Foundation Booth to view breath-taking photographs from previous year's curated exhibits. All photos on site are available to take home with a donation in the name of the photographer.

### STATE OF ASE, AWARDS PRESENTATION, FASE RECOGNITION, INCOMING PRESIDENT'S MESSAGE, AND 34<sup>TH</sup> ANNUAL EDLER LECTURE

8:00 – 10:00 AM

MARYLAND BALLROOM

Stephen Little, MD, FASE, ASE's president, will preside over a session to honor our 2023 award winners, new FASE and give an overview of ASE's accomplishments. Raymond Stainback, MD, FASE, ASE's Immediate Past President, will present "The Living History of Echocardiography for Mechanical Circulatory Support Devices" as the 34<sup>th</sup> Annual Edler Lecture. Dr. Stainback is Chief of Non-Invasive Cardiology at Texas Heart Institute at Baylor St. Luke's Medical Center and Associate Professor of Medicine at Baylor College of Medicine, Houston, Texas. He has practiced general cardiology at this facility and with Hall-Garcia Cardiology Associates at Baylor College of Medicine for over 20 years, where he also directed the echocardiography lab. Created in 1990, the annual Edler Lecture honors the founder of echocardiography, Dr. Inge Edler.

## SONOGRAPHER CAREER AND RECRUITMENT DAY

New this year, ASE is offering a Sonographer Career and Recruitment Day. All registrants are welcome to attend any sessions on Saturday, but there are additional sessions that have been added to the schedule that may be of particular interest to students. ASE is committed to helping address the shortage of sonographers in the field. There will be 24 institutions onsite to share information about their labs and employment opportunities. Institutions will be set up in the Chesapeake Ballroom hallway during two recruiting sessions listed below.

### 10:00 AM to 12:00 PM

- Ann & Robert H. Lurie Children's Hospital of Chicago
- Banner University Medical Center Phoenix
- Bayhealth Medical Center
- Children's Hospital of Philadelphia
- Cleveland Clinic
- Duke University Hospital
- Hospital of the University of Pennsylvania
- Houston Methodist Hospital
- Inova Health System
- Johns Hopkins Health System
- Kentucky Children's Hospital
- University of Washington Heart Institute

### 1:30 to 3:30 PM

- CaroMont Health
- Children's Hospital Colorado
- Mary Washington Healthcare
- Mayo Clinic
- Mount Sinai Children's Heart Center; New York, NY
- Northwestern Memorial Hospital
- Piedmont Healthcare System
- Sanger Heart and Vascular Institute, Advocate Atrium
- Sinai Hospital
- University of Wisconsin Health
- UPMC Children's Hospital of Pittsburgh
- Virginia Heart

## FREE PROFESSIONAL HEADSHOT PHOTOS

### 9:30 AM - 4:30 PM MARYLAND FOYER

First impressions count and ASE is here to help you stand out from the crowd. FREE professional headshots are being offered in the Maryland Foyer.

## ImageGuideEcho REGISTRY INFORMATION SESSION

12:00 – 12:30 PM

ECHO EXPO – Booth 531

Growth of the ImageGuideEcho Registry

**Jordan Strom, MD, FASE**

## SCIENCE & TECHNOLOGY THEATER

12:15 – 1:15 PM

ECHO EXPO

THEATER 1

Be the Difference for Your Echo Lab and Patients

**Presented by Lantheus**

Join Dr. Narang and Eric Kruse as they share their experience on how UEAs impact workflow efficiency, patient management, and sonographer ergonomics. They will also discuss the use of UEAs and how they can help reduce reader fatigue and sonographer injury.

*Lunch is provided by ASE, with support from Lantheus, and is included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## SCIENCE & TECHNOLOGY THEATER

12:45 – 1:45 PM

ECHO EXPO

THEATER 2

EchoRight™ Pro: A New Interactive Tool for Teaching Echocardiography in Pulmonary Hypertension

**Presented by Janssen Pharmaceuticals**

Join us as we review some real-world cases found in EchoRight Pro, an educational App, which integrates guidelines and clinical algorithms (probability of Pulmonary Hypertension and risk factors for poor outcome) to case-based learning. Users are guided through game-style questions to determine if the patient has signs of pulmonary hypertension.

*Lunch is provided by ASE, with support from Janssen, and is included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## ImageGuideEcho REGISTRY INFORMATION SESSIONS

1:00 – 1:30 PM

ECHO EXPO – Booth 531

Cedaron: Improving Quality of Care  
**Malcolm Bond, PhD**

2:45 – 3:15 PM

The Pediatric Echo Module  
**Dan Forsha, MD, MCS, FASE,** and **Charitha Reddy, MD**

## PRESIDENT'S RECEPTION 4:30 – 6:30 PM ECHO EXPO

All attendees are invited to celebrate ASE 2023 at the President's Reception, hosted by ASE President, Stephen Little, MD, FASE. This is an opportunity to network with colleagues and friends while learning more about the newest equipment and services in the cardiovascular field. More than 40 exhibitors will be showcasing their products. Live entertainment from area musicians will set the mood. Complimentary beer and wine, and light hors d'oeuvres will be available at many stations throughout the hall. Admission is included in your registration fee, and guest tickets can be purchased during the registration process.

## ASE 2023 PRESIDENT'S CIRCLE (PC) POSTER SESSION 4:30 – 6:30 PM

- Adult & Pediatric Heart Failure / Transplant / Other .... PC-01
- Critical Illness ..... PC-02
- Diseases of the Aorta / Vascular Diseases ..... PC-03
- Echocardiography in Myocardial Disease (HCM, Amyloidosis, Sarcoidosis, Chagas) ..... PC-04
- Pediatric Congenital Heart Disease.....PC-05 through PC-06
- Valvular Heart Disease: Aortic .....PC-07 through PC-11
- Valvular Heart Disease: Mitral ..... PC-12
- 3D Echocardiography .....PC-13 through PC-15
- Artificial Intelligence / Machine Learning ..... PC-16
- Value of Echocardiography (Quality & Cost) / Outcomes / Comparative Effectiveness.....PC-17 through PC-20
- Ventricular Function / Myocardial Mechanics .....PC-21 through PC-28

## SCIENCE & TECHNOLOGY THEATER

4:45 – 5:45 PM

ECHO EXPO  
THEATER 1

### Unique Echo Cases Review *Presented by Bracco Diagnostics*

Case studies demonstrating the utility of ultrasound enhancing agents with audience participation solving interesting cases.

*Refreshments are provided by ASE, with support from Bracco Diagnostics, and are included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## SCIENCE & TECHNOLOGY THEATER

5:15 – 6:15 PM

ECHO EXPO  
THEATER 2

### Utilizing Echocardiography in Hypertrophic Cardiomyopathy *Presented by Bristol Myers Squibb*

Join this session to review echocardiography techniques used in HCM diagnosis and monitoring, including an illustrative patient case and practical tips.

*Refreshments are provided by ASE, with support from Bristol Myers Squibb, and are included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## SATELLITE SYMPOSIA

*These sessions are not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

7:00 – 9:30 PM

## ANNAPOLIS

### A Review of Long-Term Data and Appropriate Real-World Use of Cardiac Myosin Inhibition Through Illustrative Patient Cases of Adults with NYHA Class II-III Obstructive HCM *Presented by Bristol Myers Squibb*

## BALTIMORE 3-5

### Artificial Intelligence in Ultrasound: Yesterday, Today and Tomorrow Register at: [Siemens-Healthineers.com/UltrasoundAI](https://Siemens-Healthineers.com/UltrasoundAI) *Presented by Siemens Healthineers*

## WILSON B-D

### Advanced Imaging for Mitral and Tricuspid Valves *Sponsored by Abbott in collaboration with Philips*

Register here



# SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

## SUNDAY, JUNE 25

### GARDIN LECTURE

8:00 – 8:45 AM

MARYLAND BALLROOM



ASE is proud to have **George Mensah, MD**, Director of The Center for Translation Research and Implementation Science (CTRIS) at the National Heart, Lung, and Blood Institute (NHLBI), deliver the 5<sup>th</sup> Annual Gardin Lecture, “Echocardiography and the Global Burden of Cardiovascular Disease: The Crucial Role of Implementation Science” on Sunday,

June 25. This lectureship was established in honor of ASE Past President and 1<sup>st</sup> Scientific Sessions Chair, Julius Gardin, MD, FASE. Dr. Gardin mentored numerous physicians and sonographers and this lecture series supports his passion for education by providing funding to bring a luminary speaker to the Scientific Sessions every year.

### KALMANSON LECTURE

8:50 – 10:05 AM

CHERRY BLOSSOM BALLROOM



The ASE Foundation is honored to recognize **Gianni Pedrizzetti, PhD**, University of Trieste, Trieste, Italy, as the 2023 Kalmanson Lecturer. Established in memory of Professor Daniel Kalmanson, a pioneer in the use of Doppler echocardiography, and funded through a grant from the International Cardiac Doppler Society (ICDS), this annual lectureship

provides a forum for honoring worthy investigators while promoting research and education in cardiovascular Doppler ultrasound. Dr. Pedrizzetti will present his lecture entitled “Vorticity: From First Principles to Clinical Application in Cardiology” during the Engineering in the Echo Lab: Building the Future session.

