American Society of Echocardiography

SE

YEARS OF INNOVATION

Scientific Sessions • June 21-25, 2019 Oregon Convention Center • Portland, OR

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A S E S c i e n t i f i c S e s s i o n s . o r g

FINAL PROGRAM

Yak (Perflutren Lipid Microsphere)

INJECTABLE SUSPENSION

INDICATIONS

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.

CONTRAINDICATIONS

Do not administer DEFINITY® to patients with known or suspected hypersensitivity to perflutren.

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® 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-containing microsphere administration [see Adverse Reactions (6)]. The risk for these reactions may be increased among patients with unstable cardiopulmonary conditions [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 cardiopulmonary disease.

Please see brief summary of Prescribing Information, including boxed WARNING regarding serious cardiopulmonary reactions on subsequent pages. Please see full Prescribing Information at www.DEFINITYimaging.com.

Most¹ Used

Most Studied

Most Trusted

References:

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Embase and Medline Search, May 2018. 3. Data on file, Lantheus Medical Imaging, Inc. 4. Kurt, M, et al. J. Am Coll. Cardiol 2009;53:802-810

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FOR INTRAVENOUS USE

BRIEF SUMMARY

Please see Full Prescribing Information available at www.definityimaging.com for additional information.

WARNING: SERIOUS CARDIOPULMONARY REACTIONS

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

- •Assess all patients for the presence of any condition that
- precludes DEFINITY® administration [*see Contraindications*]. • 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.

DOSING AND ADMINISTRATION

Important Administration Instructions

- DEFINITY[®] is intended for administration only after activation in the VIALMIX[®] apparatus. Before injection, this product must be activated and prepared according to the instructions outlined below.
- DEFINITY[®] may be injected by either an intravenous (IV) bolus or infusion. Do not administer DEFINITY[®] by intraarterial 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

<u>Bolus</u>

The recommended bolus dose for activated DEFINITY® is 10 microliters (microL)/kg of the activated product by intravenous bolus injection within 30-60 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 4.0 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 [see Warnings and Precautions].

WARNINGS AND PRECAUTIONS

Serious Cardiopulmonary Reactions

Serious cardiopulmonary reactions including fatalities have occurred uncommonly during or shortly following perflutrencontaining 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:

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 have occurred in patients with no prior exposure to perflutren-containing microsphere products [see Adverse Reactions]. 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

	DEFIN	
	<u>(N=17</u>	10)
Total Number of Adverse Reactions	269	
Total Number of Subjects with an		
Adverse Reaction	144	(8.4%)
Body system		
Preferred term	n	(%)
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 v DEFINITY®	vho received	activated
•• • • •• •		

 $\ensuremath{\mathsf{n}}\xspace = \ensuremath{\mathsf{N}}\xspace$ news reporting at least one Adverse Reaction

Other adverse reactions that occurred in ${\leq}0.5\%$ 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-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 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

Anaphylactic reaction, anaphylactic shock, bronchospasm, throat tightness, angioedema, edema (pharyngeal, palatal, mouth, peripheral, localized), swelling (face, eye, lip, tongue, upper airway), facial hypoesthesia, rash, urticaria, pruritus, flushing, 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.

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TABLE OF CONTENTS

PROGRAM INFORMATION

Conference Overview7
Welcome Message9
ASE 2019 Program Committee10
Scientific Program Tracks and Key11
Registration Information12
Claiming CME13
Facility Information14
Facility Map
Program Information and Regulations16
Education Information17
Disclosure Information19

FRIDAY, JUNE 21st

Schedule at a Glance	.21
Friday Schedule	.23

SATURDAY, JUNE 22ND

Schedule at a Glance	25
Saturday Schedule	27

SUNDAY, JUNE 23RD

Schedule at a Glance	35
Sunday Schedule	37

MONDAY, JUNE 24TH

Schedule at a Glance	
Monday Schedule	51

TUESDAY, JUNE 25TH

Schedule at a Glance	59
Tuesday Schedule	61

SPECIAL EVENTS

Special Events and Networking Opportunities	69
ASE Foundation Awards and Grants	76

EXHIBITS

Exhibit & Poster Hall Floorplan	.80
Exhibit & Poster Hall Hours	.81
Science & Technology Theater Schedule	.81
Exhibitor Assignments	.89
Exhibitor Descriptions	.91

GENERAL INFORMATION

About ASE	103
Officers and Board of Directors	104
Board, Council, and Committee Meetings	106
ASE Foundation	107
ASEF Contributors	108
2018 Annual Appeal Campaign Donors	110
Fellows of the American Society	
of Echocardiography (FASE)	113



PROGRAM INFORMATION

CONFERENCE OVERVIEW



THANK YOU ASE TWITTER CHAMPIONS

#ASE2019

Follow our ASE Twitter Champions as they provide LIVE UPDATES from the 11 Tracks at this year's Scientific Sessions. You can "attend" multiple sessions in real time using Twitter!

CIRCULATION #ASECirculation @AmerJohri @DrMalissaWood	5	ISCHEMIA #ASEIschemia @AllanLKleinMD1	8	PERIOPERATIVE #ASEPeriop @GB_Mackensen @NicoA002
2 EARLY CAREER #ASEEarlyCareer @AkhilNarangMD @LucySafi	6	MYOCARDIUM/ FUNCTION #ASEFunction @Onco_Cardiology	9	POCUS #ASEPOCUS @DRsonosRD
3 IMAGING ESSENTIALS #ASEEssentials @BonitaEcho	7	PEDIATRIC #ASEPeds @DrDorfKidsHeart @MelisWasserman @ShelbyKuttyMD	10	SPECIAL SESSIONS #ASESpecialSessions @SMcCartney31 VALVES
@DDefariaYeh INNOVATION/TECHNOLOGY #ASEIT @PPSengupta1 @Sugeng_Lissa			н	#ASEValves @Hahn_RT @NadeenFaza @RajDoc2005 @TiffChenMD
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#ASE2019 @Ash71US @DavidWienerMD

@DocStrom @ErinMichos

@GWhalleyPhD @HeartDocSharon @IAmRitu @PPibarot

DEAR COLLEAGUES & FRIENDS,

On behalf of the ASE Scientific Sessions Program Committee and the Board of Directors, we welcome you to the beautiful city of Portland to celebrate ASE's Scientific Sessions 30th anniversary!

The role of cardiovascular ultrasound has expanded rapidly and is at the core of modern, high-quality healthcare around the world. For this reason, the theme of this year's meeting, "30 Years of Innovation" is **overarching**, highlighting the complementary strengths of cardiovascular ultrasound at the intersection of imaging, physiology, physiopathology, interventional medicine, and surgery. We are bringing together healthcare providers of many specialties, not only cardiologists and sonographers, but also pediatricians, point of care clinicians, anesthesiologists, interventionalists, vascular specialists, surgeons, veterinarians, nurses, researchers, engineers, and more. Our program committee has created a cutting-edge educational scientific program featuring everything you have come to expect from a premier scientific meeting.

The program starts off on Friday afternoon with four popular workshops, the IAC Bootcamp, Adult Congenital Heart Disease, and Point of Care Ultrasound. This year we have added a special session **"How to Optimize Ultrasound Enhancing Agents in a Busy Echo Lab."** This highly interactive workshop is designed for those who wish to add contrast ultrasound techniques to their practice or enhance their skills. The learning labs on 3D Cropping, 3D Volume/Function, and Myocardial Strain are always full so we have increased the **total number of learning labs to nine**. New options this year include **3D Printing** and **Virtual Reality**. Seats are limited for the learning labs, so if you haven't pre-registered, check at the registration desk for availability.

We have included content for all levels of training, with 117 sessions in 11 tracks over five days. In addition to Imaging Essentials, Circulation, Pediatric/Congenital, Perioperative, and Point of Care, we added five new tracks: **Early Career, Ischemia, Myocardium/Function, Innovation/ Technology, and Valves**. There are also focused sessions on the growing field of interventional echocardiography. We have increased the number of **discussion-based interactive sessions**, with a return of the simulated valve teams and a new format of case-based sessions with a presenter, a discussant, and a panel of experts. To best customize your experience, sessions have been identified with their level of difficulty.

We welcome the **junior conference attendees** and all new members of ASE! Our brand-new **Early Career track** provides six intimate sessions designed just for you. This setting provides an opportunity to interact with our highly accessible leaders, to share your concerns, and to get personal advice directly from them.

State-of-the-art lectures will be given by renowned experts in the field. To cite a few, the 30th Annual Edler Lecture, "Time Flies When You Are Having Fun with Aortic Stenosis," will be presented by Past President **Vera Rigolin, MD, FASE. Sanjiv Shah, MD, FASE**, will deliver the 20th Annual Feigenbaum Lecture on "Echocardiography for Precision Medicine: Digital Biopsy to Deconstruct Biology," and **Matt Bruce, PhD**, will give the Kalmanson Lecture on "Ultrafast Echo: Seeing More with Speed." This year, special guest **Dr. Barbara Natterson-Horowitz**, a *New York Times* bestselling author of the book *Zoobiquity*, will be here to deliver fascinating speeches on "Species-Spanning Echocardiography: Cardiovascular Insights for Humans and Other Animals" and "Not Uniquely Human" and she will be doing a **book signing on Sunday afternoon at the ASE Foundation booth**. Plan to buy this fascinating book and donate to ASEF at the same time!

Showcasing the groundbreaking research and the latest clinical developments remains a core of ASE Scientific Sessions and is featured in many different ways. From the Arthur E. Weyman Young Investigator's Award Competition and Brian Haluska Sonographer Research Award Competition, to our new "Best of CASE: Twitter Competition" and "Advancing the Echo Field: from Abstracts to JASE" presentations, and 476 selected research posters, there is no doubt one of these will amaze you.

If you want to know what the **future of cardiovascular ultrasound** looks like, or how innovation changes the outcomes of our field, then don't miss these sessions, **"Artificial Intelligence in Echocardiography," "Echo Innovation,"** and the popular **"Value Summit."** Two dedicated sessions for women's diseases are offered this year. The focus is on challenging clinical scenarios in women's diseases, such as pregnancy-related cardiovascular disease, spontaneous coronary artery dissection, and heart failure. To highlight our theme of "30 Years of Innovation" and show the full growth of the imaging field, we offer several sessions **focused on multimodality imaging**, including **"MRI for the Echocardiographer," "Ischemia Integration of Echo and Other Modalities," "Integration of Echo in Cardiac Imaging: Dilemmas in Valves and Devices," and "Role of Multimodality in Cardiac Function."**

Last but not least, **Chalk Talks** are also worthy of being highlighted! They feature hot topics—Strain, Diastology, 3D, and Valve guidelines and **"How to Design and Implement a Research Project"** presented by Michael Picard, MD, FASE, Editor-in-Chief of JASE. These discussions will allow in-depth interactions with world-class experts.

The President's Reception on Saturday afternoon and the Closing Reception on Monday evening will be great opportunities for you to network with old and new friends alike. On Sunday evening, dress up for the 10th Annual Research Awards Gala to support the ASE Foundation!

It's a marathon with 520 lectures, 39 symposia, nine learning labs, three debates, five chalk talks, three joint sessions, six early career sessions, two value summit sessions, and more! So, dive into the sessions, soak up the speeches, roll up your sleeves at a workshop, and don't forget to save a little energy for some fun time!

Thank you to our supporters, exhibitors, partners, speakers, and conference attendees for your support and participation. Welcome to Portland!



ASE 2019 Program Chair Marielle Scherrer-Crosbie, MD, PhD, FASE



ASE 2019 Sonographer Co-Chair Lanqi Hua, RDCS, (AE/PE/FE), FASE

ASE 2019 PROGRAM COMMITTEE



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Chair



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Perioperative Council Representative Co-chair

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Joel Turner, MD, MsC Point of Care Representative

Sharon Mulvagh, MD, FASE Member at Large

Jyothy Puthumana, MD, FASE Member at Large

James Thomas, MD, FASE Presidential Liaison



10 #ASE2019

CIRCULATION (c)

ASE's Council on Circulation & Vascular Ultrasound has put together a program that will provide attendees with an excellent overview, as well as advanced topics on vascular ultrasound of interest to the practicing cardiologist/sonographer.

EARLY CAREER (EC)

New for 2019, this track has been designed specifically for fellows in training, and early career physicians and sonographers. The focus will be career development with sessions geared toward helping you effectively navigate the formative years of practice while maximizing the skills you have obtained during your training.

IMAGING ESSENTIALS (E)

ASE's Council on Cardiovascular Sonography has created this track to instruct practitioners on techniques of assessment and quantitation. There are disease-based sessions that will help you improve your skills in imaging, measurements and quantification in a variety of disease states. In addition, there are practical sessions on lab management, diastology, myocardial perfusion, strain, and 3D echo that you can incorporate into your lab when you return home.

INNOVATION/ TECHNOLOGY (IT)

New for 2019, the Innovation/Technology Track has been designed to communicate recent advances that improve quality. Topics include clinically-relevant innovations that improve diagnostic accuracy, quantification, and workflow; and breakthrough cuttingedge technologies that will be used for treating the patients of tomorrow.

ISCHEMIA (I)

New for 2019, the Ischemia Track covers a diverse spectrum inclusive of obstructive and non-obstructive coronary diseases and stress echocardiography. Pericardial sessions have also been included. Sessions will address physiology, pathophysiology, diagnosis, and clinical management using echocardiography and multimodality imaging.

MYOCARDIUM/ FUNCTION (M)

New for 2019, the Myocardium/Function Track addresses the core and advanced competencies of pathologies involving the myocardium and provides an update about standards of care. Included in this track are sessions on cardio-oncology and non-ischemic cardiomyopathies.

PEDIATRIC/ CONGENITAL (PC)

ASE's Council on Pediatric and Congenital Heart Disease has created a program packed with cutting-edge science from fetus to adult that brings together cardiologists, PhDs, engineers, and sonographers with the unifying goal of improving care for those with heart disease. The program will take you on a journey of using echo to predict, diagnose, and treat heart disease by reviewing current standards, learning from experts, and exposing you to what is on the horizon.

PERIOPERATIVE (P)

The Perioperative Track, designed by ASE's Council on Perioperative Echocardiography, brings together cardiac anesthesiologists, sonographers, cardiologists, and surgeons with the goal of sharing knowledge in cardiovascular care and perioperative/ periprocedural echocardiography.

POINT OF CARE (POC)

The Point of Care track focuses on this highly valuable modality that is of critical importance as healthcare practitioners become skilled in the use of point of care ultrasound.

SPECIAL SESSIONS (s)

The 2019 Program Committee has designed the Special Sessions Track to introduce different learning formats to entertain and educate. Join us for the Great Debates, Stump the Stars, Echo Jeopardy, Lessons from the Legends, and more.

VALVES (V)

New for 2019, the Valve Track has been planned with the goal of bringing together the expertise of sonographers, cardiologists, cardiac anesthesiologists, and surgeons to share knowledge in the diagnosis and management of patients with both simple and complex valvular heart disease. The sessions will highlight the role of the newer echocardiography modalities in managing patients with valvular diseases, present and future of percutaneous aortic, mitral, and tricuspid valve therapies, and an overview of structural imaging to complement the perioperative track.

Sessions are identified with the following shapes to assist you in locating education aimed at your level of training.

BASIC/INTERMEDIATE



INTERMEDIATE/ADVANCED



INTERMEDIATE



BASIC/INTERMEDIATE/ADVANCED

ASE is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. For detailed information, please download the ASE Courses app or visit <u>ASEScientificSessions.org</u>.

ATTENDEE REGISTRATION

The ASE Registration Desk is located in the Pre-function C Lobby of the Oregon Convention Center. Attendees may pick up their conference materials and name badge at this location.

REGISTRATION HOURS

Friday, June 21 st	12:00 PM – 6:30 PM
Saturday, June 22 nd	6:30 AM – 5:00 PM
Sunday, June 23 rd	6:30 AM – 5:00 PM
Monday, June 24 th	6:30 AM – 5:30 PM
Tuesday, June 25 th	6:30 AM – 11:30 AM

NAME BADGES

Admission to the educational sessions, ASE Exhibit & Poster Hall, and Science & Technology Theater 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 Exhibit & Poster Hall or Science & Technology Theater. 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 Exhibit & Poster Hall 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 30th 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 room B-116 on Level 1 and staffed with technicians to assist faculty with uploading and previewing presentations. It is open during the following times:

Friday, June 21 st	.12:00 PM – 5:00 PM
Saturday, June 22 nd	.6:00 AM – 4:30 PM
Sunday, June 23rd	.6:30 AM – 4:30 PM
Monday, June 24 th	.6:30 AM – 4:30 PM
Tuesday, June 25 th	.6:30 AM – 9:00 AM

NEWS MEDIA

For information regarding news releases, news conferences, and interviews, please visit the ASE Registration Desk located in the Pre-function C Lobby of the Oregon Convention Center. 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.



CLAIMING CONTINUING EDUCATION CREDIT

To claim your CME credit for the 30th Annual ASE Scientific Sessions, please follow these steps using Mozilla Firefox, Google Chrome, or Safari browsers. **Internet Explorer will not work.**

THE DEADLINE TO CLAIM CREDIT FOR THIS CONFERENCE IS AUGUST 27, 2019.

ASE Members:

- 1. Go to **ASEcho.org** and log on to the Member Portal with your username (email) and password.
 - a. If you forget your password, simply click "Retrieve" under the login.
- 2. Click on ASEUniversity and CME Credits. This will take you directly to your ASEUniversity account.

Nonmembers:

- 1. Go to **ASEUniversity.org**.
- 2. Log into your existing account or create a new one.

To Claim Credit:

- 3. On the ASEUniversity homepage, click My Account at the top right of the page.
- 4. Under My Account, click Add Access Code on the left sidebar and enter the code, **PORTLAND19**.
- 5. Verify your registration information. Please be sure to use the same information that you used to register for the event.
- 6. Once verified, click CE Information tab and Take Exam button to claim your CME credit. CME credits are not earned until the entire evaluation has been completed.
- 7. Your certificate will be available for immediate download and can also be found under My Account in the My Transcripts.

Remember to enter your board number and birthdate if you choose to have your CME credits transferred to accrediting boards. Credits will be transferred to ABIM, ABA, ABP, ARDMS, and CCI. There is a space for this information on the first page of the evaluation.

INTERACTIVE SESSIONS: ASK QUESTIONS

The ASE Courses app 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 going to the appropriate link below or by searching for ASE Courses in the Apple or Google Play store.

iOS: http://apple.co/2oQyI3z

Android: http://bit.ly/2pfalJD

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

- 1. Select "Vote and Ask" on the main screen to access the sessions.
- 2. Select the Session you are attending.
- 3. Select "Ask."
- 4. Enter your question and tap the red symbol in the bottom right corner of the screen.



MOBILE DEVICE USE

We encourage you to use your mobile device to download the new ASE Courses app. After you have downloaded the app, you will have access to the entire meeting program at your fingertips. You can also use the app to ask questions during most of the sessions you attend. Please remember to turn your mobile device to silent or vibrate mode when in the sessions.

INTERNET ACCESS

Complimentary Wi-Fi is available in the Oregon Convention Center. Please use the following log-in information:

Network: ASE2019

Password: IHeartEcho

FACILITY INFORMATION

The Oregon Convention Center's physical address is:

777 NE Martin Luther King Jr Blvd, Portland, OR 97232



GETTING AROUND PORTLAND DURING ASE 2019

This beautiful conference center is located across the river from downtown Portland and easily accessible by the MAX light rail. All registered attendees of ASE 2019 will receive a FREE TriMet MAX Light Rail Pass to use when traveling around Portland.

Make your way to the Oregon Convention Center when you arrive and pick up your pass at the Registration Desk in the Pre-function C Lobby. The Convention Center MAX Station stop on the corner of NE Holladay & Martin Luther King Jr. Boulevard is opposite the entrance to the Oregon Convention Center. The rail stop allows easy, safe access to the facility. Using the MAX light rail is the preferred method of travel for conference attendees located at any of the designated hotels in downtown Portland.

The free TriMet MAX Light Rail Pass will be valid Friday, June 21 through Tuesday, June 25. The free pass will expire at 11:59 PM on Tuesday, June 25. MAX Light Rail is Portland's safe, efficient train system that connects the metro area, Portland International Airport, and the downtown core. Visit **TravelPortland.com/Plan-Your-Trip** for more Portland details.

Please note your hotel's TriMet stop below:

- Courtyard by Marriott, Portland City Center SW 6th & Pine Street (Green Line)
- Hilton Portland Downtown Pioneer Square (Red or Blue Line)
- Paramount Hotel Pioneer Square (Red or Blue Line)
- Portland Marriott City Center Pioneer Square (Red or Blue Line)
- The Benson Hotel SW 6th & Pine Street (Green Line)
- The Duniway Portland Pioneer Square (Red or Blue Line)
- The Nines Mall/SW 5th Avenue (Red or Blue Line)

FIRST AID

An emergency medical professional will be available during the hours of the ASE 2019 meeting, as well as during setup and break down 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 Pre-function C Lobby of the convention center.

LUGGAGE STORAGE

Luggage storage will be available at the Oregon Convention Center Friday-Tuesday in room C-127.

SELF-SERVICE PRINTING CENTER

A self-service printing center is located next to Portland Ballroom 251 on Level 2 in the convention center. Services include computers with internet access and computer printing (both black and white and color, 8.5" x 11" paper only). Copying, faxing, and scanning services are not available onsite. The printing center is open during the hours of our event.

PRINTING AND SHIPPING SERVICES

The Oregon Convention Center does not provide any shipping services. The nearest shipping services are available at FedEx Office Print & Ship Center, located at 1605 NE 7th Avenue. The phone number is 503-284-2129. For more information and directions, please visit their website.

ATMs

You will find three ATMs conveniently located within the Convention Center:

- Gingkoberry Concourse, to the right of the entry doors
- Holladay Lobby, in the elevator alcove
- Exhibit Hall A Lobby

FACILITY MAP



Registration 1

Hall

- 3 Science & **Technology Theater**
 - **4** ASE Foundation Booth
- 6 FASE Lounge

5 Session Rooms

- 7 Speaker Ready Room
- 8 Learning Labs
- 9 Committee Meetings
- **10** ASE Products Booth

2 Exhibit & Poster

FOOD FUNCTIONS

ASE will provide continental breakfast in Pre-function A Lobby (Level 1) and Portland Ballroom Lobby (Level 2), from 6:30 – 7:30 AM daily. Morning and afternoon coffee breaks are available for registered attendees in the Exhibit & Poster Hall on Level 1 on Sunday, June 23 and Monday, June 24 and in Pre-function A Lobby (Level 1) and Portland Ballroom Lobby (Level 2), on Friday, June 21, Saturday, June 22, and Tuesday, June 25. Please refer to the Schedule at a Glance pages for the times of the daily breaks. For those attending the Science & Technology Theater, located in the Exhibit & Poster Hall on Level 1, ASE will provide boxed meals during each lunch session on a first come, first served basis (max. 350 participants). Various refreshments may also be available for the evening sessions. See page 81 of this program for a detailed Science and Technology Theater schedule.

INTERNET ACCESS

Complimentary Wi-Fi is available in the Oregon Convention Center. Please use the following log-in information:

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Password: IHeartEcho

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.

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 2019 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 2019 attendees may take photographs during 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 presenters' request. Use #ASE2019 when posting on social media and be sure to tag @ASE360.

CHILD CARE

Working parents are an integral part of the ASE community. To accommodate families attending with children, ASE is pleased to offer professionally managed and staffed on-site child care services during the main conference days and hours for the 2019 Scientific Sessions. Please visit the ASE Registration Desk if you need child care and have not already made a reservation. For their safety,



children must be accompanied by an adult at all times when they are outside the child care room provided by ASE.

There are two complimentary private nursing suites available at the Oregon Convention Center. These secure suites are located near the ASE Registration Desk on Level 1. The suites are ADA compatible and equipped with standard AC power outlets and USB charger ports.

CHILDREN RULES AND REGULATIONS

All children ages 16 and under must be accompanied at all times by their parent or guardian while in the Oregon 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 Exhibit & Poster Hall while under the supervision of a parent or guardian. However, please note that for their safety children are not allowed in the Exhibit & Poster Hall 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 (0-12 months old) 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.

TARGET AUDIENCE

The ASE 30th Annual 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 oral and poster research presentations offer a broad spectrum of educational opportunities in both large and small group settings. The curriculum is intended to enhance knowledge and performance for adult and pediatric cardiologists, cardiothoracic and vascular surgeons, cardiac anesthesiologists, sonographers, and emergency and critical care physicians, as well as hospitalists, veterinarians, radiologists, research scientists, primary care practitioners, residents and fellows in training, students, and nurses. Attendees are encouraged to interact with available faculty, and also to take advantage of the opportunity to gain new expertise.

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 educational grants from: Abbott, Boston Scientific, Edwards Lifesciences, GE Healthcare, Lantheus Medical Imaging, Inc., and Medtronic.

IN-KIND DONATIONS

This activity is supported in part by in-kind donations from: Canon Medical Systems, FUJIFILM Sonosite, GE Healthcare, Hitachi, Materialise, Inc., Oregon Health & Science University, Philips, Siemens Healthineers, University of Chicago Medicine.

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 guide-lines 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:

- Utilize cardiac and vascular ultrasound for the comprehensive assessment and management of cardiovascular diseases including, but not limited to: valvular heart disease, coronary artery disease, cardiomyopathies, pericardial disease, congenital heart disease, peripheral artery disease, and effects of systemic disease on the heart.
- Incorporate new guideline recommendations into clinical practice.
- Recognize the recent advancements and future direction of cardiac and vascular ultrasound and the impact these advancements may have on patient care.
- Integrate the latest technical developments into clinical practice.
- Employ cardiac ultrasound in pre-procedural, intraprocedural, and post-procedural care of patients in the operating room and catheterization laboratory.
- Delineate how the new changes in the healthcare delivery system affect the private and hospital-based practice of cardiology and cardiovascular imaging.
- Improve quality and workflow in the echocardiography lab through practice-improvement measures.
- Define the role of echo specifically in the guidance of non-surgical procedures.
- Discuss best practices in education for sonographer and physician staff, cardiology fellows, and sonography students and management of echocardiographic laboratories.
- Describe the lab accreditation process and standards for clinical practice and quality improvement.
- Explain the primary uses of echocardiography in the areas of critical care and emergency medicine.
- Apply new technologies such as 3-D and stress echo for advanced assessment of valve disease.
- Integrate qualitative and quantitative echocardiography for better understanding of physiology and anatomy of cardiac surgical patients in order to optimize practice performance and patient outcomes.

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 through the joint providership of the American Society of Echocardiography and the ASE Foundation. ASE is accredited by the ACCME to provide continuing medical education for physicians.

ASE designates the live activity for a maximum of 32.25 AMA PRA Category 1 Credits^m. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

DAILY BREAKDOWN OF CME CREDITS: June 21, 2019 = 4.0June 22, 2019 = 8.75June 23, 2019 = 8.5June 24, 2019 = 7.5June 25, 2019 = 3.5

Successful completion of this CME activity enables the participant to earn up to 32.25 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit.

Successful completion of this CME activity, which includes participation in the activity, with individual assessments of the participant and feedback to the participant, enables the participant to earn up to 21 MOC points in the American Board of Pediatrics' (ABP) Maintenance of Certification (MOC) program. It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABP MOC credit.

Successful completion of this CME activity enables the participant to earn up to 32.25 MOCA[®] points in The American Board of Anesthesiology[®] (ABA) Maintenance of Certification in Anesthesiology Program[®] or "MOCA[®]." It is ASE's responsibility to submit participant completion information to ACCME for the purpose of granting ABA MOCA[®] credit.

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 continuing medical education (CME) credit with the American Medical Association (AMA). European physicians interested in converting *AMA PRA Category 1 Credit*[™] into European CME credit (ECMEC) should contact the UEMS (uems.eu). The National Board of Echocardiography[™] (NBE) requires 15 hours of echocardiography specific CME for both ReASCE[®] and RePTE[®] recertification. This activity contains 32.25 *AMA PRA Category 1 Credits*[™] that can be used toward recertification requirements.

ARDMS, CCI, and Sonography Canada recognize ASE's certificates and have agreed to honor the credit hours toward their registry requirements for sonographers.

All or a portion of this educational activity may meet the CME requirement for IAC Echocardiography accreditation. 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.

DISCLOSURE

The American Society of Echocardiography is committed to ensuring that its educational mission and all educational programs are not influenced by the special interests of any corporation or individual, and its mandate is to retain only those speakers whose financial interests can be effectively resolved to maintain the goals and educational integrity of the program. While a monetary or professional affiliation with a corporation does not necessarily influence a speaker's presentation, the policies of the ACCME require that any relationships that could possibly conflict with the educational value of the program be resolved prior to the educational session and disclosed to the audience. In accordance with these policies, ASE implemented mechanisms prior to the planning and implementation of this CME activity to identify and resolve conflicts of interest for all individuals in a position to control content. Disclosure information is referenced and can be found beginning on page 19 of this program. Maintenance of Certification in Anesthesiology Program® and MOCA® are registered certification marks of the American Board of Anesthesiology[®]. MOCA 2.0[®] is a trademark of the American Board of Anesthesiology[®].



It is the policy of ASE to ensure balance, independence, objectivity, and scientific rigor in all of its educational activities. All speakers at the 30th Annual Scientific Sessions have agreed to the following:

- The information presented to the learner will be unbiased, scientifically balanced and based on best available evidence and best practices in medicine.
- All reasonable clinical alternatives will be presented when making practice recommendations.
- All scientific research referred to, reported, or used in support or justification of patient care recommendations will conform to the generally accepted standards of experimental design, data collection, and analysis.
- To disclose to the audience when products/services are not labeled for the use under discussion or when the products are still under investigation.
- To comply with patient confidentiality requirements as outlined in the Health Insurance Portability and Accountability Act (HIPAA) by removing any and all patient identifiers from presentations.
- Relationships with commercial interests will not influence or bias the presentations and/or planning of the activity.

ASE is committed to resolving all conflicts of interest issues, and its mandate is to retain only those speakers with financial interests that can be reconciled with the goals and educational integrity of the educational program. In accordance with these policies, the ASE implemented mechanisms during the planning and implementation of this CME activity to identify and resolve conflicts of interest for all individuals in a position to control content.

In accordance with this policy and the ACCME, all presenters have indicated whether or not they and/or their spouse/significant other have a relationship with a commercial interest which, in the context of their presentation, may be perceived by the audience as a real or apparent conflict of interest (e.g. ownership of stock, research grant, etc.). The ACCME defines a commercial interest as any proprietary entity producing healthcare goods or services consumed by, or used on patients, with an exception of nonprofit or government organizations and non-healthcare related companies.

The ACCME does not consider providers of clinical services directly to patients to be a commercial interest.

RELATIONSHIP CODES

- 1. SPEAKER/SPEAKERS' BUREAU
- 2. CONSULTANT, ADVISOR
- 3. STOCK OWNERSHIP (NOT INCLUDING STOCKS OWNED IN A MANAGED PORTFOLIO)
- 4. RESEARCH GRANT SUPPORT (INCLUDING GRANTS IN WHICH SPEAKER IS LISTED AS PI)
- 5. EMPLOYMENT AFFILIATION/SPOUSE EMPLOYMENT AFFILIATION
- 6. ROYALTY, PATENTS
- 7. CORPORATE RESEARCH COLLABORATION (INCLUDING TRIALS/ PRODUCT TESTING)
- 8. OTHER (EDUCATOR OR HONORARIA)
- 9. MEMBER DATA SAFETY AND MONITORING BOARD

	Bay Labs (2); ESP Registry Review (1)
Badano, L	GE Healthcare (2)
Banchs. J	
D011001,71	Edwards Lifesciences Surgical (1)
Rhott H	
	Lantheus Medical (2); Bay Labs (2)
	Lantheus Medical (1)
Chirinos, J	
	BMS (2), (4); OPKO Healthcare (2); Ironwood (2); Pfizer (2),
	Akros Pharma (2); Merck (2); Edwards (2); Bayer (2);
Chow. C	Cardio Square Inc. (3); USquaresoft Inc. (3)
	Lantheus Medical Imaging (1)
DeMaria, A	
	Astellas (4)
	Heartflow (4); Bay Labs (2); REAL TIMI 63B (2)
Galderisi, M	
Gillam, L	Edwards Lifesciences (2, 4); Medtronic (4)
	Gilead (4); GE (1); Bracco (2)
	Philips (2); Edwards (2); Medtronic (2); Abbott (2)
Heitner, S	
Hill, J	Phillips Healthcare (1)
Holt. B	
	Harpoon Medical Inc. Core Lab (8)
	Bay Labs Inc. (2)
	Janssen Pharmaceuticals (2)
Kaul, S	Bracco (2); Ultromics (2)
Kim, J	Lantheus (7)
, -	GE Healthcare (4); NovoNordisk (4)
Klein A	
	Lantheus Medical Imaging (1)
	Lantheus Medical Imaging (1) Lantheus Medical Imaging (2)
NIU5ぜ, E	Lanuneus meuicai imaging (2)

Lang, R	Philips Imaging Systems (2)
	Lantheus Medical Imaging (1)
Liel-Cohen, N	
Linder, J	Lantheus (4); GE Lifesciences (4)
	Lantheus Medical Imaging (1)
	Edwards Lifesciences (2), (6); Abbott Vascular (2) Medtronic (1);
	AtriCure (1)
	Philips Healthcare (1); Abbott Healthcare (1)
Mitchell, C	Davies Publishing (6); Elsevier (6); Wolters-Kluwer (6)
Mor-Avi V	W.L. Gore & Associates (4) Bay Labs (2)
	NovoNordisk (2)
	Lantheus (1); Canon (2); Siemens (2)
	Lantheus Medical (1), (2)
	Edwards Lifesciences (1)
	Lantheus Medical Imaging (2)
	Edwards Lifesciences (7); Medtronic (7)
	Bracco (4); Philips (4)
Pruetz, J	NIH (4); The Coulter Foundation (4); L.K. Whittier Foundation (4); Southern California Clinical and Translational Science Institute (4)
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Pruetz, J Puthumana, J Roberson, D Salcedo, E Saric, M Scalia, G Schiller, N Sengupta, P Senior, R	NIH (4); The Coulter Foundation (4); L.K. Whittier Foundation (4); Southern California Clinical and Translational Science Institute (4) Abbott (1) Philips Medical (1) Philips Medical (2) Philips (1); Siemens (2); Medtronic (1) Abbott Vascular (1); GenesisCare (1) Cardiocore (2); HD Medical (2); Echonous (7); GE (7) Heart Sciences (2); Ultromics (2); Kencor Health (2) Bracco (1); Lantheus (1); Philips (1)
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Pruetz, J Puthumana, J Roberson, D Salcedo, E Saric, M Scalia, G Schiller, N Sengupta, P Senior, R Shook, D Stone, M Strachan, M Sugeng, L Thomas, J	NIH (4); The Coulter Foundation (4); L.K. Whittier Foundation (4); Southern California Clinical and Translational Science Institute (4) Abbott (1) Philips Medical (1) Philips Medical (2) Philips (1); Siemens (2); Medtronic (1) Abbott Vascular (1); GenesisCare (1) Cardiocore (2); HD Medical (2); Echonous (7); GE (7) Cardiocore (2); HD Medical (2); Echonous (7); GE (7) Bracco (1); Lantheus (1); Philips (1) Actelion (4); AstraZeneca (4); Corvia (4); Novartis (4); Bayer (4) Edwards (1), (2); Boston Scientific (1); Baylis Medical (1) Lantheus (1) Lantheus (1) Lantheus (1)
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NO FINANCIAL RELATIONSHIP

Abdelmoneim, S; Abraham, C; Abraham, T; Abuzaid, A; Adusumalli, S; Addetia, K; Afonso, L; Albers, A; Alfirevic, A; Allen, S; Anderson, B; Aragam, J; Armour, A; Arntfield, R; Arora, B; Arya, B; Asch, F; Astbury, J; Aurigemma, G; Ayres, N; Barac, A; Barker, P; Beeri, R; Benenstein, R; Bennett, C; Benson, M; Beroukhim, Bertrand, P; R; Bieriq, M; Billick, K; Birk, E; Bolin, E; Border, W: Bremmer, M; Broberg, C; Bruce, M; Bughrara, N; Burbano, N; Burgess, P; Cardim, N; Carlos, J; Chamsi-Pasha, M; Chen, M; Chen, T; Chetrit, M; Cho, G; Churchill, J; Cobey, F; Collins, K; Cohen, M; Cosyns, B; Dal-Bianco, J; Daniels, A; Davidson, B; Defaria Yeh, D; Delling, F; Dent, J; Deo, R; Desai, M; Dillenbeck, A; Donal, E; Donofrio, M; Dorfman, A; D'Ovidio, A; Drake, D; Dragulescu, A; Dudzinski, D; Dversdal, R; Dvir, D; Edvardsen, T; Edwards, N; Eidem, B; Ensing, G; Ermakov, S; Fanola, C; Feigenbaum, H; Feinman, J; Ferrari, V; Fey, B; Finley, A; Flachskampf, F; Fleishman, C; Forsha, D; France, R; Freed, B; Freud, L; Friedberg, M; Frommelt, P; Fuss, C; Garcia, M; Garcia-Sayan, E; Gardin, Ghosal, S; J; Gill, E; Giraud, G; Goldstein, S; Gopal, A; Grimm, R; Gutierrez-Fajardo, P; Ha, J; Hall, M; Harrild, D; Hartsfield-Pugh, M; Hartzel, B; Hays, A; Hersh, A; Hodovan, J; Hogan, W; Hosking, M; Hua, L; Hussain, A; Isselbacher, E; Jaber, W; Jackson, A; Jagasia, D; Janardhanan, R; Jarrett, H; Jewell, J; Joffe, D; Johnson, J; Johri, A; Jolley, M; Jone, P; Kadian-Dodov, K; Kane, B; Kane, G; Katz, W; Kebed, K; Khan, A; Khandheria, B; Kinsara, A; Kirkpatrick, J; Kolias, T; Kort, S; Koulogiannis, K; Kovalchin, J; Kreeger, J; Kronzo, I; Kutty, S; Labovitz, A; Lai, W; Landeck, B; Lanspa, M; Layoun, M; Lefebvre, B; Levin, D; Little, S; Litwin, S; Liu, J; Liu, K; Lopez, L; Lu, J; Mackensen, G; Mahmood, F; Main, M Malkowski, M; Mankad, R; Marcoff, L; Marek, J; Marshall, J; Marwick, T; Marx, G; Maskatia, S; Matsumoto, K; Mayer, S; McCartney, S; Mcgovern, M; McIlwain, E; Medvedofsky, Menteer, JD; D; Menon, S; Mercandetti, J; Mertens, L; Michelfelder, R; Miller-Hance, W; Miller, F; Miller, S; Mohabir, P; Moon-Grady, A; Nagueh, S; Namasivayam, M; Nanda, N; Naqvi, T; Natterson-Horowitz, B; Narang, A; Narayan, H; Natarajan, S; Nesbitt, G; Nguyen, H; Nicoara, A; Nikravan, S; Nkomo, V; Oberhoffer, R; Ogunyankin, K; Okonoboh, P; Olivieri, L; Olson, J; Onishi, T; Orsinelli, M; Pai, S; Panebianco, N; Parashar, S; Parker, M; Parra, D; Parthiban, A; Passeri, J; Patil, P; Pearlman, A; Pearson, K; Pellett, A; Pellikka, P; Peyvandi, S; Phelan, D; Phillip, S; Picard, M; Playford, D; Pislaru, C; Pislaru, S; Poh, K; Powell, A; Prado, A; Prakash, A; Pressman, G; Puchalski, M; Quader, N; Quatromoni, N; Quiroz, R; Radhakrishnan, A; Rangarajan, V; Ranjo, C; Rapoport, L; Reisman, M; Rigolin, V; Riley, A; Rim, S; Ripley, B; Roberts, B; Roberts, M; Robinson, J; Rodrigues, A; Rodriguez, L; Roemer, S; Rose, G; Rose-Felker, K; Rosen, D; Rudski, L; Ryan, T; Rychik, J; Sable, C; Sachdeva, R; Sade, L; Sadeghpour, A; Safi, L; Sami, A; Sanborn, Sanchez, L; D; Schafer, M; Scherrer-Crosbie, M; Schweitzer, M; Scott, N; Sebag, I; Sengupta, S; Seward, J; Shah, S; Shamoun, F; Shea, E; Shen, I; Sherrid, Sheu, R; M; Shrivastava, S; Singh, D; Slesnick, T; Smiseth, O; Song, J; Song, H; Soni-Patel, N; Soslow, J; Spina, S; Srivastava, S; Stachura, M; Stainback, R; Statile, C; Stern, K; Stewart, W Stoddard, M; Strange, G; Strom, J; Swaminathan, M; Tacy, T; Tan, T; Tatum, G; Taub, C; Taylor, C; Taylor, M; Thamman, R; Thankavel, P; Thomas, L; Tison, G; Toptine, J; Umland, M; Van Houten, T; Verrier, E; Venkateshvaran, A; Vieira, M; Villanueva, F; Von Ramm, O; Vorsanger, M; Wahi, S; Wang, D; Wantz, M; Wasserman, M; Weinberg, P; Weiss, R; Welch, T; Wells, B; Wharton, R; Wiener, D; Wiley, B; Win, S; Woo, A; Wood, M; Wright, R; Yamat, M; Young, L; Yucel, E; Zahr, F; Zhu, T; Zimmerman, K; Zoghbi, W

SCHEDULE AT A GLANCE

FRIDAY, JUNE 21st

REGISTRATION OPEN: 12:00 – 6:30 PM					
ROOM	PORTLAND BALLROOM 251	PORTLAND BALLROOM 252	PORTLAND BALLROOM 253-254	PORTLAND BALLROOM 255	
2:00 - 4:00 PM	I How to Optimize Ultrasound Enhancing Agents (Contrast) in a Busy Echo Lab*	Adult Congenital – Pathology*	POC POCUS Extracardiac Imaging Workshop*	E IAC Echocardiography Boot Camp Part 1	
4:00 – 4:15 PM	REFRESHMENT BREAK				
4:15 – 6:15 PM		Adult Congenital Primer*	POC New Frontiers of POCUS*	IAC Echocardiography Boot Camp Part 2	
6:30 - 8:00 PM	SCIENCE & TECHNOLOGY THEATER: HITACHI HEALTHCARE				

* These are ticketed events and an additional fee is required. Please check at the registration desk for availability. For detailed information, please download the ASE Courses app.



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FRIDAY, JUNE 21st SCHEDULE

2:00 PM - 4:00 PM

I How to Optimize Ultrasound Enhancing Agents (Contrast) in a Busy Echo Lab – Portland Ballroom

251 (*Ticketed Event. Additional Fee Required*) *Chairs: B. Davidson, S. Mulvagh, K. Wei*

2:00 PM – 2:10 PM

Bubbles, Settings, and Protocols: What You Need to Know *M. Park*

2:10 PM - 2:20 PM

Optimizing the Echo Image: Artifacts, Tips and Tricks *J. Hodovan*

2:20 PM - 2:30 PM

Contrast Applications in the Echo Lab: Left Ventricular Opacification-Left Ventricular Ejection Fraction, Masses, Regional Wall Motion *S. Mulvagh*

2:30 PM – 2:40 PM

Myocardial Perfusion 101 Bootcamp *K. Wei*

2:40 PM - 2:50 PM

Contrast in Exercise and Pharmacologic Stress (Protocols and Physiology) *R. Senior*

2:50 PM - 3:00 PM

Additive Value of Contrast: Worth the Time to Overcome Administrative Hurdles? *M. Main*

3:00 PM - 3:15 PM

Break

3:15 PM - 4:00 PM

Hands-On Workshop: Left Ventricular Opacification, Myocardial Contrast Echocardiography

2:00 PM - 4:00 PM

Adult Congenital: Pathology Workshop – Portland Ballroom 252 (Ticketed Event. Additional Fee Required)

Chairs: J. Kreeger, D. Defaria Yeh

2:00 PM – 2:20 PM Basic Segmental Anatomy of Congenital Heart Disease *E. Shea*

2:20 PM – 2:40 PM

Evaluation of Intracardiac Shunts *J. Kreeger*

2:40 PM - 3:00 PM

Echocardiography in the Adult Congenital Heart Disease Patient with Tetralogy of Fallot *J. Churchill*

3:00 PM - 3:20 PM

Echocardiographic Evaluation of Systemic Right Ventricle in Transposition of the Great Arteries: Congenitally Corrected Transposition of the Great Arteries, Senning and Mustard Procedure *D. Defaria Yeh*

3:20 PM – 3:40 PM

Echocardiographic Evaluation of the Adult with Single Ventricle *R. Beroukhim*

3:40 PM - 4:00 PM

Question & Answer

2:00 PM - 4:00 PM

POC POCUS Extracardiac Imaging Workshop – Portland Ballroom 253-254 (Ticketed Event.