### POSTER SESSIONS 1-7

10:00 AM – 5:45 PM

ECHO EXPO

#### MODERATED POSTER SESSION 1

12:00 – 1:30 PM

Echocardiography in Myocardial Disease (HCM, Amyloidosis, Sarcoidosis, Chagas) ..... P3-06

Echocardiography in Systemic Diseases (DM, HTN, Obesity) / Pericardial Disease ..... P6-24

Ischemic Heart Disease ..... P5-25

Valvular Heart Disease: Aortic ... P2-11 and P2-20 — P2-22

Valvular Heart Disease: Tricuspid & Pulmonic ..... P5-30

#### POSTER SESSION 1 (P1): 10:00 – 10:45 AM

Adult & Pediatric Heart Failure / Transplant / Other ..... P1-01 — P1-10

Adult Congenital Heart Disease ..... P1-11 — P1-13

Pediatric Congenital Heart Disease ..... P1-14 — P1-36

#### POSTER SESSION 2 (P2): 11:00 – 11:45 AM

Pediatric Congenital Heart Disease ..... P2-01 — P2-10

Valvular Heart Disease: Aortic ..... P2-11 — P2-27

Valvular Heart Disease: Mitral ..... P2-28 — P2-36

#### POSTER SESSION 3 (P3): 1:00 – 1:45 PM

Diseases of the Aorta / Vascular Diseases ..... P3-01 — P3-04

Echocardiography in Myocardial Disease (HCM, Amyloidosis, Sarcoidosis, Chagas) ... P3-05 — P3-19

Echocardiography in SOE / Arrhythmias / Atrial Function ..... P3-20 — P3-35

#### POSTER SESSION 4 (P4): 2:00 – 2:45 PM

Artificial Intelligence / Machine Learning ... P4-01 — P4-17

Developing Technology and Innovation ..... P4-18 — P4-26

Doppler / Hemodynamics ..... P4-27 — P4-36

#### POSTER SESSION 5 (P5): 3:00 – 3:45 PM

Quality / Practice Improvement / Education ..... P5-01 — P5-17

Value of Echocardiography (Quality & Cost) / Outcomes / Comparative Effectiveness ..... P5-18 — P5-22

Ischemic Heart Disease ..... P5-23 — P5-29

Valvular Heart Disease: Tricuspid & Pulmonic ..... P5-30 — P5-36

## POSTER SESSION 6 (P6): 4:00 – 4:45 PM

3D Echocardiography .....	P6-01 — P6-12
Contrast Echocardiography .....	P6-13 — P6-18
Multi-Modality Imaging .....	P6-19 — P6-23
Echocardiography in Systemic Diseases (DM, HTN, Obesity) / Pericardial Disease ....	P6-24 — P6-32
My Best Heart Team Cases.....	P6-33 — P6-36

## POSTER SESSION 7 (P7): 5:00 – 5:45 PM

Interventional Echocardiography (Operating Room and Interventional Lab) ...	P7-01 — P7-06
Perioperative Echocardiography .....	P7-07 — P7-09
Ventricular Function / Myocardial Mechanics .....	P7-10 — P7-16
Cardio-Obstetrics.....	P7-17 — P7-22
Cardio-Oncology .....	P7-23 — P7-27
Critical Illness .....	P7-28 — P7-31
Critical Care and Emergency Medicine Cases .....	P7-32 — P7-35

## ImageGuideEcho REGISTRY INFORMATION SESSIONS

10:05 – 10:35 AM

ECHO EXPO – Booth 531

### The Perioperative Echo Module

*Alina Nicoara, MD, FASE*

12:00 – 12:30 PM

### ASE & IAC: A Continued Alignment in Quality

*David Wiener, MD, FASE*

## SCIENCE & TECHNOLOGY THEATER

12:15 – 1:15 PM

ECHO EXPO

THEATER 1

### Experts Sharing Insights: How Innovative Imaging Technologies are Transforming Patient Care

*Presented by Philips Healthcare*

Join clinical leaders to explore the latest 2D and 3D complete imaging solutions and gain insights into the present and future of echocardiography.

*Lunch is provided by ASE, with support from Philips Healthcare, and is included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## SCIENCE & TECHNOLOGY THEATER

12:45 – 1:45 PM

ECHO EXPO

THEATER 2

### The Importance of Imaging Techniques to Suspect, Diagnose, and Treat ATTR-CM

*Presented by Pfizer*

ATTR-CM is a serious, underrecognized and underdiagnosed cause of heart failure. Join us to help raise awareness of the signs and symptoms of ATTR-CM and the role of cardiac health professionals in suspecting, diagnosing and confirming ATTR-CM and review a treatment option for patients with ATTR-CM.

*Lunch is provided by ASE, with support from Pfizer, and is included in all Scientific Sessions registration fees, but space and food are first come, first served.*

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

## BRIAN HALUSKA SONOGRAPHER RESEARCH AWARD COMPETITION

1:30 – 3:00 PM

CHERRY BLOSSOM BALLROOM

The ASE Foundation's annual Brian Haluska Sonographer Research Award Competition honors the late Brian Haluska, PhD, MSC (HONS), MSC, RDCS, AMS, FASE, and his incredible contributions to sonographer-led research over the course of his career. This competition recognizes non-physicians who served as the primary investigator on their project of original work. During this session the competition finalists will present their research, and a winner will be selected by a panel of echo experts.

- **Nicole Guerrera, RT(R), RDCS**, Yale University School of Medicine, New Haven, CT – Early Assessment of Global Circumferential Strain from Three-Dimensional Echocardiography Predicts Late Left Ventricle Remodeling in a Chronic Porcine Model of Reperfused Myocardial Infarction
- **Madeline Jankowski, BS, RDCS, ACS, FASE**, Northwestern University Feinberg School of Medicine, Chicago, IL – Prognostic Value of Echocardiographic Derived RV to PA Coupling in Patients with ATTR Cardiac Amyloidosis
- **Gilda Kadiu, MS, RDCS (AE, PE), FASE**, Children's Hospital of Michigan, Detroit, MI – Comprehensive Assessment of Effect of Transcatheter Device Closure of Patent Ductus Arteriosus on Left Ventricle Function
- **Suzanne Poston, BS, ACS, RDCS, RVS, RCS, RCCS, CCT, FASE**, UT Health Science Center, Houston, TX – Use of Definity in Repaired Adult Congenital Population for Enhancement of Ventricular Function

## ASE FOUNDATION RESEARCH AWARDS GALA

6:30 – 11:00 PM

CHERRY BLOSSOM BALLROOM

The premier annual fundraiser for the ASE Foundation is the **14<sup>th</sup> Annual Research Awards Gala**. The ASE Foundation is proud to host its All the Colors of the World Gala to celebrate cardiovascular ultrasound research and honor ASE's 2023 award recipients. Attendees are encouraged to wear formal attire that honors their personal heritage and culture. Event proceeds support research activities that advance the progress and future of our field. Tickets are required. For more information and to pick up your table assignment for the event, visit the ASE Foundation booth, located in the Maryland Ballroom Lobby.

## SATELLITE SYMPOSIUM

*This session is not part of the official ASE 2023 Scientific Sessions as planned by the Program Committee or in any way endorsed by or affiliated with ASE.*

6:00 – 8:00 PM

CHESAPEAKE E-F

### Advanced Concepts in Echocardiography for the Sonographer: Hypertrophic Cardiomyopathy

Register at: <https://qrco.de/ace-hcm-ase>

*Presented by ACC*

## MONDAY, JUNE 26

### ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION AND 24<sup>TH</sup> ANNUAL FEIGENBAUM LECTURE

8:00 – 10:00 AM

MARYLAND BALLROOM

This annual competition is supported by the National Board of Echocardiography (NBE) in honor of its first president, Arthur E. Weyman, MD, FASE. These investigators will present their research, and a winner will be selected by a panel of echo experts.

- **Sydney Collins, BS**, Duke University, Durham, NC – Assessing the Accuracy of Fetal Aortic Valve Range Phantom Measurements
- **Martin Gruca, MD, MS**, University of Chicago Medical Center, Chicago, IL – Noninvasive Assessment of Left Ventricular Filling Pressure Using Machine Learning Derived Phasic Left Atrial Strain
- **Jwan Naser, MBBS**, Mayo Clinic, Rochester, MN – Incidence, Risk Factors, and Outcomes of Atrial Functional Mitral Regurgitation in Atrial Fibrillation and Sinus Rhythm
- **Jeremy Slivnick, MD, FASE**, University of Chicago Medical Center, Chicago, IL – Deep Learning Analysis of Echocardiographic Images for Automated Classification of Regional Wall Motion

## FEIGENBAUM LECTURER



**Rima Arnaout, MD, FASE**, will present the 24<sup>th</sup> Annual Feigenbaum Lecture titled “ChatGPT Helped Me Write This Talk Title, But Can It Read an Echocardiogram?” Dr. Arnaout is a Cardiologist, Artificial Intelligence Researcher, and Assistant Professor in Medicine at UCSF Health, San Francisco, CA. She

is also a faculty member in the Biological and Medical Informatics Graduate Program at the Bakar Computational Health Sciences Institute and the Center for Intelligent Imaging. This lecture was named in honor of the founder and first president of ASE, Harvey Feigenbaum, MD, FASE. This lectureship is awarded to a young investigator in recognition of their significant contributions to research in the field of echocardiography and their potential to continue at a high level of achievement.

## POSTER SESSIONS 8-10

10:00 AM – 1:45 PM

ECHO EXPO

### MODERATED POSTER SESSION 2

11:45 AM – 1:15 PM

Diseases of the Aorta / Vascular Diseases ..... P3-01

Echocardiography in SOE / Arrhythmias / Atrial Function..... P3-21

Pediatric Congenital Heart Disease..... P1-16

Valvular Heart Disease:  
Tricuspid & Pulmonic.....P5-32 and P5-33

3D Echocardiography .....P6-01 and P6-05

Contrast Echocardiography ..... P6-13

Value of Echocardiography (Quality & Cost) / Outcomes / Comparative Effectiveness ..... P5-18

### SESSION 8 (P8): 10:00 – 10:45 AM

Adult Cardiovascular Patient Cases ..... P8-01 — P8-24

Pediatric Cardiovascular & Congenital Patient Cases..... P8-25 — P8-35

### SESSION 9 (P9): 11:00 – 11:45 AM

Adult Cardiovascular Patient Cases ..... P9-01 — P9-24

Pediatric Cardiovascular & Congenital Patient Cases..... P9-25 — P9-36

### SESSION 10 (P10): 1:00 – 1:45 PM

Multi-Modality Cases..... P10-01 — P10-34



## ASE Foundation

The following Awards and Grants are supported by the ASE Foundation. Charitable donations are fostering the next generation of cardiovascular ultrasound professionals.