Additional Fee Required) Chairs: M. Lanspa, J. Turner Learning Lab Assistants: R. Arntfield, M. Benson, P. Boubert, N. Bughrara, R. Dversdal, S. Ghosal, A. Hersh, A. Hussain, A. Jackson, P. Mohabir, S. Nikravan, N. Panebianco, L. Rapoport, M. Stachura, M. Useinovic, B. Wiley

Abdominal Ultrasound L. Rapoport

Lung Ultrasound *P. Mohabir*

Vascular Ultrasound *M. Vorsanger*

2:00 PM - 4:00 PM

IAC Echocardiography Bootcamp - Part 1 – Portland Ballroom 255

Chairs: M. Bremer, P. Burgess, B. Gorman

4:15 PM - 6:15 PM

Adult Congenital Primer – Portland Ballroom 252

(Ticketed Event. Additional Fee Required) Chairs: R. Beroukhim, N. Soni-Patel Learning Lab Assistants: R. Beroukhim, J. Churchill, J. Kreeger, E. Shea, N. Soni-Patel

4:15 PM - 4:45 PM

Scanning the Adult Congenital Patient: Where Do I Begin? *N. Soni-Patel*

FRIDAY, JUNE 21st SCHEDULE

4:45 PM – 6:15 PM

Live Scanning

4:15 PM - 6:15 PM

New Frontiers of POCUS – Portland Ballroom 253-254 (Ticketed Event. Additional Fee Required) Chairs: B. Arya, J. Turner

4:15 PM – 4:25 PM Differentiating POCUS From Conventional Echocardiography *B. Wiley*

4:25 PM – 4:40 PM Multimodality Ultrasound Assessment of Pulmonary Embolism *P. Okonoboh*

4:40 PM – 4:50 PM TEE as POCUS? *R. Arntfield*

4:50 PM – 5:05 PM Question & Answer 5:05 PM - 5:20 PM

OA-12: Focused Cardiac Ultrasound Training for Rural Providers Via Simulation *F. Sheehan*

5:20 PM – 5:30 PM Board Exam for Critical Care Echo: What Does That Mean? *R. Arntfield*

5:30 PM – 5:45 PM POCUS for Airway Assessment and Management *M. Benson*

5:45 PM – 6:00 PM POCUS in the Cardiology Clinic *N. Cardim*

6:00 PM – 6:15 PM Question & Answer

4:15 PM - 6:15 PM

IAC Echocardiography Bootcamp - Part 2 – Portland Ballroom 255

Chairs: M. Bremer, P. Burgess, B. Gorman

Announcing the ASE Foundation's Strategic Plan!

The ASE Board of Directors conducted an in-depth analysis of the healthcare environment and recently created a strategic plan for the ASE Foundation, separate from that of ASE. The vision for the ASE Foundation is to be the driving force for improving health for all through the use of cardiovascular ultrasound. Three goals were established to move the Foundation towards the realization of this envisioned future. We hope you will join us in helping achieve these goals.

GOAL .





Global Outreach: Healthcare workers worldwide have better access to tools and strategies for improvement of cardiovascular health standards through the use of ultrasound.



Foundation's Profile: The Foundation has been recognized as a key force in improving cardiovascular health and access to ultrasound worldwide.



SCHEDULE AT A GLANCE

SATURDAY, JUNE 22ND





For detailed information, please download the ASE Courses app.

ANNOUNCING THE

AWARDS Research Grants for Clinician-Scientist and Engineering Partnerships

Three grants of up to \$200,000 each are available Application opens: April 10, 2019

> Submission deadline: June 30, 2019

> > Earliest start date: October 1, 2019

Designed to support innovative approaches to major clinical problems in cardiovascular ultrasound imaging that can be solved through engineering solutions. Applications must involve research partnerships between clinician-scientists and engineering scientists.

Sponsoring Organizations:



Additional information at ASEFoundation.org/E21ResearchGrant

7:00 AM - 7:45 AM

Fetal Symposium: The Beat Goes On – Portland Ballroom 251

Chairs: M. Donofrio, A. Moon-Grady

7:00 AM – 7:15 AM Too Slow *J. Pruetz*

7:15 AM – 7:30 AM Too Fast *A. Moon-Grady*

7:30 AM – 7:45 AM Challenging Cases *W. Hogan*

7:00 AM - 7:45 AM

 Endocarditis: A Multifaceted Disease – Portland Ballroom 252

Chairs: L. Afonso, W. Katz

7:00 AM – 7:15 AM Infectious Endocarditis *K. Kebed*

7:15 AM – 7:30 AM Noninfectious Endocarditis *M. Vieira*

7:30 AM – 7:45 AM Prosthetic Valve Endocarditis *L. Afonso*

7:00 AM - 7:45 AM

E Hemodynamics: Back to the Basics – Portland Ballroom 253-254

Chairs: B. Anderson, D. Sanborn

7:00 AM – 7:15 AM Principle of Cardiac Hemodynamics: Understanding Flow and Pressure *S. Miller*

7:15 AM – 7:30 AM Challenging Cases: When the Measurements Just Don't Add Up *B. Anderson*

7:30 AM – 7:45 AM High Gradient Puzzles for Prosthesis: Explain It! *K. Zimmerman*

7:00 AM - 7:45 AM

Adapting Novel Technologies and Fields to Clinical Practice – Portland Ballroom 255

Chairs: S. Adusumalli, T. Kolias

7:00 AM – 7:15 AM Using Strain Day-To-Day *J. Banchs*

7:15 AM – 7:30 AM

Cardio-Oncology *A. Barac*

L. Sugeng

7:30 AM – 7:45 AM Incorporating 3D Echocardiography Into Clinical Practice

7:00 AM - 7:45 AM

Quantification of Left Ventricular Function: Is the End in Sight? – Portland Ballroom 256 Chairs: M. Galderisi, S. Goldstein

7:00 AM – 7:15 AM WASE: Worldwide Data to Improve Quantification *F. Asch*

7:15 AM – 7:30 AM Should I Be Using Strain and 3D Routinely? *F. Flachskampf*

7:30 AM – 7:45 AM Overcoming Pitfalls in Quantification *S. Goldstein*

7:00 AM - 7:45 AM

MRI Basics: What the Echocardiographer Needs to Know – C-120 Chair: V. Ferrari. A. Patel

7:00 AM – 7:20 AM Essential Physics *C. Broberg*

7:20 AM – 7:35 AM What to Order for What? *Y. Han*

7:35 AM – 7:45 AM Question & Answer

7:50 AM - 9:45 AM

ASE Awards Presentations, Announcements, FASE Recognition, and 30th Annual Edler Lecture – Exhibit Hall A

Chair: J. Lindner

7:50 AM – 8:00 AM State of ASE *J. Lindner*

8:00 AM – 8:15 AM Board of Directors Induction and Announcements *J. Lindner*

8:15 AM – 8:30 AM FASE Recognition *J. Lindner, G. Tatum*

8:30 AM – 8:50 AM Edler Lecture: Time Flies When You Are Having Fun with Aortic Stenosis *V. Rigolin*

8:50 AM – 9:25 AM ASE Award Presentations and Recognitions *J. Lindner*

9:25 AM – 9:35 AM ASE Foundation Award Presentations and Recognitions *J. Banchs*

9:35 AM – 9:45 AM Incoming President's Address *M. Swaminathan*

10:00 AM - 11:30 AM

Diastology: Lifting the Fog – Exhibit Hall A Chairs: G. Aurigemma, S. Nagueh

10:00 AM – 10:30 AM Case 1: Review of the Guidelines (Different Degrees of Diastolic Dysfunction) *Presenter: L. Marcoff Discussant: L. Gillam*

10:30 AM – 11:00 AM Case 2: When Guidelines Can't Guide (Discrepancies in Diastolic Indices, Indeterminates) *Presenter: A. Abuzaid Discussant: J. Thomas* **11:00 AM – 11:30 AM** Case 3: The Value of Diastolic Stress Test *Presenter: M. Chamsi-Pasha Discussant: J. Oh*

10:00 AM - 11:30 AM

Path-Echo Correlations: Tricuspid Atresia – Portland Ballroom 251

Chairs: C. Broberg, L. Young

10:00 AM – 10:20 AM Pathology *P. Weinberg*

10:20 AM – 10:35 AM Comprehensive Prenatal Assessment *L. Freud*

10:35 AM – 10:50 AM Post-Natal Echo *D. Parra*

10:50 AM – 11:05 AM Echo-MRI Utility Mid and Long-Term *A. Prakash*

11:05 AM – 11:20 AM Long-Term Clinical Outcomes: Case-based *C. Broberg*

11:20 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Comprehensive Evaluation of the Aorta – Portland Ballroom 252

Chairs: C. Fuss, F. Shamoun

10:00 AM – 10:12 AM Everything You Wanted to Know About the Aorta *E. Isselbacher*

10:12 AM – 10:24 AM Multimodality Imaging of the Aorta *C. Fuss*

10:24 AM – 10:36 AM Aortopathies (Marfan, Ehlers-Danlos, Loeys-Dietz Syndrome, Coarctation) *C. Fanola*

10:36 AM – 10:48 AM Vasculitis Involving the Aorta and Branches *F. Shamoun*

10:48 AM – 11:00 AM Pregnancy and the Aorta (Aneurysm and Aortopathies) *A. Albers*

11:00 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Quantitative Assessment of Valvular Disease – Portland Ballroom 253-254

Chairs: M. Strachan, E. Yucel

10:00 AM – 10:15 AM Quantitative Assessment of Mitral Regurgitation *B. Kane*

10:15 AM – 10:30 AM Quantitative Assessment of Mitral Stenosis *I. Sebag*

10:30 AM – 10:45 AM Quantitative Assessment of Aortic Stenosis *D. Bourque*

10:45 AM – 11:00 AM Quantitative Assessment of Aortic Regurgitation *M. Strachan*

11:00 AM – 11:15 AM Fresh Approach for Tricuspid Valve Assessment: 2D vs. 3D *M. Yamat*

11:15 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

 Managing the Unstable Patient – Portland Ballroom 255 Chairs: P. Mohabir, B. Wiley

10:00 AM – 10:20 AM Volume Assessment and the Patient in Shock *M. Stone*

10:20 AM – 10:35 AM POCUS in the Neuro ICU *S. Ghosal*

10:35 AM – 10:50 AM To B or Not To B: Lung B-Lines in the III Patient *J. Turner* **10:50 AM – 11:05 AM** POCUS Assessment for the Dyspneic/Hypoxemic Patient *S. Nikravan*

11:05 AM – 11:20 AM Using POCUS in Cardiac Arrest *N. Bughrara*

11:20 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Aortic Valve Interventions in 2019 – Portland Ballroom 256 Chairs II, Photh A, Niecere

Chairs: H. Bhatt, A. Nicoara

10:00 AM - 10:10 AM

Starting with A Case: An Intermediate Risk Patient with Aortic Stenosis *H. Bhatt*

10:10 AM - 10:25 AM

Preoperative Assessment of the Aortic Valve: Challenges When Applying the Guidelines *A. Patel*

10:25 AM - 10:40 AM

Key Aspects of Echocardiographic Imaging During TAVR and TAVR Valve-In-Valve *G. Mackensen*

10:40 AM - 10:55 AM

All I Need to Know About TAVR Valve-In-Valve for Degenerative Bioprosthetic Surgical Valves: VIVID Registry and Beyond *D. Dvir*

10:55 AM – 11:10 AM Imaging the Complications of TAVR, SAVR, and TAVR Valve-In-Valve *A. Nicoara*

11:10 AM – 11:15 AM Case Presentation: What Actually Happened? *H. Bhatt*

11:15 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

E Leadership Academy (Invitation Only) – C-120 K. Pearson

10:00 AM - 12:00 PM

Learning Lab: 3D Volume and Function – B-119 (Ticketed Event. Additional Fee Required) Chairs: A. Gopal, L. Sugeng

12:30 PM - 2:30 PM

Learning Lab: 3D Cropping – B-119 (*Ticketed Event. Additional Fee Required*) *Chairs: J. Hung, E. Kruse, N. Pandian*

1:00 PM - 2:30 PM

Echo Jeopardy – Exhibit Hall A *Chairs: J. Gorcsan, S. Mankad* Team 1: *K. Billick, M. Saric* Team 2: *A. Davis, L. Sugeng*

Team 3: *G. Aurigemma, J. Mercandetti*

1:00 PM - 2:30 PM

Path-Echo Correlations: Double Outlet Right Ventricle – Portland Ballroom 251 Chairs: A. Dowell, J. Chap.

Chairs: A. Powell, I. Shen

1:00 PM – 1:20 PM Pathology *P. Weinberg*

1:20 PM – 1:35 PM Comprehensive Prenatal Assessment *L. Howley*

1:35 PM – 1:50 PM Post-Operative Multimodality Imaging *A. Powell*

1:50 PM – 2:05 PM Virtual Surgical Planning and 3D Printing *L. Olivieri*

2:05 PM – 2:20 PM Surgical Correction: Some Easy, Some Hard: Case-based *I. Shen*

2:20 PM – 2:30 PM Question & Answer

1:00 PM - 2:30 PM

Bad Things Happen to Good Aortas – Portland Ballroom 252

Chairs: C. Fanola, J. Feinman, A. D'Ovidio

1:00 PM – 1:12 PM Acute Aortic Syndromes *E. Isselbacher*

1:12 PM – 1:24 PM Cardiac Complications of Aortic Dissection *S. Goldstein*

1:24 PM – 1:36 PM Extension of Aortic Dissection to Branch Vessels *R. Quiroz*

1:36 PM – 1:48 PM Transesophageal for Acute Aortic Syndromes and Trauma *M. Hall*

1:48 PM – 2:00 PM Patient Selection for Surgical vs. Endovascular Aorta Repair *C. Abraham*

2:00 PM – 2:30 PM Question & Answer

1:00 PM - 2:30 PM

Stop the Struggles: Assessment of Right Heart – Portland Ballroom 253-254 *Chairs: R. Meece, S. Spina*

1:00 PM – 1:20 PM The Algorithm of Right Ventricular Size and Function Assessment: Guideline Approach *L. Hua*

1:20 PM – 1:40 PM How to Use Novel Technology to Assess Right Ventricular Function: 3D and Strain *D. Sanborn*

1:40 PM – 2:00 PM Contrast for the Right Ventricle *J. Pereira*

2:00 PM – 2:20 PM Echocardiographic Assessment for Pulmonary Hypertension: It's Not Just the Tricuspid Regurgitation *L. Rudski*

2:20 PM – 2:30 PM Question & Answer

1:00 PM - 2:30 PM

Today's Innovations, Tomorrow's Practice of Medicine – Portland Ballroom 255

Chairs: P. Sengupta, F. Villanueva

1:00 PM – 1:15 PM Automation in Echo Analysis *R. Lang*

1:15 PM – 1:30 PM Hybrid Imaging *E. Salcedo*

1:30 PM – 1:45 PM Innovations for Sonographer Workflow and Safety *M. Orsinelli*

1:45 PM – 2:00 PM Artificial Intelligence and Echo: A Perfect Marriage *P. Sengupta*

2:00 PM – 2:15 PM Therapeutic Ultrasound in Cardiovascular Medicine *T. Porter*

2:15 PM – 2:30 PM Question & Answer

1:00 PM - 2:30 PM

Current State of Percutaneous Mitral Valve Therapy – Portland Ballroom 256

Chairs: S. Pislaru, M. Reisman

1:00 PM – 1:15 PM Present and Future of Percutaneous Mitral Therapy *J. Passeri*

1:15 PM – 1:30 PM MitraClip: Intra-Procedural Imaging Tips and Tricks and the Follow-Up Echo *S. Little*

1:30 PM – 1:45 PM Ischemic Mitral Regurgitation: Evaluation and Options (Post COAPT) *M. Reisman*

1:45 PM – 2:00 PM Percutaneous Valve-in-Native Valve, Valve-in-MAC, Valve-in-Ring *G. Mackensen*

2:00 PM – 2:15 PM Percutaneous Repair/Replacement of the Mitral Valve Other Than MitraClip *P. McCarthy* **2:15 PM – 2:30 PM** Question & Answer

1:00 PM - 2:30 PM

EC Leadership Training *(Open to Everyone)* – C-120 Becoming a Perceptive Leader: The Need for Strategic Agility *K. Pearson*

3:00 PM - 4:30 PM

Mitral Regurgitation: Evolving Understanding – Exhibit Hall A

Chairs: G. Nesbitt, D. Orsinelli

3:00 PM - 3:14 PM

Pathophysiology of Degenerative Mitral Regurgitation: New 3D Imaging Insights *L. Gillam*

3:14 PM – 3:28 PM Use of Cardiac Magnetic Resonance in Assessment of Valvular Regurgitation *M. Garcia*

3:28 PM – 3:42 PM Ischemic Mitral Regurgitation *J. Hung*

3:42 PM – 3:56 PM Timing of Intervention for Mitral Regurgitation and Contemporary Surgical Management for Mitral Regurgitation *P. McCarthy*

3:56 PM – 4:10 PM Strain Imaging to Help with Decision Making in Severe Mitral Regurgitation *F. Delling*

4:10 PM – 4:30 PM Question & Answer

3:00 PM - 4:30 PM

Echo Jeopardy (PCHD Council Business Meeting) – Portland Ballroom 251 *Chairs: M. Brook, D. Harrild* Team 1: *S. Menon, S. Peyvandi, C. Taylor* Team 2: *P. Jone, J. Soslow, K. Stern* Team 3: *J. Johnson, R. Oberhoffer, P. Thankavel*

3:00 PM - 4:30 PM

Pericardial Disease: A Forgotten Structure – Portland Ballroom 252

Chairs: B. Hoit, A. Klein

3:00 PM – 3:15 PM Anatomy and Physiology of the Pericardium *B. Cosyns*

3:15 PM - 3:30 PM

Use of Cardiac Imaging to Guide Diagnosis and Management of Pericarditis *M. Desai*

3:30 PM – 3:45 PM Constrictive Pericarditis: Is Echo Sufficient to Diagnose? *T. Welch*

3:45 PM – 4:00 PM Who Needs the Cath Lab? Echo Guided Bedside Pericardiocentesis *G. Kane*

4:00 PM – 4:15 PM Recurrent Pericarditis: How to Treat, When to Refer *A. Klein*

4:15 PM – 4:30 PM Question & Answer

3:00 PM - 4:30 PM

Imager's Role In Interventional Cardiology
– Portland Ballroom 253-254

Chairs: J. Dal-Bianco, K. Horton

3:00 PM – 3:15 PM Guiding Septal Puncture for Left Atrial Appendage Occluder and MitraClip *J. Mercandetti*

3:15 PM – 3:35 PM Pre and Post TAVR Assessment *S. Roemer*

3:35 PM – 3:55 PM 2D and 3D Guidance for MitraClip *J. Dal-Bianco*

3:55 PM – 4:10 PM Complications in Interventional Procedures *K. Horton*

4:10 PM - 4:25 PM

2D and 3D Guidance for Interventional Therapy for Hypertrophic Obstructive Cardiomyopathy *D. Sanborn*

4:25 PM – 4:30 PM

Question & Answer

3:00 PM - 4:30 PM

Early Diagnosis of Disease by Myocardial Deformation Imaging (Joint ASE/EACVI



Session) – **Portland Ballroom 255** *Chairs: L. Badano, J. Thomas*

3:00 PM – 3:15 PM Canary in the Coal Mine: Deformation as An Early Marker of Disease *M. Scherrer-Crosbie*

3:15 PM – 3:30 PM

Strain in Valve Disease *J. Gorcsan*

3:30 PM – 3:45 PM

Strain Imaging for Improved Detection of Ischemia in Coronary Artery Disease and Its Consequences *T. Edvardsen*

3:45 PM - 4:00 PM

Strain in Hypertensive Disease, Hypertrophic Cardiomyopathy, and the Athlete's Heart *D. Phelan*

4:00 PM - 4:15 PM

Deformation and Twist in Heart Failure with Normal Ejection Fraction *O. Smiseth*

4:15 PM – 4:30 PM Question & Answer

3:00 PM - 4:30 PM

Perioperative Use of Echocardiography: Mechanical Support and Transplantation (COPE Council Business Meeting) – Portland Ballroom 256 Chairs: S. Pai Cole, P. Patel

3:00 PM - 3:15 PM

Council on Perioperative Echocardiography Business Meeting *A. Finley*

3:15 PM – 3:30 PM

ECLS and Hybrid Support: What Is the Utility of Echo? *P. Patel*

3:30 PM - 3:45 PM

Echo for Durable Ventricular Assist Devices (LVAD, TAH): What Should I Look for? *S. Pai Cole*

3:45 PM – 4:00 PM

Temporary Mechanical Support: Do We Need TEE to Guide Placement? *M. Hall*

4:00 PM – 4:15 PM Role of Echo During Solid Organ Transplantation *A. Alfirevic*

4:15 PM – 4:30 PM Question & Answer

3:00 PM - 4:30 PM

Meet the ASE Sonographer Leaders – C-120 Hosts: K. Collins, J. Marshall, E. McIlwain, C. Mitchell, M. Park, A. Pellet, S. Phillip, E. Shea, M. Strachan

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ABOUT IAC | The IAC is a nonprofit organization in operation to evaluate and accredit facilities that provide diagnostic imaging and procedure-based modalities, thus improving the quality of patient care provided in private offices, clinics and hospitals where such services are performed. Committed to its mission through a rigorous peer review process, the IAC has granted accreditation to more than 14,000 sites since its inception in 1991. IAC accreditation is widely respected within the medical community, as illustrated by the support of more than 40 national medical societies.

SCHEDULE AT A GLANCE SUNDAY, JUNE 23RD





Visit the GE Healthcare booth 501 to learn about our ultrasound imaging agent

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April 2019 JB65315USc
7:00 AM - 7:50 AM

All Stressed Out: Challenging Stress Echo Cases – Exhibit Hall A

Chairs: B. Anderson, T. Ryan Panelists: P. Knoll, P. Pellikka

7:00 AM – 7:15 AM Ischemic Cases *G. Nesbitt*

7:15 AM – 7:30 AM Non-Ischemic Cases *P. Patil*

7:30 AM – 7:45 AM Contrast-Left Ventricular Opacification/Perfusion Cases *K. Koulogiannis*

7:00 AM - 7:50 AM

Echo Innovation – Portland Ballroom 251 Chairs: A. Dragulescu, S. Kutty

7:00 AM – 7:15 AM Why Is Echo Ripe for Artifical Intelligence? *G. Tison*

7:15 AM – 7:30 AM Machine Learning in Echo *S. Kutty*

7:30 AM – 7:45 AM From Star Wars to Clinical Imaging: Medical Holography *E. Birk*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

POCUS in Extreme Environments and Resource-Limited Countries – Portland Ballroom 252

Chairs: L. Rapoport, R. Weiss

7:00 AM – 7:15 AM POCUS in Resource Limited Countries *M. Stachura*

7:15 AM – 7:30 AM Military Applications of POCUS *A. Hersh* **7:30 AM – 7:45 AM** POCUS in Space *J. Thomas*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

E 3D Echocardiography Fundamentals – Portland Ballroom 253-254 *Chairs: M. Bremer, J. Song*

7:00 AM – 7:15 AM How to Optimize 3D Imaging: Avoiding Artifacts *A. Daniels*

7:15 AM – 7:30 AM How to Assess Mitral Valve and Aortic Valve by 3D Echo? *R. Meece*

7:30 AM – 7:45 AM How to Assess the Right Ventricle and Tricuspid Valve by 3D Echo? *L. Badano*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Comprehensive Assessment and Management of Mitral Stenosis – Portland Ballroom 255

Chairs: S. Sengupta, E. Tucay

7:00 AM – 7:15 AM Cutting Edge in Rheumatic Mitral Stenosis *I. Sebag*

7:15 AM – 7:30 AM Role of Stress Echo in Mitral Stenosis *T. Chen*

7:30 AM – 7:45 AM Echo Guidance for Percutaneous Management of Mitral Stenosis *N. Quader*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Role of Multimodality in Cardiac Function
 – Portland Ballroom 256
 Chairs: V. Ferrari, N. Nanda

7:00 AM – 7:15 AM Non-Ischemic Cardiomyopathy: When Is MRI Needed? *A. Patel*

7:15 AM – 7:30 AM Multimodality Approach to the Right Ventricle *Y. Han*

7:30 AM – 7:45 AM Heart Failure: Can Novel Indices Be Helpful? *V. Ferrari*

7:45 AM – 7:50 AM Question & Answer

8:00 AM - 9:30 AM

Lessons from the Legends – Exhibit Hall A Chairs: A. DeMaria, J. Kisslo

8:00 AM – 8:10 AM Diastology *P. Pellikka*

8:10 AM – 8:20 AM Digital Echo and Artifical Intelligence *H. Feigenbaum*

8:20 AM – 8:30 AM Contrast *S. Kaul*

8:30 AM – 8:40 AM 3D *R. Lang*

8:40 AM – 8:50 AM Valves *L. Gillam*

8:50 AM – 9:00 AM Systolic Function *M. Picard*

9:00 AM – 9:10 AM Echo Research *P. Douglas* **9:10 AM – 9:20 AM** Strengths and Challenges of Echo *J. Kisslo*

9:20 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Logical Cardiac Mechanics Through Echo – Portland Ballroom 251

Chairs: M. Friedberg, P. Frommelt

8:00 AM – 8:15 AM 15 Rapid Fire Abstracts (1 Minute Each)

8:00 AM - 8:01 AM

P1-019: Right Ventricular Free Wall Strain Predicts Functional Capacity in Repaired Tetralogy of Fallot *H. Rodríguez Zanella*

8:01 AM - 8:02 AM

P1-020: Impact of Age on Poor Reverse Right Ventricular Remodeling After Pulmonary Valve Replacement in Tetralogy of Fallot *C. Scott*

8:02 AM - 8:03 AM

P1-021: Rapid Leaflet Expansion is the Main Adaptive Change to Maintain Tricuspid Valve (TV) Competency from Detrimental Remodeling: A Three-dimensional Echocardiography (3DE) Study in a Novel Chronic Right Ventricular (RV) Pressure and Volume Loaded Piglet Model *L. Lin*

8:03 AM - 8:04 AM

P1-022: First-Phase Fractional Area Change is Affected by Ventriculo-Ventricular Interaction in Repaired Tetralogy of Fallot Patients *J. Christensen*

8:04 AM - 8:05 AM

P1-023: Fetal Left Ventricular Strain Analysis: Are High Frame Rate Images Necessary? *A. M. Ferraro*

8:05 AM - 8:06 AM

P1-024: Fetal Cerebrovascular Response to Maternal Hyperoxia: Effects of Cardiac Physiology *S. Peyvandi*

8:06 AM - 8:07 AM

P1-025: Prenatal Features of Ductus Related Branch Pulmonary Stenosis in Fetal Pulmonary Atresia *D. Ngwezi*

8:07 AM - 8:08 AM

P1-026: Decreased Pulmonary Artery Acceleration Time is Associated with Cord Blood Biomarkers of Angiogenesis D. Ansah

8:08 AM - 8:09 AM

P1-027: Use of Tissue Doppler and Strain Imaging as Early Predictors of Fibrosis Development in Pediatric Patients with Hypertrophic Cardiomyopathy M. Gaitonde

8:09 AM - 8:10 AM

P1-028: Aortic Arch Dimensions in Determination of Surgical Approach for Aortic Arch Hypoplasia with Coarctation K. Parikh

8:10 AM - 8:11 AM

P1-029: Hemodynamic and Echocardiographic Predictors During Venoarterial Extracorporeal Membrane Oxygenation Wean in Pediatric Patients - A Multicenter Investigation R. Punn

8:11 AM - 8:12 AM

P1-030: Correlating Pulmonary Hypertension by Echocardiogram with Mortality in Premature Infants with Bronchopulmonary Dysplasia R. Torok

8:12 AM - 8:13 AM

P1-031: Abnormalities of Atrial Mechanics in Fontan Patients R. Loar

8:13 AM - 8:14 AM

P1-032: Integrated Sedation Strategy for Obtaining Echocardiograms in Young Pediatric Patients in a High Complexity Echocardiography Lab J. Lipinski

8:14 AM - 8:15 AM

P1-033: Severity of Aortic Valve Disease Does Not Impact Echo-Derived Left Ventricular Systolic Deformation Indices Through Young Adulthood: Real Time Analysis During Routine Clinical Studies J. Block

8:15 AM - 8:30 AM Diastology: Where Is It Helpful S. Lester

8:30 AM - 8:45 AM Interventricular Dependence M. Friedberg

8:45 AM - 9:00 AM Vortex Imaging

S. Srivastava

9:00 AM - 9:15 AM

Assessing Systemic Vascular Resistance Using Ultrasonic Cardiac **Output Monitors** J. Menteer

9:15 AM - 9:30 AM

Question & Answer

8:00 AM - 9:30 AM

🔽 🐺 Guidelines Galore – Portland Ballroom 252 Chairs: F. Asch. S. Little

8:00 AM - 8:15 AM Native and Prosthetic Valve Regurgitation W. Zoghbi

8:15 AM - 8:30 AM

Contrast Use S. Mulvagh

8:30 AM - 8:45 AM

Aortic Stenosis J. Hung

8:45 AM - 9:00 AM

Chagas F. Asch

9:00 AM - 9:15 AM

Stress in Non-Ischemic Cardiomyopathy P. Pellikka

9:15 AM - 9:30 AM

Question & Answer

8:00 AM - 9:30 AM

E Adult Congenital Heart Disease for Adult Sonographers – Portland Ballroom 253-254

Chairs: A. Sadeghpour, E. Shea

8:00 AM - 8:10 AM

Approaching the Adult with Suspected Congenital Heart Disease: A Basic Approach A. Armour

8:10 AM - 8:30 AM

The Adult with Unrepaired Shunts (ASD/VSD/PDA) J. Mercandetti

8:30 AM - 8:45 AM

Anomalous Coronary Artery N. Soni-Patel

8:45 AM – 9:05 AM Ebstein Anomaly: A New Perspective *D. Defaria Yeh*

9:05 AM – 9:25 AM Tetralogy of Fallot in Adults: Common Complications *M. Cohen*

9:25 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Games of Circulation Thrones! Debate – Portland Ballroom 255

Chairs: R. Quiroz, B. Wells

8:00 AM - 8:30 AM

"The King of the RAS:" Diagnosis of Renal Artery Stenosis: DUPLEX vs. CTA/MRA *A. Harzand*

8:00 AM – 8:30 AM

"The King of the RAS:" Diagnosis of Renal Artery Stenosis: DUPLEX vs. CTA/MRA D. Kadian-Dodov

8:30 AM – 9:00 AM "Plaque's Landing:" Ultrasound Plaque vs. Coronary Calcium Score for Cardiovascular Risk Stratification *V. Nambi*

8:30 AM – 9:00 AM "Plaque's Landing:" Ultrasound Plaque vs. Coronary Calcium Score for Cardiovascular Risk Stratification *M. Ferencick*

9:00 AM – 9:30 AM "POCUS Is Coming:" POCUS for Cardiovascular Screening vs. Full TTE Ultrasound *A. Johri*

9:00 AM - 9:30 AM

"POCUS Is Coming:" POCUS for Cardiovascular Screening vs. Full TTE Ultrasound *M. Lanspa*

8:00 AM - 9:30 AM

Functional Mitral Regurgitation: The Challenge Continues – Portland Ballroom 256

Chairs: D. Drake, W. Jaber

8:00 AM – 8:10 AM Starting with A Case Presentation *M. Hall*

8:10 AM – 8:30 AM Role of Echo in Understanding Mechanism and Grading Severity *J. Astbury*

8:30 AM – 8:50 AM Adjudicating the Data: Repair vs. Replace *D. Drake*

8:50 AM – 9:10 AM What Have We Learned From COAPT? *M. Reisman*

9:10 AM – 9:20 AM Case Presentation: What Actually Happened? *M. Hall*

9:20 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Developing Your Niche As An Early Career Echocardiographer – C-120 *Chairs: C. Mitchell, C. Taub*

8:00 AM – 8:12 AM Becoming the Contrast Expert *H. Leong-Poi*

8:12 AM – 8:24 AM Tips for Success: Becoming An Effective Interventional Echocardiographer *R. Hahn*

8:24 AM – 8:36 AM Education: Can It Become My Main Pathway? *S. Wiegers*

8:36 AM – 8:48 AM Developing Your Research Potential *F. Villanueva*

8:48 AM – 9:00 AM Increasing Your Leadership and Administrative Role *J. Plana*

9:00 AM – 9:30 AM Question & Answer

9:30 AM - 11:30 AM

Learning Lab: 3D Cropping – B-119 (*Ticketed Event. Additional Fee Required*) *Chairs: J. Hung, E. Kruse, N. Pandian*

10:15 AM - 11:45 AM

Y Simulated Heart Valve Team Meeting: Aortic Valve Interventions – Exhibit Hall A

Chairs: R. Hahn, G. Mackensen, M. Reisman Panelists: V. Nkomo, P. Patel

10:15 AM - 10:45 AM

Case 1: Low Flow, Low Gradient Aortic Valve Stenosis: TAVR, SAVR, or No Intervention? *E. Gill*

10:45 AM - 11:15 AM

Case 2: Severe Native Aortic Insufficiency and LVAD: TAVR, Percutaneous Occluder, or SAVR? *R. Sheu*

11:15 AM – 11:45 AM Case 3: Degenerated Bioprosthetic Aortic Valve: Percutaneous Options or REDO Surgery for SAVR? *S. Pislaru*

10:15 AM - 11:45 AM

 Ultrasound in Detection of Subclinical Disease (Joint ASE/EACVI Session)
 – Portland Ballroom 251

Chairs: R. Oberhoffer. M. Puchalski

10:15 AM – 10:35 AM Focus on Cardiomyopathy *J. Kovalchin*

10:35 AM – 10:50 AM Arterial Stiffness: What Does It Mean? *R. Oberhoffer*

10:50 AM – 11:05 AM Optical Coherence Tomography in Kawasaki Disease and Transplant *M. Hosking*

11:05 AM – 11:20 AM Wave Intensity Analysis in Pulmonary Hypertension *M. Schafer*

11:20 AM - 11:35 AM

OA-02: Altered Right Ventricle Pulmonary Arterial Coupling in Children with Pulmonary Hypertension: A Novel Approach to Cardiopulmonary Phenotyping in Pediatrics *P. Levy*

11:35 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

POCUS Training, Quality Assurance, and Accreditation – Portland Ballroom 252 Chairs: A Laboritz, M Labora

Chairs: A. Labovitz, M. Lanspa

10:15 AM – 10:19 AM ASE POCUS Training for the Medical Student *A. Johri*

10:19 AM – 10:23 AM ASE POCUS Training for the Practicing Physician *J. Kirkpatrick*

10:23 AM – 10:27 AM The Non-Cardiologist as the Teacher *N. Panebianco*

10:27 AM – 10:31 AM Online Education for POCUS *M. Stone*

10:31 AM – 11:01 AM WINFOCUS Training *A. Hussain*

11:01 AM – 11:05 AM Panel Discussion: Training

11:05 AM – 11:09 AM POCUS Quality Assurance in Training *R. Dversdal*

11:09 AM – 11:13 AM POCUS Certification *R. Arntfield*

11:13 AM – 11:17 AM POCUS Accreditation *J. Dent*

11:17 AM – 11:45 AM Panel Discussion (QA, Certification, Accreditation)

10:15 AM - 11:45 AM

Complex Adult Congenital Heart Disease for Adult Sonographers – Portland Ballroom 253-254

Chairs: J. Kreeger, D. Defaria Yeh

10:15 AM - 10:30 AM

How to Evaluate Post Transposition of the Great Arteries Repairs: Arterial Switch, Mustard/Senning Operation *J. Kreeger*

10:30 AM - 10:45 AM

Common Complications of Post Transposition of the Great Arteries Repair in Adults (Case-based) *J. Churchill*

10:45 AM - 11:05 AM

Fontan Procedure: Overview *M. Hartsfield-Pugh*

11:05 AM - 11:20 AM

Complications of Post Fontan Procedure in Adults (Case-based) D. Defaria Yeh

11:20 AM – 11:35 AM

CMRI Evaluation of Adult Congenital Heart Disease: Above and Beyond Echocardiogram *R. Beroukhim*

11:35 AM – 11:45 AM Question & Answer

QUESTION & Answer

10:15 AM - 11:45 AM

Hemodynamics and Physiology of Heart Failure with Preserved Ejection Fraction – Portland Ballroom 255

Chairs: S. Mayer, A. Radhakrishnan

10:15 AM - 10:30 AM

Case *S. Win*

10:30 AM - 10:45 AM

Pathophysiology of Diastolic Dysfunction: Hemodynamic Consequences *O. Smiseth*

10:45 AM - 11:00 AM

OA-01: Assessment of Left Ventricular Filling Pressure with Exercise is Independently Associated with All-cause Mortality in a Cohort of 14,446 Patients *C. Luong*

11:00 AM - 11:15 AM

New Methods to Diagnose Heart Failure with Preserved Ejection Fraction *S. Shah*

11:15 AM – 11:35 AM

Debate: Brain Natriuretic Peptide and Ejection Fraction are Adequate to Diagnose Heart Failure with Preserved Ejection Fraction. Do We Need Advanced Echo? *G. Aurigemma, J. Chirinos*

11:35 – 11:45

Question & Answer

10:15 AM - 11:45 AM

Challenges Surrounding the Left Ventricle Outflow Tract in 2019 – Portland Ballroom 256

Chairs: A. Alfirevic, S. Shernan

10:15 AM - 10:35 AM

Left Ventricular Outflow Tract Obstruction in Mitral Valve Surgery *M. Taylor*

10:35 AM - 10:55 AM

Avoiding Left Ventricular Outflow Tract Obstruction After Transcatheter Mitral Replacement (TMVR) *D. Wang*

10:55 AM - 11:05 AM

Treating Hypertrophic Obstructive Cardiomyopathy: Surgical Myectomy Versus Septal Ablation *E. Verrier*

11:05 AM - 11:25 AM

Measuring Gradients Across the Left Ventricular Outflow Tract in the Operating Room or the Cath Lab *F. Cobey*

11:25 AM – 11:45 AM Panel Discussion, Question & Answer

10:15 AM - 11:45 AM

S All You Need To Know About Registries – C-120 Chairs: A. Klein, D. Wiener

10:15 AM – 10:30 AM The ImageGuide Registry: Growt

The ImageGuide Registry: Growth and Capabilities for Nuclear Cardiology *R. Doukky*

10:30 AM – 10:45 AM How to Use Registries in Research *P. Douglas*

10:45 AM – 11:00 AM Registry: A European Experience *M. Galderisi*

11:00 AM – 11:15 AM ImageGuideEcho Registry: The New ASE Registry *S. Nagueh*

11:15 AM – 11:30 AM Connecting Imaging Registries to Outcome Data *D. Playford, G. Strange*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:30 AM

Learning Lab: Virtual Reality – C-124 (*Ticketed Event. Additional Fee Required*) *Chairs: R. Lang, A. Narang*

1:00 PM - 3:00 PM

Learning Lab: Myocardial Strain by Speckle Tracking – B-119

(Ticketed Event. Additional Fee Required) Chairs: B. Khandheria, S. Roemer Learning Lab Assistants: E. Kruse, S. Miller, B. Roberts, M. Schweitzer, M. Strachan, T. Van Houten

1:15 PM - 2:45 PM

Echo Technology at the Cutting Edge of Knowledge – Exhibit Hall A

Chairs: F. Flachskampf, J. Lindner

1:15 PM – 1:18 PM Introduction of Gardin Lecture *J. Lindner*

1:18 PM – 1:38 PM

Gardin Lecture: Species-Spanning Echocardiography: Cardiovascular Insights for Humans and Other Animals *B. Natterson-Horowitz*

1:38 PM – 1:53 PM

Echo as An Endpoint in Clinical Trials: Successes and Pitfalls *N. Weissman*

1:53 PM – 2:08 PM Harnessing Big Echo Data: Novel Methods *P. Sengupta* **2:08 PM – 2:23 PM** Echo as A Tool for Hemodynamic Assessment *G. Cho*

2:23 PM – 2:38 PM Understanding of Congenital Heart Disease Through New Imaging Technology *T. Slesnick*

2:38 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

Pediatric Cardio-Oncology – Portland Ballroom 251 Chairs: W. Border, M. Chen

1:15 PM – 1:30 PM

What Is the Problem? *M. Chen*

1:30 PM – 1:45 PM

How Do You Evaluate It? *W. Border*

1:45 PM - 2:00 PM

Identify the Knowledge Gaps and How to Start Addressing the Problem *H. Narayan*

2:00 PM – 2:15 PM Can I Make A Difference? *K. Rose-Felker*

2:15 PM – 2:30 PM

OA-04: Unique Challenges Associated with A Large Biorepository of Clinical Echocardiograms From A Multicenter Retrospective Cohort of Childhood Cancer Survivors: Lessons Learned From Central Core Lab Analysis *R. Sachdeva*

2:30 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

Advancing the Echo Field: From Abstracts to JASE – Portland Ballroom 252

Chairs: A. Pearlman, M. Picard

1:15 PM - 1:30 PM

Rapid Fire Abstracts : 2 Minutes Per Abstract, 7 Categories

1:15 PM – 1:17 PM

P1-100: Correlation of Internal Jugular and Subclavian Vein Diameter Variation on Bedside Ultrasound with Invasive Right Heart Catheterization *G. Vaidya*

1:17 PM – 1:19 PM

P1-182: Low Intensity Focused Ultrasound Combined with H2O2/ PFP-Loaded Acoustic Phase-Change Nanoparticles for Porcine Coronary Artery Embolism Elimination *Q. Zhou*

1:19 PM - 1:21 PM

P1-188: Prognostic Value of Cardiac Power Output in Patients with Normal Left Ventricular Ejection Fraction Referred for Stress Echocardiography *V. Anand*

1:21 PM - 1:23 PM

P2-001: Prevalence of Clinically Important Abnormalities Found on Transthoracic Echocardiograms Ordered for Finding of Heart Murmur Found on Physical Exam *I. McClelland*

1:23 PM - 1:25 PM

P2-065: Novel Concepts in Theranostics: Magnetic Nanoparticle Embedding Within Ultrasound Contrast Drug Carriers Allows Guidance by Multi-modality Imaging *C. Boswell-Patterson*

1:25 PM - 1:27 PM

P2-094: Evaluation of a Deep-Learning Algorithm Designed to Aid Novice Scanners in Obtaining Diagnostic Quality Echocardiograms *A. Narang*

1:27 PM - 1:29 PM

P2-107: Real-Time Myocardial Perfusion Echocardiography with an Ultrasound Enhancing Agent for the Assessment of Coronary Allograft Vasculopathy in Children and Young Adult Heart Transplant Patients *R. Huang*

1:30 PM - 1:50 PM

How to Design A Research Paper: Strengths and Pitfalls *V. Mor-Avi*

1:50 PM – 2:00 PM

Best Echo Articles of the Past Year: Basic Science *B. Hoit*

2:00 PM – 2:10 PM

Best Echo Articles of the Past Year: Clinical Science *S. Litwin*

2:10 PM – 2:30 PM State of the JASE and Where to Next *M. Picard*

2:30 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

E RELAX! It's Just Diastology – Portland Ballroom 253-254

Chairs: J. Oh, M. Park

1:15 PM - 1:30 PM

New Guidelines Update: Key Points *A. Pellet*

1:30 PM – 1:45 PM

Applying the Guideline (Case-based): the Devil Is in the Details *M. Jankowski*

1:45 PM - 2:00 PM

Assessing Diastolic Function Is Challenging! Atrial Fibrillation, Bundle Branch Blocks, Post-Op, and More *A. Dillenbeck*