### 2023 ASE FOUNDATION TOP INVESTIGATORS

The presentation of original research from around the world is an integral component of ASE's annual meeting. A special group of early career abstract presenters were selected by the Abstract Chairs based on the scientific merit of their research projects and were awarded grants to offset their Scientific Sessions travel expenses from the Foundation. The Alan S. Pearlman Research Award, established to honor Dr. Pearlman's ten years of service as JASE Editor-In-Chief and supported by a grant to the ASE Foundation by Elsevier, is an annual award of \$1,000 given to the highest scoring investigator in this group. Beginning in 2023, the **Michael H. Picard Research Award** has been established to honor Dr. Picard's five years of service as JASE Editor-In-Chief. Also supported by a grant to the ASE Foundation by Elsevier, this annual award of \$1,000 will be given to the overall highest scoring abstract submitted to the annual ASE Scientific Sessions by a trainee.

### 2023 INVESTIGATORS

- **Shani Dahan, MD**, Massachusetts General Hospital, Boston, MA – *Alan S. Pearlman Research Awardee*
- **Alex D'Amico, MD**, University of Alabama at Birmingham, Division of Cardiology, Birmingham, AL – *Michael H. Picard Research Awardee*
- **Mounir Al-Gibbawi, MD**, Indiana University School of Medicine, Indianapolis, IN
- **Rowa Attar, MD**, Houston Methodist Hospital, Houston, TX
- **Richard Carrick, MD**, Johns Hopkins University, Baltimore, MD
- **Michel Chedid El Helou, MD**, Cleveland Clinic, Cleveland, OH
- **Cheng Chen, PhD**, University of Pittsburgh, Pittsburgh, PA
- **Lakshay Chopra, MD**, Icahn School of Medicine at Mount Sinai Beth Israel, New York, NY
- **Anna Curtis, MD**, University of Michigan, Ann Arbor, MI
- **Ankur Dalsania, MD**, Icahn School of Medicine at Mount Sinai, New York, NY
- **Flora Huang, MD**, Department of Medicine, Division of Cardiology, University of Toronto, Toronto, ON, Canada
- **Alejandra Iturralde, MD**, Baylor College of Medicine, Houston, TX
- **Camryn Kimura**, Scripps Mercy Hospital, Providence, RI
- **Ethan Knight, BS**, Johns Hopkins University School of Medicine, Baltimore, MD

- **Josephine Lamp, BS**, University of Virginia, Charlottesville, VA
- **Linda Lee, MD**, University of Chicago, Chicago, IL
- **Jonas Marx, MD**, Cardiovascular Research Institute, Icahn School of Medicine at Mount Sinai, New York, NY
- **Fangmin Meng, MD**, Zhongshan Hospital, Fudan University, Shanghai, China
- **David Mittelstein, MD**, Scripps Mercy Hospital San Diego, San Diego, CA
- **Joanna Nelson, MD**, Columbia University Vagelos College of Physicians and Surgeons, New York, NY
- **Joy Ong, MD**, National University Heart Centre Singapore, Singapore
- **Anders Pedersen, MD**, Aarhus University Hospital, Denmark
- **Isadora Sande Mathias, MD**, Houston Methodist DeBakey Heart & Vascular Center, Houston, TX
- **Nathanael Tran, MD**, Einstein Medical Center, Philadelphia, PA
- **Yuanfeng Wu, MD**, Zhongshan Hospital, Fudan University, Shanghai, China

### 2023 TOMTEC INNOVATOR RESEARCH TRAVEL GRANT

**Juan Ignacio Cotella, MD**, University of Chicago, Chicago, IL, is the recipient of the 2023 TOMTEC Innovator Research Travel Grant. Supported by a grant to the ASE Foundation from TOMTEC IMAGING SYSTEMS GMBH, this annual award of \$4,000 is given to assist a promising young researcher presenting their work at the ASE Scientific Sessions.

### 2023 ALAN D. WAGGONER STUDENT SCHOLARSHIP AWARDS

The Alan D. Waggoner Student Scholarship program was established in 2001 in recognition of Mr. Waggoner's professional achievements and service to ASE. Funding from the ASE Foundation provides a limited number of \$1,000 scholarship awards for students enrolled in a cardiac ultrasound program accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in the United States or by an equivalent Canadian or external ultrasound program. Also included with each scholarship award is complimentary registration for the recipient to attend the Scientific Sessions and up to \$1,000 in travel reimbursement. Recipients were chosen from a large number of students who were nominated by their program directors. The 2023 scholarship award recipients will be recognized during ASE's Annual Awards Presentation and Edler Lecture on Saturday, June 24, in Maryland Ballroom.

## 2023 SCHOLARSHIP RECIPIENTS

- **Brooke Albrecht**, Advocate Aurora Health St. Luke's School of Diagnostic Medical Sonography, Milwaukee, WI
- **Margaret Arnold**, Prisma Health CVT Leadership Program, Greenville, SC
- **Amanda Benner**, Diagnostic Medical Sonography at South Hills School of Business & Technology, State College, PA
- **Eden Chin**, SUNY Downstate Diagnostic Medical Imaging Program, Brooklyn, NY
- **Olivia Cialfi**, Hoffman Heart and Vascular Institute School of CVT, Hartford, CT
- **Kaitlyn DiPisa**, Yale New Haven Hospital School of Diagnostic Ultrasound, New Haven, CT
- **Ricky Dormon**, Duke Cardiac Ultrasound Program, Durham, NC
- **Samantha Harbolic**, Yale New Haven Hospital School of Diagnostic Ultrasound, New Haven, CT
- **Alyssa Hickey**, University of Wisconsin Milwaukee Diagnostic Medical Sonography Program, Milwaukee, WI
- **Lanae McClure**, Prisma Health CVT Leadership Program, Greenville, SC
- **Eric Nguyen**, Diagnostic Medical Sonography at South Hills School of Business & Technology, State College, PA
- **Julio Sanchez-Salvador**, Cardiovascular Technology Echocardiography Program at the Milwaukee Area Technical College, Milwaukee, WI
- **Emily VanDyke**, Advocate Aurora Health St. Luke's School of Diagnostic Medical Sonography, Milwaukee, WI
- **Allison Veglahn**, University of Wisconsin Milwaukee Diagnostic Medical Sonography Program, Milwaukee, WI

## KATANICK SCHOLARSHIP AWARD

The 2023 Katanick Scholarship Award will be awarded to **Forrest Zimmermann**, Duke Cardiac Ultrasound Program, Durham, NC. This award includes a \$1,000 student scholarship for the highest-ranking student sonographer candidate nominated for ASEF scholarship awards and up to \$1,000 in travel reimbursement to attend the ASE Scientific Sessions. This award was named to honor the legacy of Sandy Katanick, RN, RVT, CAE, who retired as CEO of the Intersocietal Accreditation Commission after over 25 years of service to the field.

## 2023 FEIGENBAUM CARDIOVASCULAR SONOGRAPHER STUDENT TRAVEL GRANT

This award is supported by a grant to the ASE Foundation from Elsevier Inc. to honor Dr. Harvey Feigenbaum's commitment and tenure as the former *Journal of the American Society of Echocardiography* (JASE) Editor for 20 years. It is presented to a sonographer student enrolled in a CAAHEP accredited cardiac ultrasound program. This grant provides funding to assist a student to attend the Scientific Sessions or other ASE sponsored

educational courses. The 2023 student travel grant has been awarded **Aashika Korrapati, BS**, Johns Hopkins Hospital, San Jose, CA. This award will be recognized during the Cardiovascular Sonography Council Business Meeting, on Friday, June 23 at 4:15 PM in the Annapolis Ballroom.

## 2023 COUNCIL TRAVEL GRANT AWARDS

The ASE Foundation sponsors Council Travel Grant Awards to fellows, trainees, and sonographers to fund their attendance at the Scientific Sessions. These travel grants are part of an ongoing effort by the Foundation, with the assistance of the Council Steering Committees, to encourage trainees in cardiovascular specialties to focus on the respective echocardiography sub-specialty. In addition, the Council Steering Committees hope to provide interested fellows with a deeper understanding of the imaging field and facilitate the development of meaningful mentoring opportunities for trainees with established imaging faculty.

## CARDIOVASCULAR SONOGRAPHY COUNCIL TRAVEL GRANT AWARDS

- **Melissa Bond, BHS, ACS, RDCS**, University of Kentucky Healthcare, Richmond, KY
- **Lauren Howard, RDCS, FASE**, St Luke's Medical Center, Brookfield, WI
- **Lindsey Kalvin, ACS, BS, RDCS (AE & PE), FASE**, Froedtert/Medical College of Wisconsin, Oconomowoc, WI

## CIRCULATION & VASCULAR ULTRASOUND COUNCIL TRAVEL GRANT AWARDS

- **Erin Goerlich, MD**, Johns Hopkins Hospital School of Medicine, Baltimore, MD
- **Katie Martin**, University of Colorado Anschutz Medical Campus, Denver, CO
- **Alexander Sullivan, MD**, Vanderbilt University Medical Center, Nashville, TN

## CRITICAL CARE ECHOCARDIOGRAPHY COUNCIL TRAVEL GRANT AWARDS

- **Patrick Monette**, Harvard Medical School, Boston, MA

## INTERVENTIONAL ECHOCARDIOGRAPHY COUNCIL TRAVEL GRANT AWARDS

- **Victor Becerra Gonzalez, MD**, Jackson Memorial Hospital, University of Miami, Miami, FL
- **Kifah Hussain, MD**, Northshore University Health System, Barrington, IL
- **Zachary Meili, MD**, Temple University Hospital, Philadelphia, PA



## PEDIATRIC AND CONGENITAL HEART DISEASE COUNCIL TRAVEL GRANT AWARDS

- **Yasaman Farsiani**, University of California, Irvine, Irvine, CA
- **Grace Kong, MD**, New York, NY
- **Christiane Mhanna**, Nemours Children's Hospital, Wilmington, DE

## PERIOPERATIVE ECHOCARDIOGRAPHY COUNCIL TRAVEL GRANT AWARDS

- **Beiqi Chen**, Zhongshan Hospital, Fudan University, Shanghai, China
- **Kamran Namjouyan, DO**, Geisinger Medical Center, Danville, PA
- **Alon Shechter, MD**, Cedars-Sinai Medical Center, Petach Tikva, Hamerkaz, Israel

## DON'T MISS THE *ECHO* MAGAZINE – NOW A MONTHLY ONLINE PUBLICATION!



ASE has thousands of members, and this means that there are thousands of voices with things to say about echocardiography. This magazine is an outlet for all ASE members to contribute interesting articles or images related to cardiovascular ultrasound that are not research articles/images.