2:00 PM - 2:15 PM

Do We Need to Assess Diastolic Function On Everybody? What Does That Mean to Them? *M. Park*

2:15 PM - 2:30 PM

Assessing Diastolic Function By Stress Echo: How and When? *M. Bremer*

2:30 PM – 2:45 PM

Question & Answer

1:15 PM - 2:45 PM

New Advances in Strain – Portland Ballroom 255

Chairs: J. Gorcsan, A. Hays

1:15 PM - 1:30 PM

Strain for Function: Where Are We Headed? (New Technologies) *P. Sengupta*

1:30 PM – 1:45 PM

Strain in Pre-Clinical Models: What They Have Taught Us *C. Pislaru*

1:45 PM – 2:00 PM

OA-03: Global Longitudinal vs. Circumferential Strain to Identify Cardiotoxicity in Women with HER2+ Breast Cancer *M. Esmaeilzadeh*

2:00 PM - 2:15 PM

GLS vs. Strain Rate: Which Is Preferred and When *E. Donal*

2:15 PM - 2:30 PM Standardizing Strain: Can We Unify the Vendors J. Voigt

2:30 PM - 2:45 PM Strain Outside the Left Ventricle (Right Ventricle, Atrial): Do We Need It? T. Kolias

1.15 PM - 2.45 PM

Functional Tricuspid Regurgitation: The Old and The New – Portland Ballroom 256

Chairs: J. Aragam, L. Sade

1:15 PM - 1:30 PM

Functional Tricuspid Regurgitation: Mechanism and Role of Imaging L. Badano

1:30 PM - 1:45 PM

Imaging of the Tricuspid Valve for Procedural Guidance A. Berrebi

1:45 PM - 2:00 PM

Functional Tricuspid Regurgitation: Repair, Replace, or Ignore P. McCarthy

2:00 PM - 2:15 PM

Functional Tricuspid Regurgitation: Percutaneous Approaches to the Tricuspid Valve: Early Feasibility and Beyond R. Hahn

2:15 PM - 2:30 PM

Pacemaker Mediated Tricuspid Regurgitation: Mechanisms and Cases A. Narang

2:30 PM - 2:45 PM **Question & Answer**

1:15 PM - 2:45 PM

😰 Best of CASE: Twitter Competition – C-120 Chairs: S. Mulvagh, M. Swaminathan

Judges: L. Rodriguez, R. Thamman, D. Wiener, K. Zimmerman

1:15 PM - 1:20 PM Introduction of the Competition and the Judges S. Mulvagh

1:20 PM - 1:30 PM Echo Saves The Day: No Contrast Echocardiography Guided Emergency TAVR for Hemodynamic Rescue in Acute Pure Native Aortic Insufficiency N. Hamid

1:30 PM - 1:35 PM

Question & Answer

1:35 PM - 1:45 PM

"I may have tugged a little too hard." A case of traumatic tricuspid valve injury following pacemaker lead extraction. B. Anderson

1:45 PM - 1:50 PM

Question & Answer

1:50 PM - 2:00 PM

Giant Thrombotic Right Coronary Aneurysm in an Infant with Undiagnosed Incomplete Kawasaki Disease and Rapidly Progressive Cardiovascular Collapse C. Ellepola

2:00 PM - 2:05 PM

Question & Answer

2:05 PM - 2:15 PM

Atypical Case of Epicardial Amyloid Mass Without Classical Features of Myocardial Infiltration A. Iver

2:15 PM - 2:20 PM **Question & Answer**

2:20 PM - 2:30 PM Echino? Echo, Yes!

H. Mir

2:30 PM - 2:35 PM **Question & Answer**

2:35 PM - 2:45 PM

Recognition of Competition Finalists, Announcement of Winner M. Swaminathan

3:30 PM - 5:00 PM

🛕 🙀 Role of Imaging for Clinical Decision Making in Patients During and After Cancer Therapy – Exhibit Hall A

Chairs: A. Barac, M. Scherrer-Crosbie

3:30 PM - 4:00 PM

Case 1: Cardiomyopathy with Trastuzumab: How to Follow, When to Treat Presenter: A. Yu Discussant: J. Plana

4:00 PM - 4:30 PM

Case 2: Newer Therapies: Immunotherapy-Induced Myocarditis and TKI-Induced Left Ventricular Dysfunction: Is There a Role for Echo? *Presenter: B. Lefebvre Discussant: J. Liu*

4:30 PM – 5:00 PM Case 3: Cardiomyopathy or Tumor: Role of MRI When Should We Order It? *Presenter: J. Kim Discussant: J. Lopez-Mattei*

3:30 PM - 5:00 PM

Echo Indices as Outcome Predictors in Congenital Heart Disease – Portland Ballroom 251

Chairs: B. Eidem, B. Landeck

3:30 PM – 3:50 PM Year in Review *S. Maskatia*

3:50 PM – 4:05 PM Atrial Mechanics in Congenital Heart Disease *L. Mertens*

4:05 PM – 4:20 PM Do Pretty 3D Pictures Translate to Better Outcomes? *M. Jolley*

4:20 PM – 4:35 PM Ventricular Deformation in Congenital Heart Disease Outcomes *D. Forsha*

4:35 PM – 4:50 PM OA-05: Decreased Reliance on Right Atrial Contraction for Atrial Emptying Predicts Decreased Risk of Adverse Events in Pediatric Pulmonary Hypertension *B. Frank*

4:50 PM – 5:00 PM Question & Answer

3:30 PM - 5:00 PM

Stress Echo: Not just for Coronary Artery Disease. Get with the Guidelines! – Portland Ballroom 252

Chairs: G. Kane, A. Kinsara

3:30 PM – 3:45 PM Hypertrophic Cardiomyopathy *S. Heitner*

3:45 PM – 4:00 PM Valvular: Aortic *P. Bertrand*

4:00 PM – 4:15 PM Valvular: Mitral

S. Luis

4:15 PM – 4:30 PM Diastolic *J. Ha*

4:30 PM – 4:45 PM Pulmonary Hypertension *B. Freed*

4:45 PM – 5:00 PM Question & Answer

3:30 PM - 5:00 PM

Brian Haluska Sonographer Research Award Competition – Portland Ballroom 253-254

Judges: T. Abraham, L. Hua, M. Main, S. Phillip

3:30 PM – 3:35 PM Welcome and Introduction of Judges *T. Abraham*

3:35 PM – 3:45 PM SIA-01: Real Time Myocardial Perfusion Stress Echocardiography:

A Practice Implementation Pilot D. McCullough

3:45 PM - 3:55 PM

SIA-02: Resting Global Myocardial Work Derived from Non-Invasive Left Ventricular Pressure-Strain Loops Discriminates Between True Positive and False Positive Exercise Stress Echocardiography *N. Edwards*

3:55 PM - 4:05 PM

SIA-03: Left Ventricle Longitudinal Excursion in Children Following Heart Transplantation: Utility of Tissue Motion Annular Displacement Index *G. Kadiu*

4:05 PM – 4:15 PM

SIA-04: Fetal Brain Resistance is Abnormal in Neonates with Coarctation of the Aorta Despite Antegrade Aortic Arch Flow *M. Clouse*

4:15 PM – 4:20 PM Introduction of Barbara Natterson-Horowitz, MD *T. Abraham*

4:20 PM – 4:40 PM Not Uniquely Human *B. Natterson-Horowitz*

4:40 PM – 5:00 PM Recognition of Competition Finalists, Announcement of Winner *T. Abraham*

3:30 PM - 5:00 PM

Integration of Echo in Cardiac Imaging: Dilemmas in Valves and Devices – Portland Ballroom 255

Chairs: W. Jaber, W. Stewart Panelists: S. Kort, A. Patel, F. Zahr

3:30 PM – 4:00 PM Case 1: Preparing and Guiding TAVR: Role of CT and Fusion Imaging *E. Gill*

4:00 PM – 4:30 PM Case 2: MitraClip and Valves-in-Valves from a Multimodality Standpoint *S. Mankad*

4:30 PM – 5:00 PM Case 3: Are Multimodalities Necessary in LVADs? *A. Vainrib*

3:30 PM - 5:00 PM

Periprocedural Echocardiography in the Adult with Congenital Heart Disease – Portland Ballroom 256

Chairs: A. Finley, W. Lai

3:30 PM – 3:50 PM Unrepaired Defects: Unexpected Congenital Findings in the Operating Room *N. Burbano*

3:50 PM – 4:10 PM Repaired Defects: How to Best Assess Repaired Congenital Lesions in Adulthood *N. Burbano* 4:10 PM – 4:30 PM

Repairing Defects: What Does A Surgeon Need to Know From Multimodality Imaging? *E. Verrier*

4:30 PM – 4:50 PM Repairing Defects: Procedural Image Guidance for Catheter-Based Interventions in Adult Congenital Disease *D. Joffe*

4:50 PM – 5:00 PM Question & Answer

3:30 PM - 5:00 PM

Learning Lab: ImageGuideEcho[™] Experience ASE's New Registry – B-119 (Registration Required. No Additional Fee)

3:45 PM - 4:45 PM

C Meet the Faculty – C-120 S. Adusumalli, P. Douglas, L. Gillam, J. Kirkpatrick, R. Lang, J. Lindner, J. Oh, M. Picard, V. Rigolin, M. Swaminathan

5:00 PM - 6:30 PM

😫 Stump the Stars – Exhibit Hall A

Chairs: S. Mulvagh, J. Thomas Stars: P. Knoll, N. Pandian, N. Schiller Case Presenters: E. Garcia-Sayan, M. Layoun, S. McCartney, M. Namasivayam, N. Quatromoni, S. Shah

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SCHEDULE AT A GLANCE

MONDAY, JUNE 24TH

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BASIC/INTERMEDIATE

INTERMEDIATE



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ADVANCED

BASIC/INTERMEDIATE/ADVANCED

ImageGuideEcho

A module under the ImageGuideRegistry platform

Registry Events at ASE 2019

Special Session

SUNDAY, JUNE 23

3:30-5:00 PM

ImageGuideEcho: Experience ASE's New Clinical Data Registry Ballroom B-119

Booth Information Sessions

SUNDAY, JUNE 23

9:30 – 10:15 AM ImageGuide Registry Overview and Q&A

2:45-3:30 PM

ImageGuideEcho & Data Collection: How the Registry Captures and Uses Data for Quality Improvement

MONDAY, JUNE 24

9:30–10:15 AM Value of the ImageGuide Registry: How Enrolling Will Positively Impact Your Institution

2:45–3:30 PM ImageGuide Registry Overview and Q&A – Encore Presentation

Visit Booth #415 in the Exhibit and Poster Hall to learn more from the Registry experts.

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7:00 AM - 7:50 AM

V Valvular Involvement in Systemic Disease – Exhibit Hall A

Chairs: J. Dent, M. Malkowski

7:00 AM – 7:15 AM Valvular Disease in Connective Tissue Disease *R. Mankad*

7:15 AM – 7:30 AM Radiation Induced Valve Disease *J. Lopez-Mattei*

7:30 AM – 7:45 AM Carcinoid Valvular Disease *T. Tan*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Cases: What the... TEE Mishaps – Portland Ballroom 251

Chairs: W. Miller-Hance, I. Shen

7:00 AM – 7:15 AM What Did I Miss? *W. Miller-Hance*

7:15 AM – 7:30 AM I Wish I Knew That Before *P. Wong*

7:30 AM – 7:45 AM Challenging Cases D. Singh

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Uses of Echo Around the World – Portland Ballroom 252 Chair: P. Sengupta, C. Taub

7:00 AM – 7:12 AM Mexico *P. Gutierrez-Fajardo*

7:12 AM – 7:24 AM Brazil *A. Rodrigues* 7:24 AM – 7:36 AM Vietnam *H. Nguyen*

7:36 AM – 7:50 AM Experiences in Nepal, India and Ethiopia *N. Liel-Cohen*

7:00 AM - 7:50 AM

E Strain: New Speckle Science for Sonographers – Portland Ballroom 253-254 Chairs: J. Hill, J. Plana

7:00 AM – 7:15 AM The Speckle Science: Mechanism *J. Strom*

7:15 AM – 7:30 AM Strain Imaging: Optimization & Pitfalls *T. Van Houton*

7:30 AM – 7:45 AM Illustrative Cases: Cardio-Oncology, Infiltrative Diseases *L. Sanchez*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Circulation in Women – Portland Ballroom 255 Chairs: T. Naqvi, M. Wood

7:00 AM – 7:15 AM Spontaneous Coronary Artery Dissection *M. Wood*

7:15 AM – 7:30 AM Vasculitis *T. Naqvi*

7:30 AM – 7:45 AM Carotid Artery Fibromuscular Dysplasia and Risk of Stroke *D. Kadian-Dodov*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Cases: Pericardial Disease – Portland Ballroom 256 Chairs: R. Grimm, S. Parashar

7:00 AM – 7:15 AM Pericardial Cysts and Masses *R. Grimm*

7:15 AM – 7:30 AM Atypical (Post Coronary Artery Bypass Grafting) Tamponade *R. Wharton*

7:30 AM – 7:45 AM Differentiating Constriction From Restriction *R. Weiss*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Understanding and Interpreting the Exercise in Stress Echocardiograms – C-120

Chairs: P. Pellikka, T. Ryan

7:00 AM – 7:15 AM Cardiorespiratory Response to Exercise in Heath and Disease *G. Giraud*

7:15 AM – 7:30 AM Understanding and Interpreting the Exercise Data in Stress Echocardiograms *T. Ryan*

7:30 AM – 7:45 AM Question & Answer

8:00 AM - 9:30 AM

😫 Great Debates – Exhibit Hall A Chairs: A. Pearlman, N. Schiller

8:00 AM – 8:15 AM New Diastolic Guidelines: The Diagnosis Is Made: Pro *S. Nagueh*

8:15 AM – 8:30 AM New Diastolic Guidelines: The Fog Thickens: Con *J. Thomas*

8:30 AM – 8:45 AM Global Longitudinal Strain Should Always Be Added to Ejection Fraction in the Evaluation of Left Ventricular Function *T. Marwick* 8:45 AM – 9:00 AM

Global Longitudinal Strain Is Not Needed in the Evaluation of Left Ventricular Function *N. Schiller*

9:00 AM – 9:15 AM Evaluation of Mitral Regurgitation: Echo Is All I Need: Pro *W. Zoghbi*

9:15 AM – 9:30 AM Evaluation of Mitral Regurgitation: Echo Is Not Enough: Con *L. Gillam*

8:00 AM - 9:30 AM

Cuality Improvement – Portland Ballroom 251 Chairs: A. Parthiban. R. Sachdeva

8:00 AM – 8:15 AM Designing and Implementing Echo Quality Improvement Efforts *C. Statile*

8:15 AM – 8:30 AM Assuring Compliance with Quality Metrics *A. Parthiban*

8:30 AM – 8:45 AM Have Quality Improvement Metrics Made Your Lab Better? *S. Natarajan*

8:45 AM – 9:00 AM Multimodality Imaging in Congenital Heart Disease: Appropriate Use Criteria *R. Sachdeva*

9:00 AM – 9:15 AM OA-07: Serial Fetal Echocardiograms in Hypoplastic Left Heart Syndrome Fetuses: Does It Affect Immediate Post-Natal Care *B. Richards*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Artificial Intelligence in Echocardiography: Friend or Foe? – Portland Ballroom 252

Chairs: C. Chow, P. Sengupta

8:00 AM – 8:15 AM Deciphering Artificial Intelligence: Machine Learning, Deep Learning, Neural Networks *C. Chow*

8:15 AM - 8:30 AM

Data Driven Analytics to Improve Echo Understanding *S. Shah*

8:30 AM – 8:45 AM Image Recognition and Automated Interpretation *R. Deo*

8:45 AM – 9:00 AM Can Al Guide Acquisition? *G. Tison*

9:00 AM – 9:15 AM Al-Driven "Echo-Nomics:" Can We Better Utilize Our Resources? *P. Gladding*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

E Many Faces of the Weak Heart – Portland Ballroom 253-254

Chairs: A. Prado, T. Zhu

8:00 AM – 8:15 AM Chagas Disease Updates *B. Fey*

8:15 AM - 8:30 AM

Arrhythmogenic Right Ventricular Dysplasia: Can Echo Detect It? What Are the Echo Features? What's the Gold Standard? *B. Roberts*

8:30 AM – 8:45 AM Takotsubo Cardiomyopathy: A Mimicker of Coronary Artery Disease *K. Liu*

8:45 AM – 9:00 AM Non-Compaction Cardiomyopathy: Why Is the Diagnosis So Challenging? *M. Schweitzer*

9:00 AM - 9:15 AM

Spontaneous Coronary Artery Dissection (SCAD): Ischemic Heart Disease in Healthy Woman? *M. Wood*

9:15 AM – 9:30 AM Infiltrative Disease: Comes in All Varieties *J. Hill*

8:00 AM - 9:30 AM

I Following the Ultrasound Enhancing Agents (Contrast) Guidelines: Break Out the Bubbles! – Portland Ballroom 255

Chairs: M. Bierig, S. Kaul

8:00 AM – 8:15 AM

Applying the Ultrasound Enhancing Agents Guidelines *S. Abdelmoneim*

8:15 AM - 8:30 AM

Optimizing Images for Left Ventricular Cavity Opacification and Myocardial Contrast Echocardiography: Contrast Settings, Bubble Behavior *J. Olson*

8:30 AM - 8:45 AM

Every Day "Novel" Applications: Tumor, Thrombi, and Trouble Post Myocardial Infarction *M. Bierig*

8:45 AM – 9:00 AM Should I or Shouldn't I? Safety, Pediatrics, and Pregnancy *S. Kutty*

9:00 AM – 9:15 AM Beyond Our Borders: Contrast Outside the Echo Lab *C. Bennett*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

34 Million Patients: The Issue of Atrial Fibrillation – Portland Ballroom 256

Chairs: B. Khandheria, M. Saric

8:00 AM – 8:15 AM Diastolic Assessment in Atrial Fibrillation *S. Lester*

8:15 AM – 8:30 AM Role of TEE Prior to Cardioversion *B. Khandheria*

8:30 AM - 8:40 AM

OA-06: Immediate Recovery of Left Atrial Function is Associated with Maintenance of Sinus Rhythm After Electrical Cardioversion in Patients with Atrial Fibrillation and Atrial Flutter *A. Rabinovitz*

8:40 AM – 8:55 AM

Role of Echo/TEE in Assessment of Stroke Risk *M. Stoddard*

8:55 AM – 9:10 AM Echo in Atrial Fibrillation Device Therapies *M. Saric*

9:10 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Career Development – C-120 Chairs: J. Kirkpatrick, N. Weissman

8:00 AM – 8:15 AM Should I Train in Multimodality Imaging or Is Echo Enough? *V. Ferrari*

8:15 AM – 8:30 AM New Requirements for Level III Training *T. Ryan*

8:30 AM – 8:45 AM BA, MPH, etc. What Do They Bring? *C. Taub*

8:45 AM – 9:00 AM Tips and Tricks for Finding A Job in Imaging *L. Rodriguez*

9:00 AM – 9:15 AM How to Best Develop Value as A New Hire *N. Weissman*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 10:00 AM

Learning Lab: 3D Printing – B-119 (*Ticketed Event. Additional Fee Required*) *Chairs: D. Levin, G. Mackensen Learning Lab Assistants: S. Little, B. Ripley*

10:15 AM - 11:45 AM

Aortic Stenosis/Aortic Regurgitation: Special Situations – Exhibit Hall A

Chairs: S. Kort, J. Puthumana

10:15 AM – 10:30 AM Low Flow, Low Gradient Aortic Stenosis with Reduced Ejection Fraction *K. Poh*

10:30 AM – 10:45 AM Low Flow, Low Gradient Aortic Stenosis with Preserved Ejection Fraction *M. Clavel* **10:45 AM – 11:00 AM** Bicuspid Aortic Stenosis: Anatomy, Evaluation, and Implications for Treatment with TAVR vs. SAVR *J. Puthumana*

11:00 AM – 11:15 AM Strain Imaging in Severe AI to Aid in Decision Making for Intervention *L. Sade*

11:15 AM – 11:30 AM Expanding Indications for TAVR: TAVR in Artificial Intelligence/TAVR for Prosthetic Valve Degeneration *M. Parker*

11:30 AM - 11:45 AM

Question & Answer

10:15 AM - 11:45 AM

PC Application of Echo to Improve Lives – Portland Ballroom 251

Chairs: G. Ensing, C. Sable

10:15 AM – 10:30 AM Handheld Devices: Extension of My Stethoscope *A. Riley*

10:30 AM – 10:45 AM Reaching Out to the Masses: Screening for Rheumatic Heart Disease *C. Sable*

10:45 AM – 11:00 AM Evolution of Remote Echo Reading *S. Shah*

11:00 AM – 11:15 AM Fetal Telemedicine: Advantages and Pitfalls *E. Bolin*

11:15 AM – 11:30 AM OA-08: Management of Pediatric Cardiology Cases in Developing Countries Utilizing Cardiac Point of Care Ultrasound Via A Telemedicine Platform: A Descriptive Study *R. Muhame*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

S Value Summit: Quality and Efficiency in Today's Echo Lab – Portland Ballroom 252

Chairs: J. Kirkpatrick, R. Wright

10:15 AM – 10:30 AM Business School for Echocardiographers: the Economics of Running A Lab *G. Rose*

10:30 AM – 10:45 AM Strategies to Limit Low Value Care *R. Stainback*

10:45 AM – 11:00 AM ACC/AHA/ASE New Requirements for Training Fellows: Improving the Quality of the Team *S. Wiegers*

11:00 AM – 11:15 AM How Board Certification, Sonographer Registry, and Lab Accreditation Promote Quality *J. Dent*

11:15 AM – 11:30 AM The ImageGuideEcho Registry: A Mechanism for Quality Improvement at Home and Nationally *A. Klein*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

Mechanical Assist Device: "MAD" for Echo – Portland Ballroom 253-254

Chairs: A. Armour, S. Rim

10:15 AM – 10:35 AM Overview Ventricular Assist Devices *A. Armour*

10:35 AM – 10:50 AM Common Ventricular Assist Device Complications *B. Hartzel*

10:50 AM – 11:05 AM How to Do A Left Ventricular Assist Device Ramp Study *E. Kruse*

11:05 AM – 11:20 AM Impella: Echo Guidance for Lead Placement and Its Complications *A. Venkateshvaran*

11:20 AM – 11:35 AM ECMO: Bypass Lung, Bypass Heart *D. Dudzinski*

11:35 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

Heart Failure Revisited (Joint ASE/JSE Session) – Portland Ballroom 255 Chairs: S. Nakatani, V. Rigolin



10:15 AM – 10:30 AM Emerging Concepts in the Pathophysiology of Heart Failure *S. Nakatani*

10:30 AM – 10:45 AM Stress Echocardiography for Heart Failure: Conventional and Novel Methods (Acute Preload Stress) *K. Matsumoto*

10:45 AM – 11:00 AM Global Longitudinal Strain and Magnetic Resonance for Risk Stratification in Dilated Cardiomyopathy *T. Onishi*

11:00 AM – 11:15 AM Ultrasonographic Assessment of Non-Cardiac Organs in the Evaluation of the Severity of Heart Failure *K. Yamamoto*

11:15 AM – 11:30 AM Echo Imaging in Mechanical Circulatory Support *D. Jagasia*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

Applied Ultrasound Physics: What Clinicians Need to Know – Portland Ballroom 256 Chairman La Lagrage Dai, O. Von Bamm

Chairs: H. Leong-Poi, O. Von Ramm

10:15 AM – 10:30 AM The Evolution of Echo Technology: From Edler & Hertz to Today *J. Kisslo*

10:30 AM – 10:45 AM Safety and Bio Effects of Ultrasound *F. Villanueva*

10:45 AM – 11:00 AM Kalmanson Lecture: Ultrafast Echo: Seeing More with Speed *M. Bruce*

11:00 AM – 11:15 AM Myocardial and Vascular Imaging of Tissue Composition *C. Mitchell*

11:15 AM - 11:30 AM

Contrast Specific Imaging: Getting Signal From Bubbles *R. Senior*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:45 AM

Everyday 3D: Applications in Pathology & Procedures for Sonographers – C-120

Chairs: W. Tsang, K. Collins

10:15 AM – 10:30 AM 3D vs. 2D Left Ventricular Volumes: Worth the Effort? *N. Edwards*

10:30 AM – 10:45 AM 3D Explained What 2D Couldn't *J. Toptine*

10:45 AM – 11:00 AM 3D Color Flow Imaging: For Mitral Regurgitation Quantification *K. Addetia*

11:00 AM – 11:15 AM 3D Periprosthetic Leak and Closure Assessment *W. Tsang*

11:15 AM – 11:30 AM Optimizing 3D TEE: Tips and Tricks *K. Collins*

11:30 AM – 11:45 AM Question & Answer

10:15 AM - 11:30 AM

Learning Lab: Virtual Reality – C-124 (*Ticketed Event. Additional Fee Required*) *Chairs: R. Lang, A. Narang*

1:00 PM - 3:00 PM

Learning Lab: 3D Printing – B-119 (*Ticketed Event. Additional Fee Required*) *Chairs: D. Levin, G. Mackensen Learning Lab Assistants: S. Little, B. Ripley*

1:15 PM - 2:45 PM

Y Simulated Heart Valve Team Meeting: Mitral Valve Interventions – Exhibit Hall A

Chairs: A. Nicoara, J. Passeri Panelists: S. Mankad, D. Shook, H. Song

1:15 PM - 1:45 PM

Case 1: Failed Surgical Mitral Valve Repair - Percutaneous MitraClip, Valve-In-Ring or REDO Surgery and Replacement? *G. Scalia*

1:45 PM - 2:15 PM

Case 2: Severe Mitral Stenosis and MAC: Transcatheter Valve-In-Native Valve or Surgical Replacement? *M. Saric*

2:15 PM – 2:45 PM

Case 3: Degenerated Bioprosthetic Mitral Valve and Paravalvular Leak: Percutaneous Options or REDO Surgery? *L. Safi*

1:15 PM - 2:45 PM

Valvular Regurgitation and Stenosis: How to Quantify – Portland Ballroom 251

Chairs: C. Altman, L. Lopez

1:15 PM – 1:30 PM Echo Evaluation: Quantification of Right Heart Valves *J. Lu*

1:30 PM – 1:45 PM Echo Evaluation: Quantification of Left Heart Valves *L. Lopez*

1:45 PM - 2:00 PM

MRI 4D Flow *J. Robinson*

2:00 PM – 2:15 PM

What Do I Incorporate Into Daily Practice? *T. Slesnick*

2:15 PM - 2:30 PM

OA-09: Effect of Pressure Recovery On Pressure Gradients in Congenital Stenotic Outflow Lesions in Pediatric Patients - Clinical Implications of Lesion Severity and Geometry: A Simultaneous Doppler Echocardiography and Cardiac Catheter Correlative Study *K. Mowers*

2:30 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

S Value Summit: Preparing for the Echo Lab of the Next Decade – Portland Ballroom 252

Chairs: M. Main, M. Picard

1:15 PM - 1:45 PM

Update On U.S. Health Care Policy: Impact On Cardiac Imaging *D. Rosen*

1:45 PM - 2:00 PM

Role of Multimodality Imaging, POCUS, and Limited Echoes in A Value Based World—Where Do They All Fit In? *A. Johri*

2:00 PM – 2:15 PM Echo 2025: What Tomorrow's Echo Lab Will Look Like *S. Wiegers*

2:15 PM – 2:30 PM Getting to 2025: Change Management Strategies and Leadership in the Echo Lab *N. Weissman*

2:30 PM – 2:45 PM Predicting and Preventing Physician Burnout *J. Kirkpatrick*

1:15 PM - 2:45 PM

Educator's Summit (Sonographer Council Business Meeting) – Portland Ballroom 253-254 Chairs: K. Collins. E. Shea

1:15 PM – 1:35 PM Council on Cardiovascular Sonography Business Meeting *E. Shea*

1:35 PM – 1:55 PM Sonographer Education Summit *M. Bremer*

1:55 PM – 2:10 PM Sonographer Career Pathways *M. Roberts*

2:10 PM – 2:30 PM Advanced Cardiovascular Sonographer: What's the Role? How to Implement? *M. Umland*

2:30 PM – 2:45 PM Sonographers Reaching Out to the World *D. Adams*

1:15 PM - 2:45 PM

The Journey of a Thrombus from Vein to Artery – Portland Ballroom 255 Chairs: R. Benenstein, B. Wells **1:15 PM – 1:27 PM** The Take-Off.... Findings and Diagnosis of Lower Extremity DVT *M. Vorsanger*

1:27 PM – 1:39 PM The First Layover...Pulmonary Embolism and Right Ventricular Strain *R. Benenstein*

1:39 PM – 1:51 PM An Unexpected Stop Cryptogenic Stroke/PFO Closure *K. Addetia*

1:51 PM – 2:03 PM A "Gut" Feeling...Mesenteric Ischemia: Splenic and Renal Infarct *B. Wells*

2:03 PM – 2:15 PM The End of the Journey...The 5 "P"s...Acute Arterial Thrombosis *F. Shamoun*

2:15 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

The Right Ventricle – Portland Ballroom 256
 Chairs: N. Schiller, S. Shrivastava

1:15 PM – 1:30 PM Imaging the Right Ventricle: Quantification By 3D, Contrast, and Beyond *D. Medvedofsky*

1:30 PM – 1:40 PM Hemodynamic Assessment of the Right Ventricle: Pulmonary Artery Compliance/Vascular Resistance *P. Gutierrez-Fajardo*

1:40 PM – 1:55 PM

OA-10: Right Ventricular Volumes, Ejection Fraction, and Longitudinal Strain Assessed by Three-Dimensional Speckle Tracking Echocardiography: Comparisons with Cardiac Magnetic Resonance Imaging *Y. Li*

1:55 PM - 2:10 PM

Strain Echocardiography When Assessing the Right Ventricle *S. Wahi*

2:10 PM – 2:30 PM Echocardiographic Findings in Pulmonary Hypertension *S. Goldstein*

2:30 PM – 2:45 PM Question & Answer

1:15 PM - 2:45 PM

Fireside Chat: Early Career Development – C-120

Moderators: S. Adusumalli, T. Chen, H. Jarrett, A. Narang

1:30 PM – 1:45 PM Adjusting to Faculty Life in Your Training Environment *E. Yucel*

1:45 PM – 2:00 PM Building A Social Media Presence *R. Thamman* **2:00 PM – 2:15 PM** Early Career Transition Tips *L. Safi*

2:15 PM – 2:30 PM Job Search Tips and Tricks *D. Medvedofsky*

2:30 PM – 2:45 PM From Mentee to Mentor *S. Adusumalli*

3:30 PM - 5:30 PM

Arthur E. Weyman Young Investigator's Award Competition and 20th Annual Feigenbaum Lecture – Exhibit Hall A

Chair: T. Abraham Judges: T. Edvardsen, H. Leong-Poi, M. Main, S. Nakatani

3:30 PM – 3:35 PM Welcome and Introduction *T. Abraham*

3:35 PM - 3:50 PM

YIA-01: Cardiac Ultrasonic Fingerprinting: A Radiomics Approach for High-Throughput Feature Phenotyping of Dysfunctional Myocardium *N. Kagiyama*

3:50 PM - 4:05 PM

YIA-02: Molecular Imaging of Microvascular Endothelial Von Willebrand Factor and Platelet Adhesion in Myocardial Ischemia-Reperfusion Injury *K. Ozawa*

4:05 PM - 4:20 PM

YIA-03: Deep Learning of Echocardiography to Identify Systemic Phenotypes and Unsupervised Learning of Clinical Measurements *D. Ouyang*

4:20 PM - 4:35 PM

YIA-04: Comprehensive Evaluation of Tricuspid Regurgitation Location and Severity Using Vena Contracta Analysis: A Color Doppler 3-Dimensional Transesophageal Echocardiography Study *H. Utsunomiya*

4:35 PM – 4:37 PM Concluding Remarks *T. Abraham* **4:37 PM – 4:40 PM** Introduction of the Feigenbaum Lecturer *J. Lindner*

4:40 PM – 5:00 PM Feigenbaum Lecture: Echocardiography for Precision Medicine: Digital Biopsy to Deconstruct Biology *S. Shah*

5:00 PM – 5:05 PM

Recognition of Feigenbaum Lecturer, Presentation of Plaque, Concluding Remarks *H. Feigenbaum*

5:05 PM – 5:07 PM Introduction of ASE Foundation Research Lecturer *R. Lang*

5:07 PM – 5:20 PM ASE Foundation Research Lecture: WASE Study *F. Asch*

5:20 PM – 5:25 PM Concluding Remarks *R. Lang*

5:25 PM – 5:30 PM Recognition of Competition Finalists, Announcement of Winner

SCHEDULE AT A GLANCE

TUESDAY, JUNE 25TH





For detailed information, please download the ASE Courses app.

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TUESDAY, JUNE 25TH SCHEDULE

7:00 AM - 7:50 AM

Read with the Masters: Complex Cardiology
 – Portland Ballroom 251
 Chairs: N. Avres, M. Brook, M. Cohen

7:00 AM – 7:20 AM Case *R. France*

7:20 AM – 7:40 AM Case *M. Wasserman*

7:40 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

 Special Session: Echo in Women – Portland Ballroom 252
Chairs: R. Thamman, M. Wood

7:00 AM – 7:10 AM Stress Testing to Diagnose Chest Pain *A. Poppas*

7:10 AM – 7:20 AM Acute Coronary Syndromes: Takotsubo, Spontaneous Coronary Artery Dissection, Myocardial Infarction with Non-obstructive Coronary Arteries *N. Scott*

7:20 AM – 7:30 AM Pregnancy: Physiology, Cardiomyopathy, Valves *A. Khan*

7:30 AM – 7:40 AM Vascular and Valves: Aortopathy, TAVR *N. Quader*

7:40 AM – 7:50 AM Heart Failure with Preserved Ejection Fraction *J. Kim*

7:00 AM - 7:50 AM

E Contrast: Know Your Bubbles – Portland Ballroom 253-254 Chairs: M. Umland. K. Wei

7:00 AM – 7:10 AM What Are My Options: Different Agents, Indications and Contraindications *J. Olson* 7:10 AM – 7:25 AM Image Optimization with Contrast *E. McIlwain*

7:25 AM – 7:40 AM Real Time Perfusion Imaging: Step By Step *J. Hodovan*

7:40 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

C Rapid Fire Cases (Circulation & Vascular Council Business Meeting) – Portland Ballroom 255 Chairs: R. Benenstein, A. Johri

7:00 AM – 7:10 AM

Council on Circulation & Vascular Ultrasound Business Meeting *R. Benenstein, A. Johri*

7:10 AM – 7:20 AM

The Carotid Is Glooming...Carotid Body Tumors *R. Benenstein*

7:20 AM – 7:25 AM

COMPASS...The New GPS in Peripheral Arterial Disease: NOACS for Peripheral Arterial Disease *A. Johri*

7:25 AM – 7:30 AM Unmasking the Heart with Carotid Doppler: Doppler Waveforms *R. Quiroz*

7:30 AM – 7:35 AM The Aorta Is Bullying the Neighbors: Compression Syndromes *T. Naqvi*

7:35 AM – 7:40 AM Don't Blame the Cholesterol: Nonatherosclerotic Peripheral Arterial Disease *B. Wells*

7:40 AM – 7:45 AM Ultrasound Contrast in Peripheral Arterial Disease *B. Davidson*

7:45 AM – 7:50 AM Question & Answer

TUESDAY, JUNE 25th Schedule

7:00 AM - 7:50 AM

V How To Cases: Valves – Portland Ballroom 256 Chairs: A. Narang, G. Whalley

7:00 AM – 7:15 AM Assess Valves Post MitraClip *V. Rangarajan*

7:15 AM – 7:30 AM Evaluate for Low Gradient and Normal Gradient Severe Aortic Stenosis *M. McGovern*

7:30 AM – 7:45 AM Prosthetic Valve Dysfunction *M. Jankowski*

7:45 AM – 7:50 AM Question & Answer

7:00 AM - 7:50 AM

Multimodality: Ischemia Integration of Echo and Other Modalities – C-120

Chairs: M. Ferencik, R. Janardhanan

7:00 AM – 7:15 AM CT and Stress Echo in Acute Chest Pain: Where Are We Now and Where Are We Going? *M. Ferencik*

7:15 AM – 7:30 AM Multimodality Post MI *A. Patel*

7:30 AM – 7:45 AM Fusion of CT and 3D Echo for Chest Pain *V. Mor-Avi*

7:45 AM – 7:50 AM Question & Answer

8:00 AM - 9:30 AM

Diverse Dilemmas – Portland Ballroom 251 Chairs: P. Barker, C. Fleishman

8:00 AM – 8:20 AM Evaluating A New Patient with Poor Function: Is Echo Just the Start? *J. Soslow*

8:20 AM – 8:40 AM Anomalous Coronary Course: What Is the Data for Intervention When Asymptomatic? *A. Dorfman* **8:40 AM – 9:00 AM** Unicuspid Aortic Valve: Valvuloplasty, Valvotomy, or Ross? *P. Barker*

9:00 AM – 9:15 AM OA-11: Exercise Stress Echocardiography in Children with Hypertrophic Cardiomyopathy *I. El-Assaad*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Hydrodynamics Bootcamp: Beyond the Basics in Doppler Quantitation – Portland Ballroom 252

Chairs: G. Girand, S. Shernan

8:00 AM – 8:15 AM The Importance of Conservation Laws in Echocardiography: Mass, Momentum, and Energy *G. Girand*

8:15 AM – 8:30 AM Nuances in Aortic Stenosis: Low Flow, Pressure Recovery, Impact of Afterload *P. Pibarot*

8:30 AM – 8:45 AM Upping Your PISA Game: Flow Constraint, Contour Flattening, Impact of Orifice Shape *J. Thomas*

8:45 AM – 9:00 AM 3D to the Rescue: Can 3D Doppler Be Quantitative? *M. Vannan*

9:00 AM – 9:15 AM Intracardiac Blood Flow: Vortex Imaging, Pressure Gradients, and Beyond *S. Nakatani*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

Stress Echo: New Updates and More – Portland Ballroom 253-254

Chairs: K. Wei, E. Yucel

8:00 AM – 8:15 AM Guideline Updates for Ischemic Heart Disease: Key Points *M. Wantz*

TUESDAY, JUNE 25TH SCHEDULE

8:15 AM - 8:30 AM

How to Incorporate Strain, 3D in Stress Echo for Ischemic Heart Disease (Case-based) *E. Kruse*

8:30 AM – 8:45 AM How to Incorporate Real Time Myocardial Perfusion in Stress Echo for Ischemic Heart Disease (Case-based) *K. Wei*

8:45 AM – 9:00 AM Stress Echo NOT for Ischemic Heart Disease: Protocol and Workflow *P. Burgess*

9:00 AM – 9:15 AM Stress Echo for Low Flow, Low Gradient Aortic Stenosis: Protocol and Workflow *E. Yucel*

9:15 AM – 9:30 AM Question & Answer

8:00 AM - 9:30 AM

S Law and Echo – Portland Ballroom 255 Chairs: B. Davidson, J. Gardin

8:00 AM – 8:20 AM Ethical Codes and Echocardiographers *J. Gardin*

8:20 AM – 8:40 AM Legal and Ethical Issues for the Cardiovascular Sonographer *M. Park*

8:40 AM – 9:00 AM Anatomy of A Malpractice Lawsuit *P. Cox, L. St. Clair*

9:00 AM – 9:15 AM Case 1 Panel Discussion of Case

9:15 AM – 9:30 AM Case 2 Panel Discussion of Case

8:00 AM - 9:30 AM

Strain Cases – Portland Ballroom 256 Chairs: J. Gorcsan, T. Marwick

8:00 AM – 8:30 AM Utility of Strain in Systolic Function *Presenter: S. Ermakov Discussant: T. Abraham* 8:30 AM – 9:00 AM Strain and Diastolic Function *Presenter: M. Chetrit Discussant: E. Donal*

9:00 AM – 9:30 AM

Right Ventricle, Atrial Function, and Strain Presenter: B. Arora Discussant: J. Gorcsan

8:00 AM - 9:30 AM

Controversies in Mitral Valve Disease – C-120 *Chairs: R. Beeri, M. Malkowski*

8:00 AM – 8:15 AM 3D vs. CMRI for Quantification of Mitral Regurgitation *R. Janardhanan*

8:15 AM – 8:30 AM Advanced Heart Failure with High Grade Mitral Regurgitation: Repair, Replace, Clip, or Transplant? *H. Song*

8:30 AM – 8:45 AM Mitral Valve Pathology and Mitral Regurgitation in Hypertrophic Cardiomyopathy *D. Phelan*

8:45 AM – 9:00 AM Morphologic Differences in Patients with MR Related to Atrial Fibrillation *J. Hung*

9:00 AM – 9:15 AM Evaluating Contractile Reserve and Strain in Mitral Valve Disease: Is It Useful? *F. Delling*

9:15 AM – 9:30 AM Question & Answer

TUESDAY, JUNE 25th Schedule

8:00 AM - 11:30 AM

Learning Lab: 3D in Congenital Heart Disease – B-119

(Ticketed Event. Additional Fee Required) Chair: D. Roberson Speakers: G. Marx, A. Parthiban

10:00 AM - 11:30 AM

Decision Making for the Fetus & Neonate – Portland Ballroom 251

Chairs: E. Michelfelder, T. Tacy

10:00 AM – 10:15 AM Changes in the Approach to Fetal Counseling Over 30 Years *T. Tacy*

10:15 AM – 10:30 AM Does 1st Trimester Screening Modify the Natural History of Congenital Heart Disease *J. Marek*

10:30 AM – 10:45 AM Shared Decision Making *N. Pinto*

10:45 AM – 11:00 AM Regionalized Care for the Highest Risk *J. Rychik*

11:00 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

 30+ Years of Perioperative Imaging of the Mitral Valve: Yesterday, Now, and Tomorrow
 – Portland Ballroom 252

Chairs: F. Cobey, N. Pandian

10:00 AM – 10:15 AM What Can Be Learned From the Early Innovators? *O. Von Ramm*

10:15 AM – 10:30 AM State of the Art of Mitral Valve Imaging: What Works and What Doesn't? *A. Berrebi*

10:30 AM – 10:45 AM Multimodality Imaging of the Mitral Valve: How Does It Inform Procedural Guidance? *D. Shook*

10:45 AM - 11:00 AM

What Is the Potential of Virtual Reality and 3D Printing to Advance Patient Care? *F. Mahmood*

11:00 AM – 11:30 AM Panel Discussion About Innovation of Mitral Imaging

10:00 AM - 11:30 AM

Lab Leadership and Management Summit – Portland Ballroom 253-254 Chairs: J. Marshall, C. Mitchell

10:00 AM – 10:15 AM How to Enhance Lab Culture *M. Orsinelli*

10:15 AM – 10:30 AM How to Hire the Best Candidate *M. Bierig*

10:30 AM – 10:45 AM Teams Matter: Physician, Sonographer, and Nurse *C. Ranjo*

10:45 AM – 11:00 AM How to Maintain Competency: Ongoing Education *C. Mitchell*

11:00 AM – 11:15 AM How to Help Protect Staff: Radiation and Ergonomic Safety *J. Marshall*

11:15 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Hypertrophic Cardiomyopathy – Portland Ballroom 255

Chairs: D. Phelan, M. Sherrid

10:00 AM – 10:15 AM Hypertrophic Cardiomyopathy vs. Athletes *D. Phelan*

10:15 AM – 10:30 AM Evaluation of Hypertrophic Cardiomyopathy/Hypertrophic Cardiomyopathy Mimickers *A. Woo*

10:30 AM – 10:45 AM Exercise Testing in Hypertrophic Cardiomyopathy *T. Abraham*

TUESDAY, JUNE 25TH SCHEDULE

10:45 AM – 11:00 AM Multimodality and Hypertrophic Cardiomyopathy *J. Lopez-Mattei*

11:00 AM – 11:15 AM Emerging Concepts in Hypertrophic Cardiomyopathy Therapy *S. Heitner*

11:15 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Systematic Approach to Evaluation of Prosthetic Valves – Portland Ballroom 256

Chairs: J. Dent, W. Zoghbi

10:00 AM – 10:15 AM ASE/ESC Guidelines for the Assessment of Prosthetic Valves *F. Miller*

10:15 AM – 10:30 AM Common Mistakes in the Evaluation of Prosthetic Valves *P. Burgess*

10:30 AM – 10:45 AM Distinguishing Prosthesis-Patient Mismatch From Dysfunction *P. Pibarot*

10:45 AM – 11:00 AM Bioprosthetic Mitral and Aortic Valve Degeneration Assessment in the Era of Valve-in-Valve *J. Dent*

11:00 AM – 11:15 AM Subacute Bioprosthetic Valve Thrombosis and Role of Imaging *S. Pislaru*

11:15 AM – 11:30 AM Question & Answer

10:00 AM - 11:30 AM

Cardiomyopathies: Horses and Zebras – C-120 Chairs: J. Banchs, G. Pressman

10:00 AM – 10:15 AM Amyloid *J. Banchs*

10:15 AM – 10:30 AM Hemochromatosis *A. Patel* **10:30 AM – 10:45 AM** Hypereosinophilic Disease *R. Mankad*

10:45 AM – 11:00 AM Diabetic Cardiomyopathy *T. Marwick*

11:00 AM – 11:15 AM Chagas Disease *R. Marcus*

11:15 AM – 11:30 AM Question & Answer



Honorably Recognizing Dr. Weyman

The NBE is pleased to recognize Dr. Arthur E. Weyman as Past President of NBE, a Board member, Chair of the ASCeXAM Certification committee and for his numerous contributions to the field of echocardiography. We applaud his dedication and extend our sincerest gratitude for his years of service.