### Each issue contains:

- *Communications from the ASE President ASE Councils and Specialty Interest Groups*
- *Education Calendar*

Read past issues and learn more at [ASEcho.org/EchoMagazine](https://ASEcho.org/EchoMagazine).

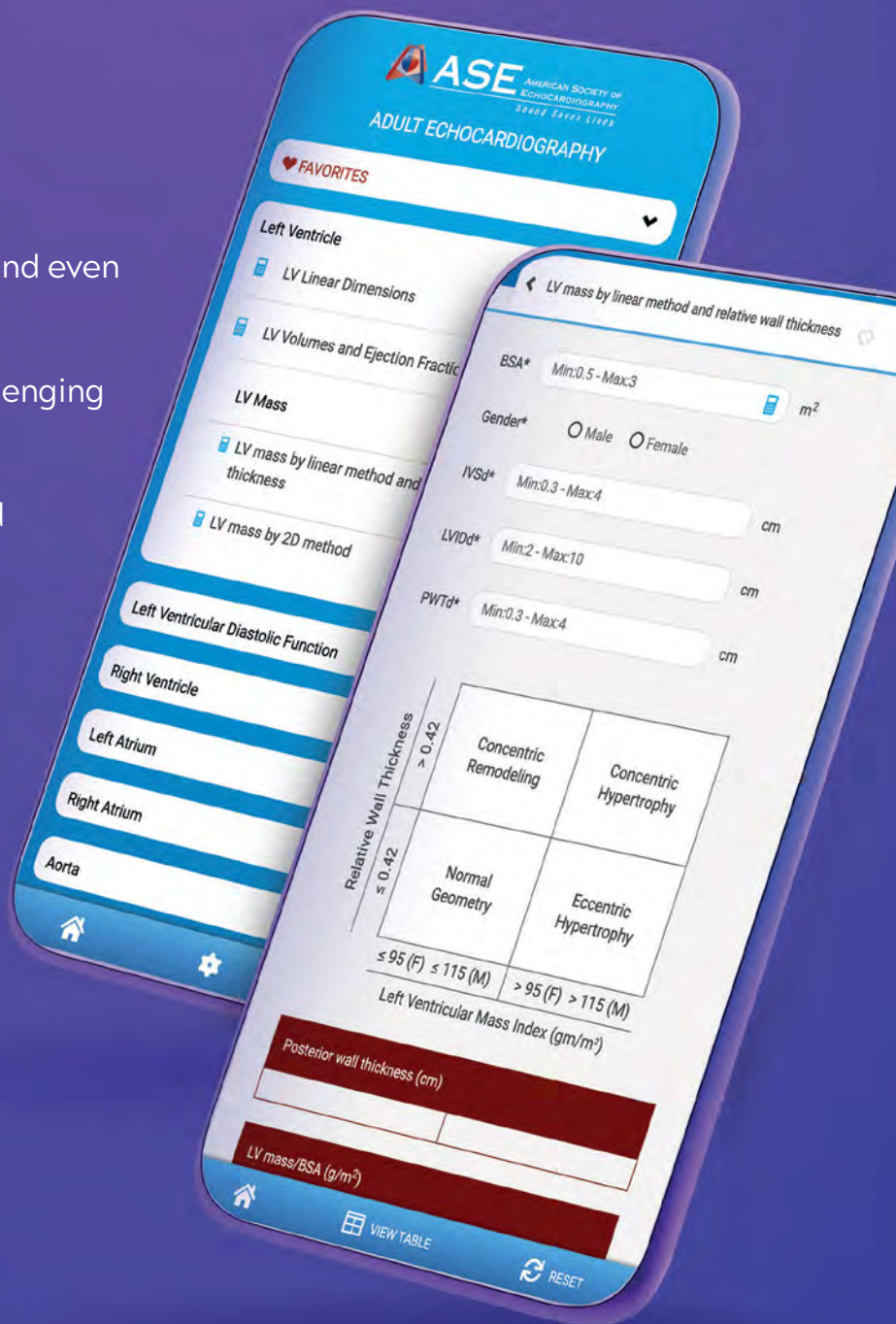


# DOWNLOAD THE NEW ASE GUIDELINE CALCULATOR AND ALGORITHM APP.

Available now for FREE in the Apple and Google Play app stores

## EchoGuide™

- Works on smartphones, tablets, and even includes a web-based interface.
- Quick access to common and challenging echo measurements and values.
- Calculators and algorithms based on the most popular guidelines published by ASE.



# Don't Miss the Latest Products from the ASE Learning Hub

ASE is your one-stop-shop for everything you need in cardiovascular ultrasound education!



EXHIBITS

## Purchase ASE's products at the following locations:

### ASE Headquarters Booth #423

Saturday, June 24. . . . . 12:00 – 4:30 PM  
 Sunday, June 25. . . . . 10:00 AM – 6:00 PM  
 Monday, June 26 . . . . . 10:00 AM – 2:00 PM

### ASE Products Sales Booth – Woodrow Wilson Ballroom Hallway

Friday, June 23. . . . . 12:00 – 5:30 PM  
 Saturday, June 24. . . . . 6:00 AM – 4:30 PM  
 Sunday, June 25. . . . . 6:30 AM – 4:30 PM  
 Monday, June 26 . . . . . 6:30 AM – 4:30 PM

ASE products will also be for sale on Saturday during the President's Reception.



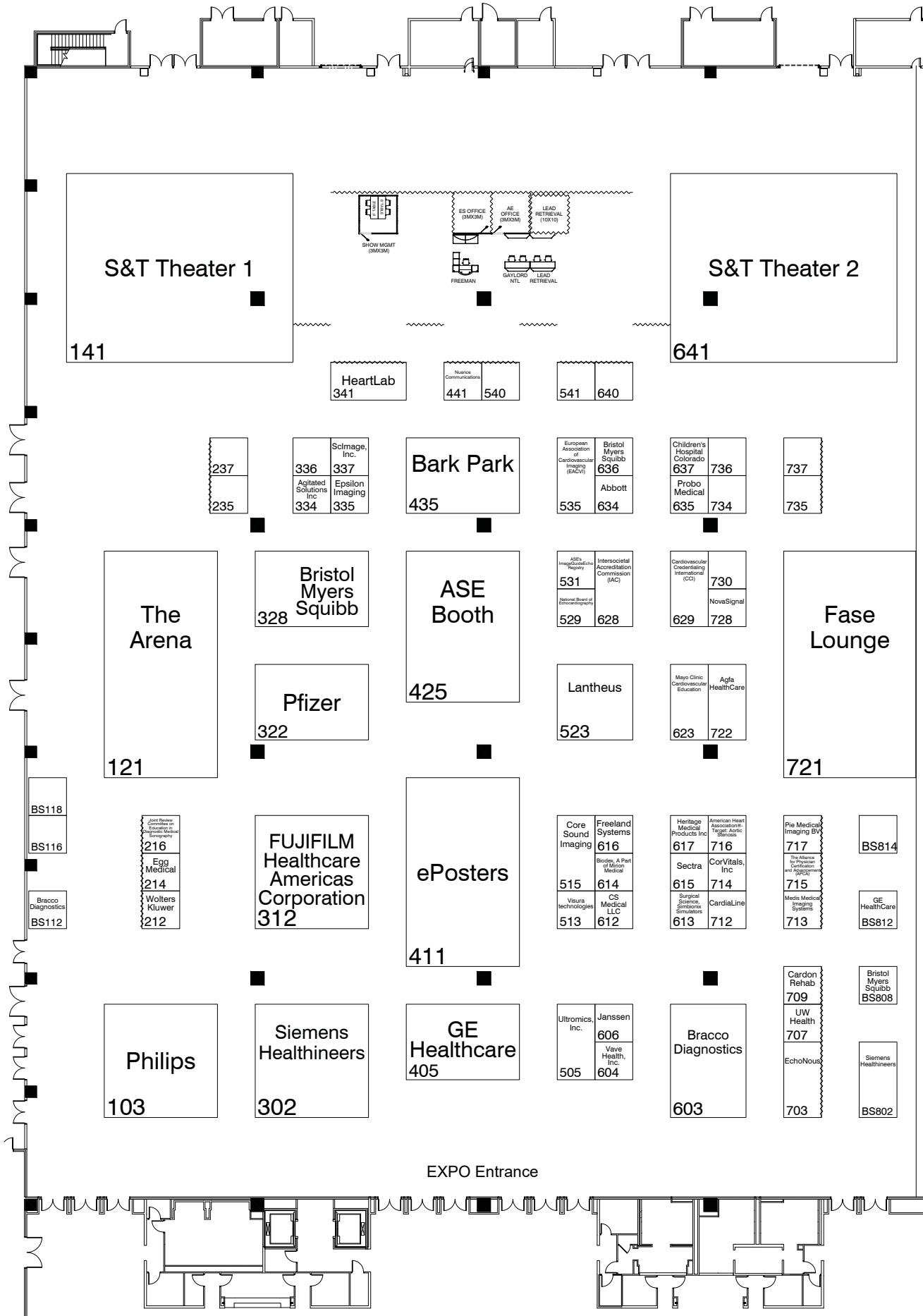
Also Order Products Online at [ASELearningHub.org](http://ASELearningHub.org)

# ASE 34th ANNUAL SCIENTIFIC SESSIONS

JUNE 23 - 26, 2023

NATIONAL HARBOR, MD

EXHIBITS



**ECHO EXPO HOURS**

SATURDAY, JUNE 24	12:00 – 6:30 PM
President's Reception	4:30 – 6:30 PM
SUNDAY, JUNE 25	10:00 AM – 6:00 PM
MONDAY, JUNE 26	10:00 AM – 2:00 PM

**ECHO EXPO BREAK SCHEDULE**

SATURDAY, JUNE 24	
Lunch Break*	12:00 – 1:30 PM
Coffee Break	2:45 – 3:15 PM
SUNDAY, JUNE 25	
Coffee Breaks	10:05 – 10:45 AM 2:45 – 3:15 PM
Lunch Break*	12:00 – 1:30 PM
MONDAY, JUNE 26	
Coffee Break	10:00 – 10:30 AM
Lunch Break*	11:45 – 1:15 PM

\*Lunch is not provided for conference attendees unless you are attending the Science & Technology Theater presentations which is available on a first-come, first-served basis. However, food and refreshments will be available for purchase in the Echo Expo.