NBE shares ASE's continued commitment to quality in echocardiography.



NATIONAL BOARD OF ECHOCARDIOGRAPHY, INC.

Experts in the field FASE hold the designation of



Nidhish Tiwari, MD, FASE Associate Director North Central Bronx Hospital Bronx, NY









Melissa Tracy, MD, FASE Associate Professor of Medicine **RUSH University** Medical Center Chicago, IL



Cindy Laliberte.

Supervisor, Echo Lab Akron Children's Hospital

RDCS, FASE

Akron, OH

Joshua D. Quick, MD, FASE Cardiothoracic Anesthesiologist VA Connecticut Healthcare System West Haven, CT



Alison White, BSc, MSc, DMU (cardiac), AMS, SFHEA, FASE Program Director and Senior Lecturer Griffith University Brisbane, Queensland, Australia

Want to achieve the FASE designation? All echo specialists, in addition to cardiologists, can apply for FASE at ASEcho.org/FASE.

Come to the ASE Exhibit Booth 409 to learn more about applying for FASE.



FASE LOUNGE

Level 1, B-114 Saturday, June 22 ... 9:00 AM – 4:00 PM Sunday, June 23 9:00 AM - 4:00 PM Monday, June 24..... 9:00 AM - 4:00 PM Tuesday, June 25 9:00 AM - 11:00 AM

GOOD COMPANIES. GOOD WORKS.

ASE would like to thank our Industry Roundtable members.

> Visit our Industry Roundtable Partners at ASE's 30th Annual Scientific Sessions.





BOOTH #200





BOOTH #709

BOOTH #300



. eje

Healthineers

BOOTH #800



BOOTH #400

BOOTH #501





FRIDAY, JUNE 21

SCIENCE & TECHNOLOGY THEATER 6:30 – 8:00 PM EXHIBIT & POSTER HALL B

a lifetime of echocardiography Presented by Hitachi Healthcare

Join us for an evening dinner, drinks, and music and experience 'a lifetime of echocardiography.' Learn how Hitachi is delivering **the next level of innovation** with presentations from leaders in Fetal, Pediatric, and Adult cardiology.

Refreshments are provided by Hitachi and are included in all Scientific Sessions registration fees, but space and food are first come, first served. These sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

SATURDAY, JUNE 22

ASEF CARDIOVASCULAR CHALLENGE ASEF BOOTH, PRE-FUNCTION C LOBBY LEVEL 1



Compete with your feet and get moving with the ASE Foundation Cardiovascular Challenge. Sign up to participate at the ASEF Booth in the Pre-function C Lobby on Level 1, then record your steps taken every day and

log them at the booth. The person with the most overall steps will win a \$150 Amazon gift card, second place will receive a \$75 Amazon gift card, and the person with the third highest step count will receive a limited edition ASEF hat. The winners will be announced Monday, June 24th during the afternoon break in the Exhibit & Poster Hall.

Special thanks to our 2019 Cardiovascular Challenge sponsors, CAE Healthcare, Lantheus Medical Imaging, Inc., and TOMTEC Corporation.

TIE-A-KNOT FOR PEDIATRIC PATIENTS!

Stop by the ASEF booth to make a tie-knot blanket for pediatric patients at the Oregon Health & Science University Doernbecher Children's Hospital! We'll have pre-cut fabric that's ready to be tied. Printed instructions will also be available - but you'll get the hang of it quickly! Donate at least \$10 to the ASE Foundation and you can participate in this fun, creative, and rewarding activity. Put a smile on a child's face with a blanket you made just for them! Money raised through this effort will be allocated to Patient Awareness projects in 2020.

IMAGES FROM THE HEART GALLERY

A special curated showcase of photographs will be on display from Saturday - Monday. View the world through the eyes and photos of ASE members taken while they traveled the world to participate in various medically-related outreach events. Many photos will be available to take home with a donation to the ASE Foundation. Stop by the ASE Foundation booth to experience these awe-inspiring photos.

ASE AWARDS PRESENTATION AND 30th ANNUAL EDLER LECTURE 7:50 – 9:45 AM EXHIBIT HALL A



ASE's Immediate Past President, Vera Rigolin, MD, FASE, Northwestern Medicine, Chicago, Illinois, will present "Time Flies When You Are Having Fun with Aortic Stenosis" as the 30th Annual Edler Lecture on Saturday morning, June 22, during the Awards

Presentations and Edler Lecture Plenary Session. Dr.

Rigolin is a cardiologist at Northwestern Memorial Hospital and a Professor of Medicine at Northwestern University's Feinberg School of Medicine. She specializes in echocardiography, valvular heart disease, and women's heart health. She is also the current medical director of the echocardiography laboratory at Northwestern Memorial Hospital. Created in 1990, the annual Edler Lecture honors the founder of echocardiography, Dr. Inge Edler.

LIFETIME ACHIEVEMENT AWARDS

The ASE Lifetime Achievement Awards recognize 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.



Jae K. Oh, MD, FASE, Mayo Clinic, Rochester, Minnesota, has been named the 2019 Physician Lifetime Achievement Award recipient. Dr. Oh has helped make echocardiography an indispensable tool for understanding the complex hemodynamics of myocardial and pericardial diseases. He is generous

with his time and offers his expertise around the world to help educate others. He is a role model and mentor for trainees, always promoting early career scientists and clinical educators. This outstanding trait has been recognized with the Mayo Clinic College of Medicine Outstanding Teacher Award 1989-1992 and 1995-1996 and the Outstanding Mentor Award in 2013. Dr. Oh has published more than 440 peer-reviewed articles, eight books, and 40 book chapters. He is currently the principal investigator on a federal grant on Anastrozole in Pulmonary Arterial Hypertension funded by National Heart, Lung, and Blood Institute. He has served as principal investigator on eight completed federal grants and 21 other grants in his career. He has also accelerated echo education with the founding of the Asian-Pacific Association of Echocardiography (AAE).



Jane E. Marshall, RDCS, FASE, Massachusetts General Hospital, Boston, Massachusetts, has been named the 2019 Sonographer Lifetime Achievement Award recipient. Ms. Marshall is a distinguished

leader, cardiac sonographer, and educator. She

has a long career that started at the University of Indiana with Dr. Harvey Feigenbaum. After moving to Mass General, she worked with Dr. Arthur Weyman to lay the foundation for excellence in an echo lab. Ms. Marshall has 28 publications and 37 abstracts and one book chapter. She has been involved with ASE as a volunteer since 1992 serving on many committees and task forces including serving on the Board of Directors from 1993-1996 and as the sonographer co-chair of the 8th Annual ASE Scientific Sessions in 1997. Ms. Marshall currently serves on the editorial board for ASE's online case reports journal, CASE.

MERITORIOUS SERVICE AWARD



ASE is pleased to recognize **Mary Alice Dilday, American Society of Echocardiography, Durham, North Carolina**, as the 2019 recipient of the Meritorious Service Award that recognizes

individual members for their substantial and generous efforts to the Society's betterment. Mary Alice

currently serves as the Vice President of Internal Relations at ASE and is retiring in March 2020 after working at ASE since 1986. Mary Alice is the longest tenured staff member at ASE, and she also served as the Executive Director of the National Board of Echocardiography during its early years and currently serves as the Executive Director of the COA-ACS. Her chief responsibilities include management of the FASE program, volunteer management for committees and task forces, and planner for the ASE Foundation Research Awards Gala. She is recognized as the "go to" person at ASE for her historical knowledge of the Society and its members.

RICHARD POPP EXCELLENCE IN TEACHING AWARD



Recognized as a role model, mentor, and teacher who finds reward in seeing the success of his trainees and mentees more than his own personal achievements, Steven J. Lester, MD, FASE, Mayo Clinic, Scottsdale,
 Arizona, has been named the 18th annual

recipient of the Richard Popp Excellence in Teaching

Award. Dr. Lester is an outstanding teacher who has impacted the lives of his colleagues/peers, medical students, residence and fellows, and most importantly his patients. This award is given in honor of ASE's second president, Richard L. Popp, MD, FASE, and recognizes physicians who epitomize the ideal qualities possessed by a mentor and role model.

COUNCIL ON PEDIATRIC AND CONGENITAL HEART DISEASE FOUNDERS' AWARD



Lindsey D. Allan, MD, FRCP, King's College Hospital (retired), London, United Kingdom, is being honored as the 16th recipient of the ASE Council on Pediatric and Congenital Heart Disease Founders' Award which recognizes continued major scholarly contributions to the field of pediatric echocardiogra-

phy. Dr. Allan is a world-renowned fetal echocardiographer who has played a major role in revolutionizing the diagnosis of heart disease in utero. The views used on a routine basis to make a fetal diagnosis were primarily developed by her and her team. Dr. Allan has authored over 100 manuscripts and multiple textbooks. She has lectured all over the world and has taught at hundreds of courses.

OUTSTANDING ACHIEVEMENT IN PERIOPERATIVE ECHOCARDIOGRAPHY AWARD



Solomon Aronson, MD, MBA, FASE, Duke University Medical Center, Durham, North Carolina, has been named the 7th recipient of the Outstanding Achievement in Perioperative Echocardiography Award. Dr. Aronson's contributions to the field of periopera-

tive echocardiography are extensive, but the most

notable contribution is to the expansion of the National Board of Echocardiography. He served as the chairman of the Committee of Certification for Perioperative Echocardiography (PTEeXAM), which continues to serve as the standard by which perioperative echocardiographers test and demonstrate proficiency in echocardiography. He has served on a variety of ASE committees since 1993, was the chair of the Council from 2003-2005, and served on the Board of Directors from 2004-2006. 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.

MENTORSHIP AWARD



ASE recognizes Neil J. Weissman, MD, FASE, MedStar Health Research Institute, Washington, DC, as the 2019 Mentorship Award recipient. Dr. Weissman uses his unique leadership skills to develop mentoring programs that benefit both individuals

and organizations. He conceived of, and implemented, the ASE Leadership Academy as a way of growing the future leadership of the Society and assuring that they develop the necessary skills to be effective leaders. This award recognizes a senior physician or sonographer who has demonstrated exceptional mentorship within ASE. Unlike other awards, the Mentorship Award specifically acknowledges individuals who helped younger members advance within the Society and thus cultivated ASE's future leaders.

SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

SCIENCE & TECHNOLOGY THEATER 11:30 AM – 1:00 PM EXHIBIT & POSTER HALL B

Enhanced Echocardiography: It's What You Don't See That Matters

Presented by Lantheus Medical Imaging, Inc.

Join expert faculty for an interactive panel discussion on enhanced echocardiography, followed by a moderated Q&A session.

Lunch is provided by ASE and is included in all Scientific Sessions registration fees, but space and food are first come, first served. These sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

CHALK TALK

2:30 - 3:00 PM C-123

A wonderful opportunity to learn from Theodore Abraham, MD, FASE, discussing **Strain Imaging**.

TWEET UP

4:30 – 6:30 PM EXHIBIT & POSTER HALL NEAR ASE BOOTH #409

Are you active on Twitter and want to meet others who are actively using Twitter to share information? Join us for a Tweet Up during the President's Reception. Don't miss this opportunity to connect, in person, with the people you have met virtually through Twitter.

PRESIDENT'S RECEPTION 4:30 - 6:30 PM EXHIBIT & POSTER HALL

All attendees are invited to celebrate ASE 2019 at the President's Reception, hosted by ASE President, Jonathan Lindner, 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. A commemorative cake-cutting ceremony will take place at 4:45 PM in the ASE headquarters booth #409. Nearly 60 exhibitors will be showcasing their products. Complimentary cocktails 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.

SCIENCE & TECHNOLOGY THEATER

6:30 – 8:00 PM EXHIBIT & POSTER HALL B

Precision at the Speed of Life, Powered by Al Presented by Siemens Healthineers

Join us for cocktails and hors d'oeuvres as cardiovascular thought leaders discuss Al-powered ultrasound technology. Learn about the latest cardiovascular imaging Al capabilities and how knowledge-based automation can improve consistency, efficiency, and workflow. To reserve your spot, please register at siemens-healthineers.us/ase2019.

Refreshments are provided by Siemens Healthineers and are included in all Scientific Sessions registration fees, but space and food are first come, first served. These sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

2019 SOPE SYMPOSIUM, IN PARTNERSHIP WITH ASE

Intraoperative Echocardiography 7:30 - 10:00 PM ALTABIRA CITY TAVERN, PORTLAND, OR

This meeting will provide a venue where networking among the members can occur before and after the symposium. There will be a dinner preceding the presentations and discussion. *This event is for SOPE members only.*



Society of Pediatric Echocardiography

SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

SUNDAY, JUNE 23

POSTER SESSION 1 (P1) 9:00 AM - 4:00 PM EXHIBIT & POSTER HALL

Meet the Investigators 11:45 AM – 1:15 PM

MODERATED POSTER SESSION 1

12:00 PM - 1:00 PM

Cardio-Oncology	Poster P1-001
Intraprocedural Echocardiography	
(Operating Room and	
Interventional Lab) / TEE	Poster P1-105
Valvular Heart Disease	Poster P1-115
Doppler / Hemodynamics	Poster P1-155

TOPIC

Cardio-Oncology P1-001 — P1-013
Adult Congenital Heart DiseaseP1-014 — P1-020
Pediatric Heart Disease P1-021 — P1-067
Clinical Cases: Pediatric Patients P1-068 — P1-099
Critical Care Ultrasound/ Point of Care UltrasoundP1-100 — P1-104
Intraprocedural Echocardiography (Operating Room and
Interventional Lab) / TEE P1-105 — P1-114
Valvular Heart DiseaseP1-115 — P1-154
Doppler / Hemodynamics P1-155 — P1-166
Echocardiography in SOE/ Arrhythmias / Atrial FunctionP1-167 — P1-181
Ischemic Heart Disease P1-182 — P1-187
Ventricular Function / Myocardial MechanicsP1-188 — P1-230

CHALK TALKS

9:30 - 10:15 AM AND 2:45 - 3:30 PM

Have clinical questions? This is your opportunity to get answers from luminaries in the field of echo in an intimate setting. During the morning break, Jae Oh, MD, FASE, will be available to answer all of your questions about **Diastology** in the Exhibit & Poster Hall. The afternoon break will feature two concurrent sessions. **How Can** **POCUS Societies Help You?** with Renee Dversdal, MD, and Arif Hussain, MD, will take place in Room C-123; the other afternoon Chalk Talk is in the Exhibit & Poster Hall, titled **Our Patients are Active in the Cyber Space: Are We Keeping Up** with Joe Kreeger, ACS, RCCS, RDCS, FASE, Shabnam Peyvandi, MD, FASE, Akhil Narang, MD, and Burkhard Mackensen, MD, PhD, FASE.

IMAGEGUIDE REGISTRY INFORMATION SESSION 9:30 - 10:15 AM EXHIBIT & POSTER HALL BOOTH #415

ImageGuide Registry Overview and Q&A *Rami Doukky, MD, MSc, FASE, FASNC and Milind Desai, MD*

SCIENCE & TECHNOLOGY THEATER 11:45 AM - 1:15 PM EXHIBIT & POSTER HALL B

Elevating the Role of Echo in Diagnosis, Treatment, and Management *Presented by Philips*

Leading cardiovascular imagers, researchers, and professors will present on current and emerging solutions for more optimally addressing your patients using improved cardiac ultrasound visualization, new heart chamber scanning and quantification techniques and enhanced performance in structural heart interventions.

Lunch is provided by ASE and is included in all Scientific Sessions registration fees, but space and food are first come, first served. These sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

THE GARDIN LECTURE 1:15 - 2:45 PM EXHIBIT HALL A



The ASE Foundation is proud to have *New York Times* best-selling author, **Dr. Barbara Natterson-Horowitz**, deliver the inaugural Gardin Lecture, "Species-Spanning Echocardiography: Cardiovascular Insights for Humans and Other Animals." This annual lectureship was endowed to the ASE Foundation

through a generous long-term gift from ASE Past President, 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.
SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

BOOK SIGNING BY BARBARA NATTERSON-HOROWITZ, MD 2:45 – 3:30 PM ASE FOUNDATION BOOTH PRE-FUNCTION C LOBBY



Dr. Natterson-Horowitz will be signing copies

of her *New York Times* Bestseller, *Zoobiquity: The Astonishing Connection Between Human and Animal Health.* Copies of the book were available for pre-order and a limited number are available for purchase on-site. 100% of each sale will be treated as a tax-deductible donation to the ASE Foundation. Be sure to stop by and meet the author of this fascinating book!

IMAGEGUIDE REGISTRY INFORMATION SESSION 2:45 – 3:30 PM POSTER & EXHIBIT HALL BOOTH #415

ImageGuideEcho & Data Collection: How the Registry Captures and Uses Data for Quality Improvement *Srinath Adusumalli, MD, MSc*

RISING STAR NETWORKING RECEPTION 2:45 - 3:30 PM C-120

Students, fellows, and sonographers and physicians who are early in their careers are invited to meet other members who are just beginning their careers, while networking with leaders in the field of echocardiography. Representatives from the special interest councils, the Membership Steering Committee, and ASE leadership will share how ASE helped their careers.

BRIAN HALUSKA SONOGRAPHER RESEARCH AWARD COMPETITION 3:30 - 5:00 PM PORTLAND BALLROOM 253-254

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.

Michele H. Clouse, RDCS, Seattle Children's Hospital, Seattle, WA – Fetal Brain Resistance is Abnormal in Neonates with Coarctation of the Aorta Despite Antegrade Aortic Arch Flow

Natalie Edwards, ACS, AMS, FASE, Prince Charles Hospital, Queensland, Australia – Resting Global Myocardial Work Derived from Non-Invasive Left Ventricular Pressure-Strain Loops Discriminates Between True Positive and False Positive Exercise Stress Echocardiography

Gilda Kadiu, RDCS, FASE, Children's Hospital of Michigan, Detroit, MI – Left Ventricle Longitudinal Excursion in Children Following Heart Transplantation: Utility of Tissue Motion Annular Displacement Index

Daniel L. McCullough, RDCS, FASE, Mayo Clinic, Millville, MN – Real Time Myocardial Perfusion Stress Echocardiography: A Practice Implementation Pilot

ASE FOUNDATION 10TH ANNUAL RESEARCH AWARDS GALA 7:30 - 11:00 PM

HILTON PORTLAND DOWNTOWN PAVILION BALLROOM

The premier annual fundraiser for the ASE Education and Research Foundation is the 10th Annual Research Awards Gala. The ASE Foundation is proud to host the "Black & White Gala" to celebrate cardiovascular ultrasound research and honor ASE's 2019 award recipients. Black tie is encouraged for this magical evening of entertainment, dinner, and dancing. 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 Pre-function C Lobby on Level 1.

OPEN

3D/4D

In Collaboratio

ASE

EACVI

ASE and EACVI have partnered with echo companies to facilitate 3D/4D data connections and integrations across vendors.

Join these vendors alongside leaders from ASE and EACVI

for the first ever public demonstration of interoperable 3D/4D data and see how we are working together to provide seamless access.

Sunday: 9:30-10:15 AM Monday: 9:30-10:15 AM Visit Booth #106 in the Exhibit & Poster Hall

SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

MONDAY, JUNE 24

POSTER SESSION 2 (P2) 9:00 AM - 4:00 PM

EXHIBIT & POSTER HALL

Meet the Investigators 11:45 AM – 1:15 PM

MODERATED POSTER SESSION 2

12:00 – 1:00 PM

2019 JSE YIA Winner	Poster JSE-1
3D Echocardiography	Poster P2-027
Diseases of the Aorta / Vascular Disease	Poster P2-052
New Technology	Poster P2-066

TOPIC

Value of Echo P2-001 — P2-026
3D EchocardiographyP2-027 — P2-051
Diseases of the Aorta / Vascular Disease P2-052 — P2-064
New TechnologyP2-065 — P2-093
Artificial Intelligence / Machine Learning P2-094 — P2-106
Contrast Echocardiography P2-107 — P2-121
Echocardiography in Systemic Disease (DM, HTN, Obesity) / Pericardial Disease /
Primary Myocardial Disease P2- 122 — P2-151
Clinical Cases: Adult Patients P2-152 — P2-229

CHALK TALKS

9:30 – 10:15 AM AND 2:45 – 3:30 PM EXHIBIT & POSTER HALL

Don't miss the opportunity to get your clinical questions answered by expert faculty. During the morning break, Michael Picard, MD, FASE, will discuss **How to Design and Implement a Research Project**. The afternoon break will feature Natesa Pandian, MD, discussing **How to Get the Most Out of Doppler**.