**SCIENCE & TECHNOLOGY THEATER  
SCHEDULE ECHO EXPO**

ASE is pleased to offer two Science & Technology Theater presentation spaces. Please be sure to double check the schedule for the correct theater space for the presentation you are interested in attending. ASE will provide boxed meals during each lunch session on a first come, first served basis (max. 300 participants). Various refreshments may also be available for the afternoon sessions. These refreshments are included in all Scientific Sessions registration fees, but space and food are on a first come, first served basis.

**SATURDAY, JUNE 24**

12:15 – 1:15 PM	<b>THEATER 1</b> <b>BE THE DIFFERENCE FOR YOUR ECHO LAB AND PATIENTS</b> <i>Presented by Lantheus</i>
12:45 – 1:45 PM	<b>THEATER 2</b> <b>ECHORIGHT PRO: A NEW INTERACTIVE TOOL FOR TEACHING ECHOCARDIOGRAPHY IN PULMONARY HYPERTENSION</b> <i>Presented by Janssen Pharmaceuticals</i>
4:45 – 5:45 PM	<b>THEATER 1</b> <b>UNIQUE ECHO CASES REVIEW</b> <i>Presented by Bracco Diagnostics</i>
5:15 – 6:15 PM	<b>THEATER 2</b> <b>UTILIZING ECHOCARDIOGRAPHY IN HYPERTROPHIC CARDIOMYOPATHY</b> <i>Presented by Bristol Myers Squibb</i>

**SUNDAY, JUNE 25**

12:15 – 1:15 PM	<b>THEATER 1</b> <b>EXPERTS SHARING INSIGHTS: HOW INNOVATIVE IMAGING TECHNOLOGIES ARE TRANSFORMING PATIENT CARE</b> <i>Presented by Philips Healthcare</i>
12:45 – 1:45 PM	<b>THEATER 2</b> <b>THE IMPORTANCE OF IMAGING TECHNIQUES TO SUSPECT, DIAGNOSE, AND TREAT ATTR-CM</b> <i>Presented by Pfizer</i>

*These sessions are not part of the official ASE 2023 Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.*

## WHERE INNOVATION AND SCIENCE MEET

Don't miss the Echo Expo on Atrium Level in Prince George's Exhibition Halls A & B. The exchange of information and access to new concepts, technology, devices, and research is a vital component of your professional development. Meet face-to-face with the industry's leading developers and executives who can help you discover what's new, assist you in making the right choices for your institution, and show you ways to reduce costs and improve productivity. Network with colleagues and friends, while experiencing the best our rapidly changing industry has to offer, including the newest equipment and devices, as well as the latest in research and development. You can also grab a cup of coffee, lunch, or snack. The showcase of investigators from around the world presenting cutting-edge research on the latest advances in cardiovascular ultrasound is a highlight of ASE's Scientific Sessions. Spend time in the poster area and gain firsthand knowledge and insight from scientific investigators.

**Don't miss daily poster sessions on Sunday and Monday.**

## ASE HEADQUARTERS BOOTH #423

As the largest organization representing the cardiovascular ultrasound community, ASE is a vibrant and progressive organization. Visit the ASE Headquarters booth #423 to find comprehensive information on all our educational programs and products, membership opportunities, and advocacy efforts. Don't miss the debut of exciting new products and services designed to help with your practice of cardiovascular ultrasound. ASE staff is available to help you find whatever you need. If you have not logged in to the ASE Learning Hub or used Connect@ASE, come by for a tutorial. Have a question about ASE? There will be a variety of opportunities to meet committee leaders and staff in the ASE booth.

## MEET FACE TO FASE

Are you interested in becoming a Fellow of the American Society of Echocardiography (FASE) but have questions about whether you may qualify? Stop by the ASE Booth #423 to talk one-on-one with a member of the FASE Advisory Committee or ASE staff about any questions you have about achieving the FASE designation.

## ACTIVITIES IN THE ASE BOOTH

### SATURDAY, JUNE 24

#### 2:45 – 3:15 PM

Learn About ASE's Committees and How to Apply  
**Suzanne Morris, Director of Volunteer Activities**

#### 4:30 – 5:00 PM

Meet ASE President **Stephen Little, MD, FASE**

#### 4:30 – 5:30 PM

ASE Tweet Up

### SUNDAY, JUNE 25

#### 11:00 - 11:30 AM

Face to FASE – Learn How to Achieve the FASE Designation Meet FASE Advisory Committee Chair, **Jennifer Warmbecker, BS, RDCS, FASE**

### MONDAY, JUNE 26

#### 11:00 – 11:30 AM

Face to FASE – Learn How to Achieve the FASE Designation Meet FASE Advisory Committee Chair, **Jennifer Warmbecker, BS, RDCS, FASE, FASE**

#### 1:00 PM

Drawing for the Echo Expo Carnival Prizes and Announcement of the ASE Foundation Cardiovascular Challenge Winners

#### 1:30 – 2:00 PM

Learn About Submitting or Reviewing for CASE, ASE's Case Reports Journal. Meet CASE Editor-in-Chief, **Vincent Sorrell, MD, FASE, FACP (honorary), FACC, FSCCT, FSCMR**

## CARNIVAL IN THE ECHO EXPO: A FUN INTERACTIVE GAME WITH EXHIBITORS

Join in the fun by participating in the ASE 2023 Carnival in the Echo Expo adventure!

Your official ASE 2023 Carnival Game Card was included with your registration packet. Venture around the Echo Expo visiting participating exhibitor's booths. Each exhibitor will have an activity attendees need to be completed to collect your stamp. Activities may be a carnival game, scanning, reading an echo, answering a trivia question, or whatever the exhibitor chooses. Once your Carnival Card is completed with stamps from each exhibitor, come to the ASE Booth #423 to fill out a raffle ticket to be entered to win the following prizes. All tickets must be entered no later than 12:45 PM, Monday, June 26, and you need to be present to win at the ASE exhibit booth at 1:00 PM.

### Grand prize package includes:

- Complimentary ASE membership through December 31, 2024.
- Upgraded hotel room & bottle of champagne, and \$100 gift card at ASE headquarters hotel for Scientific Sessions 2024.
- Lunch with four ASE luminaries for you and 2 other guests during Scientific Sessions 2024. VALUE OVER \$2,000!

### Second Prize:

- Meet and greet for you and three other friends for 30 minutes prior to a reception with pre-determined faculty during Scientific Sessions 2024.
- \$250 USD credit towards ASE's Learning Hub store

### Third Prize:

- \$250 USD credit towards ASE's Learning Hub store



# BARK PARK



Spend some time relaxing and socializing with dogs in **ASE's Bark Park in the Echo Expo**. This experience is provided in partnership with **Homeward Trails Animal Rescue**, a nonprofit organization that rescues dogs and cats from low-income, rural animal shelters and provides pet adoption in Virginia; Washington, D.C.; and Maryland. **These dogs are all adoptable!**

## THE BARK PARK WILL BE OPEN DURING THE FOLLOWING HOURS:

**SATURDAY, JUNE 24**  
12:00 – 6:30 PM

**SUNDAY, JUNE 25**  
10:00 AM – 3:15 PM

**MONDAY, JUNE 26**  
10:00 AM – 1:15 PM

*Space for visitors to the Bark Park is limited to provide a safe environment for both attendees and the dogs.*

ASE Lunch Symposium

# Be the Difference for Your Echo Lab and Patients

Saturday, June 24, 2023 • 12:15 pm - 1:15 pm

Science and Technology Theater 1  
Gaylord National Resort & Convention Center  
National Harbor, MD



Akhil Narang, MD  
FACC, FASE, FSCMR  
Northwestern University



Eric Kruse  
BS, ACS, RDCS, RVT, FASE  
University of Chicago

## Symposium Topics include:

- Workflow Efficiency
- Patient Impact
- Reducing Reader Fatigue
- Ergonomics
- Reducing Sonographer Injury

Lunch is provided but space and boxed lunches are first-come, first served.

This session is not part of the official ASE 34th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE. This event does not qualify for continuing medical education (CME) credit



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# Join Live Presentation

Saturday, June 24, 2023 | 4:45–5:45 PM  
Science & Technology Theater  
ASE 2023, National Harbor, MD

## “Unique Echo Cases Review”

Case studies demonstrating the utility of ultrasound enhancing agents  
with audience participation solving interesting cases

### GUEST MODERATOR

## Jordan B. Strom, MD, MSc, FACC, FASE

Associate Director, Echocardiography Laboratory,  
Director of Echocardiographic Research, Division of Cardiovascular Medicine,  
Beth Israel Deaconess Medical Center

Section Head, Cardiovascular Imaging Research,  
Richard A. and Susan F. Smith Center for Outcomes Research  
in Cardiology, Beth Israel Deaconess Medical Center

Assistant Professor of Medicine, Harvard Medical School

Please visit Bracco Booth #603

This session is not part of the official ASE 2023 Scientific Sessions, as planned  
by the Program Committee, or in any way endorsed by or affiliated with ASE.  
This event does not qualify for continuing medical education (CME) credit.

The individuals who appear are for illustrative purposes. All persons depicted are models and not real patients or healthcare professionals.  
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Committed to Science,  
Committed to You.™



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# Utilizing Echocardiography in Hypertrophic Cardiomyopathy

Join this session to review echocardiography techniques used in diagnosing and monitoring HCM, including an illustrative patient case and practical tips.



## **Matthew Martinez, MD\***

Director of Sports Cardiology and  
Hypertrophic Cardiomyopathy,  
Atlantic Health System  
Morristown, NJ

**June 24, 2023**  
**5:15 PM–6:15 PM ET**  
**Theater #2 on the**  
**exhibit hall floor**

\*Speaker is compensated by Bristol Myers Squibb.  
HCM=hypertrophic cardiomyopathy.

This session is not part of the official ASE 2023 Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

This event does not qualify for continuing medical education (CME) credit.

This program is sponsored by Bristol Myers Squibb.

**PHILIPS**



# Join us for a Science & Technology Theater event

**Experts sharing insights: how innovative imaging technologies are transforming patient care**

Join clinical leaders to explore the latest 2D and 3D complete imaging solutions and gain insights into the present and future of echocardiography.

**Speakers:**

Dr. Nadira Hamid  
Dr. Jennifer Liu  
Dr. David Liang

**Sunday, June 25th**

**12:15 – 1:15 pm**

**Science & Technology Theater #1**

**Chairperson:**

Dr. Rebecca Hahn



# THE IMPORTANCE OF IMAGING TECHNIQUES TO SUSPECT, DIAGNOSE, AND TREAT ATTR-CM

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**Sunday, June 25, 2023  
12:45 pm- 1:45 pm**

ATTR-CM is a serious, underrecognized, and underdiagnosed cause of heart failure. Join us to help raise awareness of the signs and symptoms of ATTR-CM and the role of cardiac health professionals in suspecting, diagnosing, and confirming ATTR-CM and review a treatment option for patients with ATTR-CM.

**Science & Technology Theater #2  
Gaylord National Resort & Convention Center**

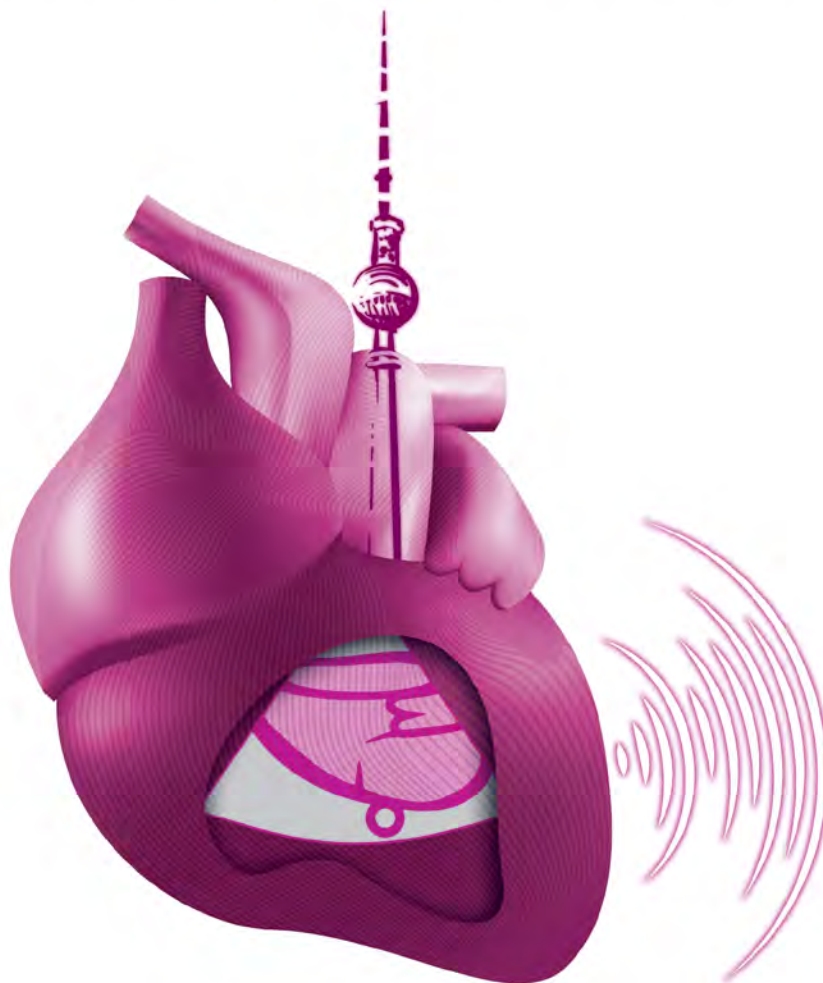
*This session is not part of the official ASE 2023 Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE. This event does not qualify for continuing medical education (CME) credit.*



**EACVI**  
European Association of  
Cardiovascular Imaging

# EuroEcho 2024

THE LEADING ECHOCARDIOGRAPHY CONGRESS



**29 May - 1 June**  
**Berlin, Germany**

**24<sup>th</sup> Annual Congress**  
of the EACVI  
[escardio.org/EACVI](https://escardio.org/EACVI)

**#EuroEcho**



**ESC**  
European Society  
of Cardiology

## EXHIBITOR LOCATION LISTED ALPHABETICALLY

Company	Booth
Abbott	634
AGFA HealthCare*	722
Agitated Solutions Inc.	334
American Heart Association® – Target: Aortic Stenosis™	716
ASE	423
ASE's ImageGuideEcho Registry	531
Biodex, A Part of Mirion Medical	614
Bracco Diagnostics*	603
Bristol Myers Squibb*	328, 636
CardiaLine	712
Cardiovascular Credentialing International (CCI)	629
Cardon Rehab	709
Children's Hospital of Colorado	637
Core Sound Imaging	515
CorVitals, Inc.	714
CS Medical LLC	612
EchoNous	703
Egg Medical	214
Epsilon Imaging	335
European Association of Cardiovascular Imaging (EACVI)	535
Freeland Systems	616
FUJIFILM Healthcare Americas Corporation	312
GE Healthcare	405

Company	Booth
HeartLab	341
Heritage Medical Products Inc	617
Intersocietal Accreditation Commission (IAC)*	628
Janssen	606
Joint Review Committee on Education in Diagnostic Medical Sonography	216
Lantheus	523
Mayo Clinic Cardiovascular Education	623
Medis Medical Imaging Systems	713
National Board of Echocardiography	529
NovaSignal	728
Nuance Communications	441
Pfizer	322
Philips	103
Pie Medical Imaging BV	717
Probo Medical	635
ScImage, Inc.	337
Sectra	615
Siemens Healthineers*	302
Surgical Science, Symbionix Simulators	613
The Alliance for Physician Certification and Advancement (APCA)	715
Ultromics, Inc.	505
UW Health	707
Vave Health, Inc.	604
Visura Technologies	513
Wolters Kluwer	212

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2530 Meridian Parkway  
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Email: [ASE@ASEcho.org](mailto:ASE@ASEcho.org)  
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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. We advocate the use of ultrasound to provide an exceptional view of the cardiovascular system to enhance patient care. ASE membership is open to all echo enthusiasts. Join the most important voice in cardiovascular ultrasound!

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[Intersocietal.org](http://Intersocietal.org)

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United States  
443-973-3251

[JRCDMS.org](http://JRCDMS.org)

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800-943-1709  
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Bloomington, MN 55437  
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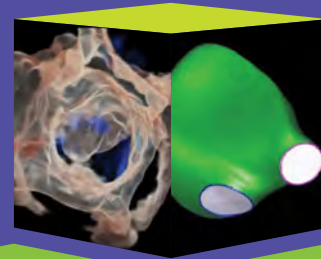
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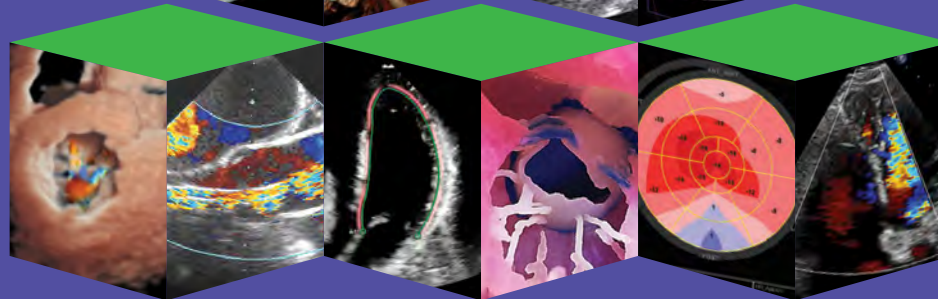
# ASE2023



## ORIGINAL SCIENCE

The annual showcase of investigators from around the world presenting cutting-edge original research on the latest advances in cardiovascular ultrasound and cases illustrating evolutions in patient care is a highlight of ASE's Annual Scientific Sessions.

Please visit [ASEcho.org/2023Abstracts](https://ASEcho.org/2023Abstracts) to see all the original science abstracts.



## CLINICAL CASES

- Adult Patient Cases
- Critical Care Cases **NEW!**
- Pediatric & Congenital Patient Cases
- Multi-Modality Cases **NEW!**
- My Best Heart Team Cases **NEW!**
- Veterinary Medicine Cases

- Ischemic Heart Disease
- Pediatric Congenital Heart Disease
- Valvular Heart Disease: Aortic
- Valvular Heart Disease: Mitral
- Valvular Heart Disease: Tricuspid & Pulmonic
- Veterinary / Comparative Medicine

## ORIGINAL SCIENCE – DISEASE/ PATHOLOGY-BASED

- Adult Congenital Heart Disease
- Athlete's Heart
- Cardio-Oncology
- Critical Illness **NEW!**
- Cardio-Obstetrics **NEW!**
- Diseases of the Aorta / Vascular Diseases
- Echocardiography in SOE / Arrhythmias / Atrial Function
- Echocardiography in Systemic Diseases (DM, HTN, Obesity) / Pericardial Disease
- Echocardiography in Myocardial Disease (HCM, Amyloidosis, Sarcoidosis, Chagas)
- Adult & Pediatric Heart Failure / Transplant / Other

## ORIGINAL SCIENCE – TECHNIQUE/PROCEDURE-BASED

- 3D Echocardiography
- Artificial Intelligence / Machine Learning
- Contrast Echocardiography
- Doppler / Hemodynamics
- Perioperative Echocardiography **NEW!**
- Interventional Echocardiography (Operating Room and Interventional Lab) **NEW!**
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- Multi-Modality Imaging **NEW!**
- Quality / Practice Improvement / Education
- Ventricular Function / Myocardial Mechanics
- Value of Echocardiography (Quality & Cost) / Outcomes / Comparative Effectiveness

**ASE gratefully acknowledges the following individuals for their contribution to the 34<sup>th</sup> Annual ASE Scientific Sessions as an Abstract Grader.**

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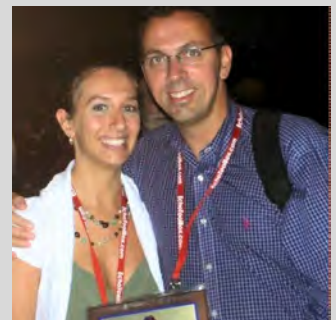
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# Congratulations to Dr. Allan Klein



## 2023 ASE Mentorship Award Recipient

The National Board of Echocardiography is delighted to recognize Allan Klein, MD, FASE. He is NBE's current Secretary/Treasurer and is a long-time esteemed member of the ASCeXAM® Writing Committee. Dr. Klein recently mentioned what inspired him to pursue a career in the echocardiography field. He stated, *"My inspiration was my parents, Jean, and Sam Klein. My career was shaped by intellectual pursuit and to help patients get better."* We celebrate his dedication to ASE and extend our sincerest appreciation for his years of service. NBE shares ASE's continued dedication to quality in echocardiography.



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ECHOCARDIOGRAPHY

# Join the ASE Foundation at **ASE 2023**

Saturday, June 24 - Monday, June 26. Stop by and see us!



## Cardiovascular Challenge Friday, June 23 - Monday, June 26 at 12 PM

Get up and moving! Track your steps taken during the weekend. Log your step totals each day and post on social media – be sure to tag @ASE360 and our sponsors: @agfahealthcare\_, Bracco Diagnostics, @bmsnews, @IACaccred, @MayoClinic, @SiemensHealth, and @UltraSightAI with #CVChallenge.



## IMAGES FROM THE HEART PHOTOGRAPHS Saturday, June 24 - Monday, June 26

Stop by the ASE Foundation Booth to view breathtaking photographs from previous year's curated exhibits. All photos on site are available to take home with a donation in the name of the photographer.



## 14th Annual Research Awards Gala Sunday, June 25 from 6:30 - 11:00 PM

Celebrate ASE's 2023 Award Winners and support cardiovascular ultrasound research at our All the Colors of the World Gala. *Advanced tickets required.*

The ASE Scientific Sessions is ASEF's largest fundraising weekend. *Stop by the ASEF Booth to make your donation.*



**ASE** Foundation ANNUAL APPEAL

Making a **WORLD** of Difference

ASEFoundation.org

# 14<sup>TH</sup> ANNUAL RESEARCH AWARDS GALA

PRESENTED BY THE ASE FOUNDATION



ALL THE  
COLORS  
OF THE  
WORLD

SUNDAY  
JUNE 25, 2023  
6:30 – 11:00 PM

GAYLORD NATIONAL RESORT  
& CONVENTION CENTER

A magical evening to celebrate cardiovascular ultrasound research  
and honor ASE's 2023 award recipients. *Advance tickets required.*

[ASEFoundation.org/Gala2023](https://ASEFoundation.org/Gala2023)



ASE is the Society for Cardiovascular Ultrasound Professionals™. It is the largest global organization for cardiovascular ultrasound imaging serving physicians, sonographers, nurses, veterinarians, and scientists and as such is the leader and advocate, setting practice standards and guidelines for the field. The Society is committed to advancing cardiovascular ultrasound to improve lives. For more information about ASE, visit: [ASEcho.org](http://ASEcho.org) and follow us [@ASE360](https://twitter.com/ASE360).

## ASE MEMBERSHIP

ASE is an organization that is open to all echo enthusiasts. It serves its members in numerous ways by providing education, advocacy, research, practice guidelines, and a community for their profession. ASE membership includes over \$750 of FREE CME credits a year, in addition to discounts on all ASE educational courses and products. Members also receive a monthly subscription to the *Journal of the American Society of Echocardiography* (JASE), access to CASE, ASE's online case reports journal, monthly *Echo Magazine*, assistance with coding and reimbursement issues, mentoring and networking opportunities, and other career resources. If you are not already a member of ASE, visit the ASE Booth in the Echo Expo to join today or join online at [ASEcho.org/Join](http://ASEcho.org/Join).

## ASE COUNCILS AND SPECIALTY INTEREST GROUPS

ASE has six councils that provide members with an opportunity to be involved with one or more subspecialty group to enhance their careers and knowledge. Council membership is free.

- Cardiovascular Sonography
- Circulation & Vascular Ultrasound
- Critical Care Echocardiography
- Interventional Echocardiography
- Pediatric and Congenital Heart Disease
- Perioperative Echocardiography

Specialty Interest Groups (SIGs) support members who have a common interest in specialized areas with growth potential in cardiovascular ultrasound. There are currently four SIGs that members can join for free.

- Cardio-Oncology
- Emerging Echo Enthusiasts
- Neonatal Hemodynamics TnECHO
- Veterinary

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This prestigious designation is only conferred upon a peer review of credentials specific to the field of cardiovascular ultrasound. ASE is proud to recognize these members for their dedication and accomplishments. Listed below are the 128 new FASE members who achieved this designation between June 2022 and April 2023. For a complete list of FASE, please visit [SeeMyHeart.org](https://www.seeMyHeart.org). Learn more about applying for FASE at [ASEcho.org/FASE](https://www.ASEcho.org/FASE).

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# ASE Foundation

The ASE Foundation (ASEF) is ASE's charitable arm, helping to assure the viability and visibility of cardiovascular ultrasound. Every dollar raised through the Foundation's Annual Appeal goes directly back out into the field. The Foundation conducts an Annual Appeal each year soliciting individuals, companies, and foundations to support its efforts. The ASE Foundation met 119% of its \$225,000 fundraising goal for the 2022 Annual Appeal, raising \$266,726. All contributions to the Foundation received in 2022 will support the following initiatives:

- Global Health Outreach
- Patient Engagement
- Research
- Travel Grants & Scholarships

Stop by the ASE Foundation booth, located in the Maryland Ballroom Lobby to:

- Learn more about fundraising events being hosted in National Harbor, such as the Annual Research Awards Gala and the Cardiovascular Challenge.
- View photos from past curated exhibits showcasing outreach event pictures.
- Pick up your "I GAVE TODAY" badge.
- Inquire about volunteer opportunities.
- Purchase an ASEF bracelet.

The Foundation booth will be open the following hours:

- Saturday, 9:00 AM – 4:30 PM
- Sunday, 9:00 AM – 3:30 PM
- Monday, 9:00 AM – 3:00 PM

Look for ASEF Annual Appeal Committee members with an "Ask Me" button, as they are dedicated donors who serve the organization by directly soliciting donations from others. Donate today and help us to make a world of difference!

## CARDIOVASCULAR CHALLENGE

Compete with your feet and get moving with the ASE Foundation Cardiovascular Challenge. Sign up to participate at the ASEF Booth in the Maryland Ballroom Lobby, then record your steps taken every day and log them at the booth. The top three steppers will win Amazon gift cards! The person with the most steps overall will receive \$200, second place will receive \$100, and the person with the third highest step count will receive \$75. The winners will be announced Monday, June 26, at 1:00 PM in the Echo Expo.

Special thanks to our 2023 Cardiovascular Challenge sponsors: AGFA Healthcare, Bracco Diagnostics, Bristol Myers Squibb, Intersocietal Accreditation Commission (IAC), Mayo Clinic, Siemens Healthineers, and UltraSight.



## IMAGES FROM THE HEART PHOTOGRAPHS

Stop by the ASE Foundation Booth from Saturday – Monday to view breath-taking photographs from previous year's curated exhibits. All photos on site are available to take home with a donation in the name of the photographer.

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# THANK YOU – CUMULATIVE GIVING RECOGNITION

This list recognizes cumulative giving from individual donors as of December 31, 2022. Cumulative giving levels are updated annually at the conclusion of that year's Annual Appeal. These all-star donors deserve a round of applause for their support of cardiovascular ultrasound.

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Qiong Zhao, MD, PhD, FASE  
Karen Zimmerman, BS, ACS, RDCS (AE, PE), RVT, FASE

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*\*Denotes an ASE Foundation sustainer*

*\*\*This list reflects all donations of \$50 or more made to the 2021 Annual Appeal between 1/1/2022 and 12/31/2022*

*We strive to be accurate and complete, but errors occasionally occur. Your assistance in bringing any inaccuracies to our attention is greatly appreciated.*



# CELEBRATING 25 YEARS

## *of quality patient care in Echocardiography*

*IAC & ASE Recognize Facilities for Their Long-Term Commitment to the Performance and Interpretation of Quality Echocardiograms*

In celebration of its 25-year anniversary of granting accreditation to echocardiography facilities, IAC launched an accreditation milestone recognition program for facilities achieving a long-time commitment to quality patient care. **Facilities honored include those that first achieved accreditation at least 20 years ago and currently hold IAC accreditation in 2023.**

In 1997, the Intersocietal Commission for the Accreditation of Echocardiography Laboratories (ICAEL) was incorporated as a nonprofit organization, with the goal of providing the field of echocardiography an independent, objective evaluation for process improvement. The purpose was to help facilities standardize their processes to provide better patient care and improved outcomes.

All stakeholders with an interest in ensuring quality imaging studies and patient safety – including clinicians, the related medical societies who serve as sponsoring organizations and insurers – had confidence that participation in the accreditation process would lead to better patient care.

*“We are proud to recognize long-time accredited echocardiography facilities through the new milestone recognition program. Since being incorporated in 1997 as ICAEL, we (now IAC Echocardiography) have helped thousands of facilities standardize their processes to provide better patient care and improved outcomes. As we celebrate 25 years of accrediting echocardiography facilities, the recognized facilities are true champions of accreditation,” said Mary Lally, MS, CAE, CEO of the IAC.*



### **25-Year Silver Recipients**

Currently accredited facilities that received the 25-Year Silver Accreditation Milestone: **46**

*\*Recipients are listed alphabetically to the right.*



### **20-Year Bronze Recipients**

Currently accredited facilities that received the 20-Year Silver Accreditation Milestone: **336**

View a list of recipients at [intersocietal.org/echo-milestone](https://intersocietal.org/echo-milestone)

More than 2,800 facilities across the U.S. and Canada are currently accredited in Adult or Pediatric Echocardiography accreditation.

**The recognized group of facilities celebrating 20 or 25 years of excellence make up a truly remarkable group of facilities dedicated to quality patient care!**



## Silver Accreditation Milestone Recipients

IAC and ASE are proud to recognize the following accredited facilities for demonstrating a **25-year commitment to quality patient care in Echocardiography**:

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**Avera McKennan Hospital & University Health Center**  
Sioux Falls, SD

**Baptist Health Louisville**  
Louisville, KY

**Baptist Hospital of Miami**  
Miami, FL

**Baylor St. Luke's Medical Center**  
Houston, TX

**Bryan Medical Center**  
Lincoln, NE

**Cardiologists of Lubbock Member of Texas Physicians Group**  
Lubbock, TX

**Cardiology Consultants of Philadelphia**  
E. Norriton, PA

**CentraCare Heart and Vascular Center**  
St. Cloud, MN

**CHAS Physician Services, LLC**  
Macon, MO

**Children's Healthcare of Atlanta at Egleston**  
Atlanta, GA

**Children's Hospital of Michigan**  
Detroit, MI

**Cincinnati Children's Hospital Medical Center**  
Cincinnati, OH

**Danbury Hospital**  
Danbury, CT

**Edward W Sparrow Hospital Association  
d-b-a Thoracic and Cardiovascular Institute**  
Lansing, MI

**Hartford HealthCare Medical Group Specialists, LLC**  
Branford, CT

**Hartford Hospital**  
Hartford, CT

**Heart and Vascular Center of Lake County**  
Gurnee, IL

**Iowa Heart Center**  
West Des Moines, IA

**Johns Hopkins All Children's Hospital, Inc**  
St. Petersburg, FL



**In their words ...** Long-time accredited echocardiography facilities share what accreditation has meant to their facility:

*"By maintaining IAC Echocardiography accreditation at Mary Rutan Hospital, it acknowledges our dedication and commitment to providing the highest quality care to every patient that enters our doors. We hold ourselves to these high standards to meet the cardiovascular needs of our community and is a testament to who we are as an organization in delivering top-notch health care."*

**Troy Toops, MHA, RT(N), CNMT, RCIS**  
**Mary Rutan Hospital | Bellefontaine, OH**  
 Accredited by IAC Adult Echocardiography Since 1998

*"The explosion of technological advances in Doppler echocardiography over the past 25 years is both exciting and daunting at the same time. Decisions concerning whether and when to introduce novel technologies and clinical applications are often challenging. IAC accreditation constitutes a valuable filter that ensures adoption of evolving methodologies which are considered essential for a laboratory to maintain 'cutting-edge' status in the field."*

**Richard Marcus, MD**  
**Iowa Heart Center | West Des Moines, IA**  
 Accredited by IAC in Adult Echocardiography (Since 1998)

*"Savannah Children's Heart Center has been continuously accredited for 25 years. The dedication and passion of our physicians and sonographers has attributed to our success. We have an amazing team! The IAC has been there throughout the years to help us stay streamlined and focused on the quality of each and every study."*

**Betsy Hinz, BS, RDCS**  
**Savannah Children's Heart Center | Savannah, GA**  
 Accredited by IAC in Pediatric Echocardiography (Since 1998)

**Join these facilities in demonstrating your facility's continuous commitment to quality patient care.** IAC offers accreditation relevant to echocardiography in the following areas:

**Adult Transthoracic**  
**Adult Transesophageal**  
**Adult Stress**  
**Adult Congenital Transthoracic**  
 (New!)

**Pediatric Transthoracic**  
**Pediatric Transesophageal**  
**Fetal**  
**Perioperative Transesophageal**  
 (Coming Soon!)

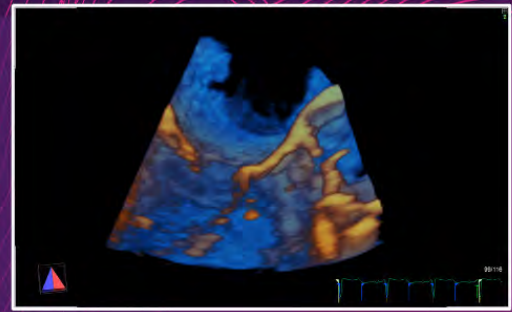
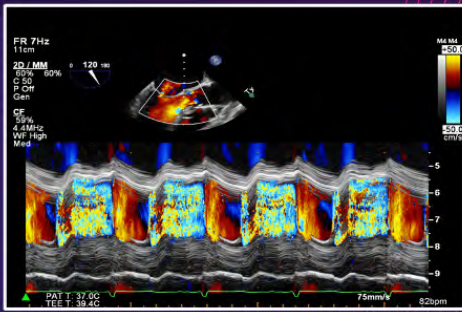
**Visit IAC during ASE 2023**  
**(Booth #628) to learn more!**

- Lankenau Medical Center**  
Wynnewood, PA
- Mary Rutan Hospital**  
Bellefontaine, OH
- Massachusetts General Hospital (Adult & Pediatric Echo Lab)**  
Boston, MA
- Mayo Clinic - Cardiac Ultrasound Imaging and Hemodynamic Laboratories**  
Rochester, MN
- Middlesex Cardiology Associates**  
New Britain, CT
- Monmouth Medical Center**  
Long Branch, NJ
- North Mississippi Medical Center**  
Tupelo, MS
- Northside Hospital**  
Atlanta, GA
- Novant Health New Hanover Regional Medical Center**  
Wilmington, NC
- Piedmont Hospital Fuqua Heart Center**  
Atlanta, GA
- Rihner, Gupta & Grosz Cardiology, PC**  
Mobile, AL
- Savannah Children's Heart Center**  
Savannah, GA
- St. Joseph's Children's Hospital**  
Tampa, FL
- The Johns Hopkins Hospital**  
Baltimore, MD
- Tryon Medical Partners**  
Charlotte, NC
- UnityPoint Health Des Moines-Methodist IMMC**  
Des Moines, IA
- University of Chicago**  
Chicago, IL
- UofL Health - UofL Hospital**  
Louisville, KY
- UPMC Mercy**  
Pittsburgh, PA
- UVA Health**  
Charlottesville, VA
- Valley Children's Hospital**  
Madera, CA
- Vanderbilt University Medical Center**  
Nashville, TN
- Virginia Cardiovascular Specialists**  
Richmond, VA
- Wake Internal Medicine Consultants, Inc.**  
Raleigh, NC
- Wheaton Franciscan Healthcare-Iowa**  
Waterloo, IA
- Wheeling Hospital**  
Wheeling, WV

*\*Qualifying facilities have maintained accreditation for 25 consecutive years as of 2023 or achieved the minimum amount of accreditation cycles in that time period deemed appropriate by IAC to qualify for this recognition.*

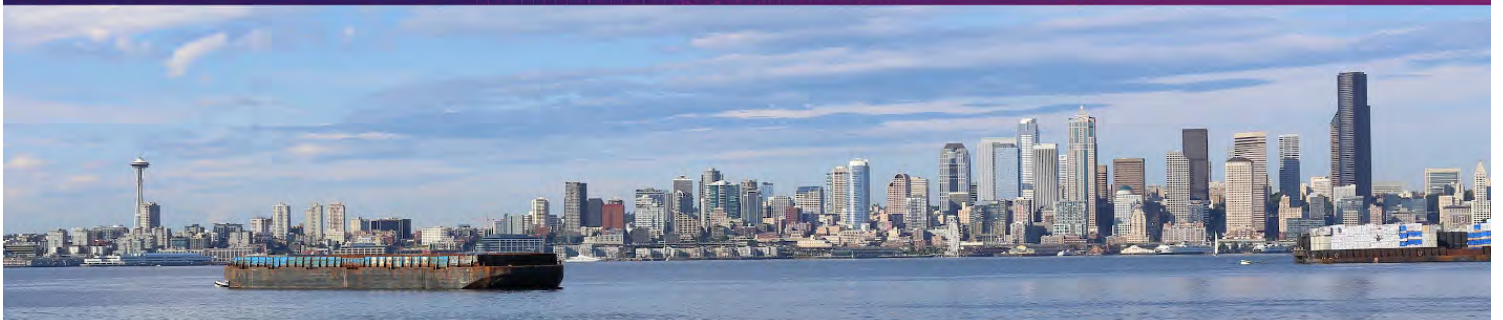
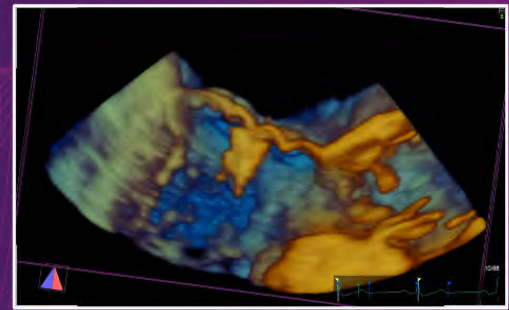


**Bronze Milestone Recipients**  
 IAC also recently recognized facilities earning more than 20 years of accreditation with a **Bronze Milestone Recognition**. Scan the QR code to view the full list of recipients.



**Interested to split your time between a position as Cardiac Sonographer & Researching Imaging Specialist? Join our structural heart team at the University of Washington in Seattle!**

**Please contact Dr. G. Burkhard Mackensen at [gbsmac@uw.edu](mailto:gbsmac@uw.edu) or DM  @gb\_mackensen to learn more about this evolving opportunity.**



**G. Burkhard Mackensen MD PhD FASE FSCAI**  
**Professor & Chair**  
**Allan J. Treuer Endowed Professor of Anesthesiology**  
**Director of Interventional Echocardiography**  
**Adjunct Professor of Medicine**  
**Department of Anesthesiology & Pain Medicine**  
**UNIVERSITY of WASHINGTON**













American Society of Echocardiography

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Discover what's  
possible for patients  
with obstructive HCM

**VISIT  
BOOTH  
328**

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HCM=hypertrophic cardiomyopathy.