IMAGEGUIDE REGISTRY INFORMATION SESSION 9:30 – 10:15 AM FXHIBIT & POSTER HALL BOOTH #415

Value of the ImageGuide Registry: How Enrolling Will Positively Impact Your Institution *James Kirkpatrick, MD, FASE*

2019 KALMANSON LECTURE 10:15 – 11:45 AM PORTLAND BALLROOM 256



The ASE Foundation is honored to recognize **Matt Bruce, PhD, University of Washington, Seattle, Washington**, as the 2019 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. Bruce will present his lecture entitled "Ultrafast Echo: Seeing More with Speed" during the Applied Ultrasound Physics: What Clinicians Need to Know session.

VALUE OF ECHO SUMMIT

10:15 – 11:45 AM; 1:15 – 2:45 PM PORTLAND BALLROOM 252

This special session will explore the changes in the healthcare system and provide expert opinions on how best to navigate and thrive in this new environment. There will be two sessions, **Quality** and Efficiency in Today's Echo Lab in the morning, and **Preparing for the Echo Lab of the Next Decade** in the afternoon. Both sessions will focus on helping the entire cardiovascular ultrasound community understand how their practice needs to implement change to provide quality patient care in the future.

SCIENCE & TECHNOLOGY THEATER 11:45 AM – 1:15 PM EXHIBIT & POSTER HALL B

Optimal Imaging Modalities for Today's Practice in Ultrasound-Enhanced Echocardiography Presented by Northwest Imaging Forums, Inc. Supported by an educational grant from Bracco Diagnostics Inc.

Join our expert panel for a lunch and learn Symposium discussing the clinical use of Ultrasound Enhancing Agents (UEAs) in echocardiography, including low mechanical index imaging techniques and acoustic principles of UEAs. An interactive Q&A session with the expert panel will follow. Visit https://nwifinvite.com/events/ ase-lunch-cme-symposium-2019/ to pre-register.

Lunch is provided by ASE and is included in all Scientific Sessions registration fees, but space and food are first come, first served. These sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

SPECIAL EVENTS AND NETWORKING OPPORTUNITIES

IMAGEGUIDE REGISTRY INFORMATION SESSION 2:45 - 3:30 PM

EXHIBIT & POSTER HALL BOOTH #415

ImageGuide Registry Overview and Q&A – Encore Presentation

Sherif F. Nagueh, MD, FASE

ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION AND 20TH ANNUAL FEIGENBAUM LECTURE

3:30 – 5:30 PM EXHIBIT HALL A

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.

Nobuyuki Kagiyama, MD, PhD, West Virginia University Heart and Vascular Institute Innovation Center, Morgantown, WV – Cardiac Ultrasonic Fingerprinting: A Radiomics Approach for High-Throughput Feature Phenotyping of Dysfunctional Myocardium

David Ouyang, MD, Falk Cardiovascular Research Center, Stanford Healthcare, Palo Alto, CA – Deep Learning of Echocardiography to Identify Systemic Phenotypes and Unsupervised Learning of Clinical Measurements

Koya Ozawa, MD, Oregon Health & Science University, Portland, OR – Molecular Imaging of Microvascular Endothelial Von Willebrand Factor and Platelet Adhesion in Myocardial Ischemia-Reperfusion Injury

Hiroto Utsunomiya, MD, Hiroshima University Hospital, Hiroshima, Japan – Comprehensive Evaluation of Tricuspid Regurgitation Location and Severity Using Vena Contracta Analysis: A Color Doppler 3-Dimensional Transesophageal Echocardiography Study

FEIGENBAUM LECTURER



Sanjiv Shah, MD, FASE, Northwestern University, Chicago, Illinois. Dr. Shah is a gifted and talented international expert and leader with outstanding clinical and echocardiography knowledge, renowned teaching capabilities, and research success. His research

has focused on the use of quantitative echocardiography to improve the understanding of the pathophysiology of heart failure, particularly heart failure with preserved ejection fraction. Heart failure with preserved ejection fraction is a challenging disorder to treat, and Dr. Shah has shown that echocardiography is a key tool for the management of patients with this disorder. He has published more than 250 peer-reviewed publications, and his work has been cited over 7,000 times. Based on this, he is a recognized authority in heart failure, echocardiography, and pulmonary hypertension. Dr. Shah will present "Echocardiography for Precision Medicine: Digital Biopsy to Deconstruct Biology" as the 20th Annual Feigenbaum Lecture. 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.

WASE NORMAL VALUES STUDY

Are guidelines-recommended normative values applicable in every country or to people of different races?

Federico M. Asch, MD, FASE, Principal Investigator, will present the main findings from the initial analysis of over 1,700 individuals in the World Alliance Societies of Echocardiography (WASE) Normal Values Study. The WASE study entails the acquisition of complete 2D and 3D echocardiograms in 100 healthy individuals of both genders and across a wide range of ages in each of 19 centers in 15 countries. This presentation will focus on specific normal characteristics regarding LV systolic and diastolic function as well as LV size from patients in each country, to answer the main question of the study: *How are hearts of individuals from regions around the world different or similar*?

Roberto M. Lang, MD, FASE is also a WASE Principal Investigator on this study which was funded by the ASE Foundation and its donors, with generous in-kind support from sponsors TOMTEC Imaging Systems, Medidata, Medstar Health Research Institute, and University of Chicago.

CLOSING RECEPTION 5:30 - 6:30 PM PRE-FUNCTION A LOBBY

All attendees are invited to this complimentary reception. Enjoy beverages and hors d'oeuvres while connecting with colleagues and friends. A world map will be on display for attendees to mark their home location. This is a great photo opportunity to share on social media with #ASE2019. There will also be promotional giveaways from Denver, Colorado, which is the location of the #ASE2020 Scientific Sessions. You won't want to miss this fun celebration.

TUESDAY, JUNE 25TH

CHALK TALK 9:30 - 10:00 AM C-123

The final Chalk Talk of ASE 2019 will be given by William Zoghbi, MD, FASE, on **Valve Guidelines**.

ASE FOUNDATION AWARDS AND GRANTS

ASE Foundation

The following Awards and Grants are supported by the ASE Foundation. Charitable donations are fostering the next generation of cardiovascular ultrasound professionals.

2019 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 was selected by the Abstract Chairs based on the scientific merit of their research projects and awarded \$1,000 each from the ASE Foundation for travel expenses. The **Alan S. PearIman Research Award**, established to honor Dr. PearIman's ten years of service as *Journal of the American Society of Echocardiography* (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.

- Alan S. Pearlman Research Award: Tatsuya Miyoshi, MD, MedStar Health Research Institute, Washington, DC
- Vidhu Anand, MD, Mayo Clinic, Rochester, MN
- Christie Boswell-Patterson, BScH, Cardiovascular Imaging Network at Queen's University, Kingston, ON, Canada
- Soham Dasgupta, MD, Children's Healthcare of Atlanta, Atlanta, GA
- Henrique Doria de Vasconcellos, MD, Johns Hopkins, Baltimore, MD and Federal University of Vale do Sao Francisco / School of Medicine, Recife, Brazil
- Iqbal El-Assaad, MD, Boston Children's Hospital, Boston, MA
- Benjamin Frank, MD, Children's Hospital Colorado, Aurora, CO
- Anahita Ghorbani, MD, MPH, University of Connecticut Health Center, Farmington, CT
- Waddy Gonzalez, MD, Montefiore Medical Center, Bronx, NY
- Cho Jung Sun, MD, PhD, Daejeon St. Mary Hospital, Daejeon, Republic of Korea and West Virginia University Heart & Vascular Institute, Morgantown, WV
- Ilya Karagodin, MD, University of Chicago, Chicago, IL
- Lily Lin, MD, University of Alberta, Edmonton, Alberta, Canada
- Isla McClelland, MD, University of Chicago, Chicago, IL
- Katie Mowers, MD, Washington University School of Medicine in St. Louis, St. Louis, MO
- Deliwe Ngwezi, MD, Stollery Children's Hospital & University of Alberta, Edmonton, AB, Canada
- Yogev Peri, MD, Tel Aviv Medical Center, Tel Aviv, Israel
- Alexander Ryu, MD, Mayo Clinic, Rochester, MN
- Hongning Song, MD, Massachusetts General Hospital, Boston, MA
- Marton Tokodi, MD, Heart & Vascular Center, Semmelweis University, Budapest, Hungary

- Marija Vukicevic, PhD, Houston Methodist Hospital, Houston, TX
- Brent White, MD, Northwestern Memorial Hospital, Chicago, IL
- Jun Yoshida, MD, Cedars Sinai Medical Center, Los Angeles, CA
- Yang Zhan, MD, Houston Methodist DeBakey Heart & Vascular Center, Houston, TX

2019 TOMTEC INNOVATOR RESEARCH TRAVEL GRANT

Jennifer Cohen, MD, Mount Sinai Medical Center, New York, NY is the recipient of the 2019 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 his/her work at the ASE Scientific Sessions.

2019 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 U.S. or by an equivalent Canadian or external ultrasound program. Also included with each scholarship award is complimentary registration to attend the Scientific Sessions and limited travel support. This year's recipients were chosen from a large number of students who were nominated by their program directors. The 2019 scholarship award recipients will be recognized during ASE's Annual Awards Presentation and Edler Lecture on Saturday, June 22, in Exhibit Hall A.

- Parisa Abutalebi, El Centro College, Dallas, TX
- Andrea Baldick, Yale New Haven Hospital DMS Cardiac Program, New Haven, CT
- Hannah Barbry, University of Arkansas for Medical Sciences, Little Rock, AR
- Nicole Brewer, Bellevue College, Bellevue, WA
- Andrea Morgan Cole, Clemson University Adult Echocardiography Program, Greenville, SC
- **Emily Deason**, Johns Hopkins Hospital School of Cardiac Sonography, Baltimore, MD
- Sadie Dyer, LSU Health Sciences Center, New Orleans, LA
- **Casandra Ferriter**, St. Francis Hospital & Med. Ctr. School of Cardiac Ultrasound, Hartford, CT
- Hannah Gouge, Florida State College at Jacksonville, Yulee, FL
- Lindsay Hammond, Central Piedmont Community College, Charlotte, NC
- Hannah Hoban, Piedmont College, Gainesville, GA
- **Mi Jung Hwang**, Sentara College of Health Sciences, Chesapeake, VA

- **Shelby Lubowicki**, Clemson University, CV Imaging Leadership Concentration, Greenville, SC
- Noweeda Mirza, PhD, Mayo Clinic School of Health Sciences, Rochester, MN
- **Bradford Smith**, Central Piedmont Community College, Charlotte, NC
- Brice Stettler, Alvin Community College, Alvin, TX
- **Joseph Vasta**, South Hills School of Business and Technology, State College, PA

2019 ULTRAECHO, LTD. CARDIOVASCULAR SONOGRAPHER STUDENT TRAVEL GRANT

This award, supported by a grant to the ASE Foundation, 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 annual Scientific Sessions or other ASE-sponsored educational courses. The 2019 student travel grant has been awarded to **Jamie Hatcher, Austin Community College Diagnostic Cardiovascular Sonography Program, Round Rock, TX**. This award will be recognized during the Council on Cardiovascular Sonography Business Meeting, on Monday, June 24 at 1:15 PM in Portland Ballroom 253-254.

2019 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 2019 student travel grant has been awarded to **Christina Ferretti, Yale New Haven Hospital School of Diagnostic Ultrasound – Adult Echo, New Haven, CT**. This award will be recognized during the Council on Cardiovascular Sonography Business Meeting, on Monday, June 24 at 1:15 PM in Portland Ballroom 253-254.

2019 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.

COUNCIL ON PEDIATRIC AND CONGENITAL HEART DISEASE TRAVEL GRANT AWARD RECIPIENTS

- Allison Black, MD, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA
- Simone Jhaveri, MD, Cleveland Clinic, Cleveland, OH

COUNCIL ON CIRCULATION & VASCULAR ULTRASOUND TRAVEL GRANT AWARD RECIPIENTS

- Salwa Nihal, MBBS, Queen's University, Kingston, ON, Canada
- Nidhal Patel, MD, University of South Florida, Tampa, FL

COUNCIL ON PERIOPERATIVE ECHOCARDIOGRAPHY TRAVEL GRANT AWARD RECIPIENTS

- Yoko Kagemoto, MD, Massachusetts General Hospital, Boston, MA
- Richard Thalappillil, MD, Tufts University, Medford, MA

COUNCIL ON CARDIOVASCULAR SONOGRAPHY TRAVEL GRANT AWARDS

- **Colin Dunbar II, RDCS**, Duke Children's Hospital, Durham, NC
- Bryana Levitan, RDCS, FASE, University of Kentucky, Lexington, KY

KATANICK SCHOLARSHIP AWARD

The 2019 Katanick Scholarship Award will be awarded to **Natalie Terhark, BS, Mayo Clinic School of Health Sciences, Rochester, MN**. This award includes a \$1,000 student scholarship for the highest ranking student sonographer candidate nominated for ASEF scholarship awards and up to \$500 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 IAC after over 25 years of service to the field.

ADAMS GLOBAL SERVICE AWARD

The Adams Global Service Award is awarded to **Suzanne Snow, BSc, DMU, Auckland District Health Board, Auckland, New Zealand**. This \$1,500 travel grant award is presented on an annual basis to one new sonographer outreach volunteer, in honor of David B. Adams, ACS, RCS, RDCS, FASE. Mr. Adams has contributed to the success of the ASEF global health outreach events with his international mission experience, clinical skills, and leadership abilities.



EuroEcho 2019

4-7 Vienna December AUSTRIA



REGISTER BY 30 SEPTEMBER

Become an EACVI Silver Member Save up to **360€** on your registration fee*

23rd Annual Congress of the EACVI www.escardio.org/EACVI



* Early fee for EACVI Silver Members (Young and Allied professionals) compared to standard early fee for non-members

New Products for 2019



Purchase all of ASE's products at the following locations:

ASE Headquarters Booth #409

Saturday June 22	. 4:30 – 6:30 PM
Sunday, June 23	. 9:00 AM – 4:00 PM
Monday, June 24	. 9:00 AM – 4:00 PM

ASE Products Sales Booth – Portland Ballroom Lobby

Friday, June 21 12:00 – 6:15 PM	
Saturday, June 226:30 AM – 4:30 PM	
Sunday, June 236:30 AM - 5:00 PM	
Monday, June 24 6:30 AM - 3:30 PM	
Tuesday, June 25 6:30 – 11:30 AM	

ASE products will also be for sale on Monday during the Member Reception.



Order Products Online at ASEMarketPlace.com

ASE 30TH ANNUAL SCIENTIFIC SESSIONS

JUNE 22-24, 2019

PORTLAND CONVENTION CENTER - LEVEL 1 - EXPO HALL B-C - PORTLAND, OREGON



EXHIBITS

EXHIBIT & POSTER HALL HOURS

SATURDAY, JUNE 22ND

President's Reception	4:30 – 6:30 PM
SUNDAY, JUNE 23 RD	9:00 AM - 4:00 PM
MONDAY, JUNE 24TH	9:00 AM - 4:00 PM

EXHIBIT & POSTER HALL BREAK SCHEDULE

SUNDAY, JUNE 23RD

Coffee Breaks	. 9:30 – 10:15 AM
	2:45 – 3:30 PM
Lunch Break 11	:45 AM – 1:15 PM

MONDAY, JUNE 24TH

Coffee Breaks	9:30 – 10:15 AM
	2:45 – 3:30 PM
Lunch Break11:	45 AM – 1:15 PM

SCIENCE & TECHNOLOGY THEATER SCHEDULE

EXHIBIT HALL B

ASE will provide boxed meals during each lunch session on a first come, first served basis (max. 350 participants). Various refreshments may also be available for the evening sessions. These refreshments are included in all Scientific Sessions registration fees, but space and food are on a first come, first served basis.

FRIDAY, JUNE 21st

6:30 - 8:00 PM

a lifetime of echocardiography

Presented by Hitachi Healthcare

SATURDAY, JUNE 22ND

11:30 AM - 1:00 PM

ENHANCED ECHOCARDIOGRAPHY: IT'S WHAT YOU DON'T SEE THAT MATTERS

Presented by Lantheus Medical Imaging, Inc.

6:30 – 8:00 PM **PRECISION AT THE SPEED OF LIFE, POWERED BY AI** *Presented by Siemens Healthineers*

SUNDAY, JUNE 23RD

11:45 AM - 1:15 PM

ELEVATING THE ROLE OF ECHO IN DIAGNOSIS, TREATMENT AND MANAGEMENT

Presented by Philips

MONDAY, JUNE 24TH

11:45 AM – 1:15 PM

OPTIMAL IMAGING MODALITIES FOR TODAY'S PRACTICE IN ULTRASOUND-ENHANCED ECHOCARDIOGRAPHY

Presented by Northwest Imaging Forums, Inc. Supported by an educational grant from Bracco Diagnostics Inc.

These sessions are not part of the official ASE 30th Annual 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 Exhibit & Poster Hall, on Level 1 of the convention center. The exchange of information and access to new concepts, technology, devices, and research is a vital component of your professional development. Get 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 #409

As the largest organization representing the cardiovascular ultrasound community, ASE is a vibrant and progressive organization. Visit the ASE Headquarters booth #409 to find comprehensive information on all of 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 into ASEUniversity or used Connect@ASE, come by for a tutorial. While you are there, pick up your complimentary USB drive loaded with all the ASE guidelines.

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 #409 to talk one-on-one with a member of the FASE Advisory Group or ASE staff about any questions you have about achieving the FASE designation.

ACTIVITIES IN THE ASE BOOTH SATURDAY, JUNE 22ND

4:30 - 5:00 PM

Meet ASE President Jonathan R. Lindner, MD, FASE

4:30 - 5:30 PM

ASE Tweet Up

Learn How to Use Twitter to Advance Your Career

Sharon Mulvagh, MD, FASE and David Wiener, MD, FASE Public Relations Committee Members

Getting the Most Out of Your Member Benefits

Dallas Lyons, ASE Associate Manager, Member Services and Natalya Read, ASE Director of Membership

SUNDAY, JUNE 23RD 9:30 - 10:15 AM

Face to FASE – Learn How to Achieve the FASE Designation

Jennifer Warmsbecker, RDCS, BS, FASE, FASE Advisory Committee Co-Chair Jimmy Lu, MD, FASE, FASE Advisory Committee Member

12:00 - 1:00 PM

Face to FASE – Learn How to Achieve the FASE Designation

Maureen McDonald, FASE Advisory Committee Member

2:45 - 3:30 PM

Face to FASE – Learn How to Achieve the FASE Designation

Gregory Tatum, MD, FASE, FASE Advisory Committee Chair Anitha Parthiban, MD, FASE, FASE Advisory Committee Member

MONDAY, JUNE 24TH 9:30 - 10:15 AM

Face to FASE – Learn How to Achieve the FASE Designation

Jennifer Warmsbecker, RDCS, BS, FASE, FASE Advisory Committee Co-Chair Jimmy Lu, MD, FASE, FASE Advisory Committee Member

Getting the Most Out of Your Member Benefits

Suzanne Morris, Membership Recruitment Manager

12:00 - 1:00 PM

Face to FASE – Learn How to Achieve the FASE Designation

Gregory Tatum, MD, FASE, FASE Advisory Committee Chair

2:45 - 3:30 PM

Learn more about ASE's case reports journal CASE

Karen Zimmerman, BS, ACS, RDCS (AE, PE), RVT, FASE, Co-Editor of CASE

Face to FASE – Learn How to Achieve the FASE Designation

Gregory Tatum, MD, FASE, FASE Advisory Committee Chair Anitha Parthiban, MD, FASE, FASE Advisory Committee Member

EXHIBIT & POSTER HALL

3:15 PM

Drawing for the Clue Prizes and Announcement of the ASE Foundation Cardiovascular Challenge Winners



CLUE GAME! A FUN INTERACTIVE GAME WITH EXHIBITORS

The mystery game you love to solve again and again! Experience CLUE with a twist at ASE 2019. CLUE cards will be distributed to each attendee in their conference bag. The CLUE card will include "clues" provided by participating exhibitors. When you find the exhibitor and answer the exhibitor's question correctly, you will receive a red ticket. Deposit one half of your ticket (keeping the other half to redeem) into the raffle bin located at the ASE Headquarters Booth #409. All tickets will be entered into a drawing on Monday, June 24 during the afternoon break in the Exhibit & Poster Hall. Must be present to win.

First prize package includes:

- Complimentary full meeting registration for 2020 ASE Scientific Sessions
- ASE membership through December 31, 2020
- Hotel accommodations during 2020 ASE Scientific Sessions
- Prize is transferable, but all elements of the prize must be utilized by the same individual.
- VALUE OVER \$1550!

Second Prize: Choice of: 2nd Edition, Cardiovascular Sonographer Registry Review Guide, Advanced Cardiac Sonographer Registry Review Guide, or Essentials for Proficiency in Basic Cardiovascular Ultrasound

Third Prize: Comprehensive TTE Scanning Maneuvers and TTE Protocol Pocket Guide Set and Echocardiography Formula Review Guide: Native Valves and Intracardiac Pressures

ECHO AROUND THE WORLD

Located at the ASE Headquarters booth #409, visit Echo Around the World and explore literature, courses, and information from echocardiography societies worldwide. Learn about ASE's International Alliance Partners and their upcoming activities.



ASE proudly recognizes our International Alliance Partners (listed alphabetically)

Argentine Society of Cardiology Argentinian Federation of Cardiology ASEAN Society of Echocardiography Asian-Pacific Association of Echocardiography Australasian Sonographers Association British Society of Echocardiography Canadian Society of Echocardiography Cardiac Society of Australia and New Zealand, Imaging Council Chinese Society of Echocardiography College of Anaesthesiologists, Singapore Cuban Society of Cardiology, Echocardiography Section Department of Cardiovascular Imaging of the Brazilian Society of Cardiology European Association of Cardiovascular Imaging Indian Academy of Echocardiography Indian Association of Cardiovascular Thoracic Anaesthesiologists Indonesian Society of Echocardiography InterAmerican Association of Echocardiography Iranian Society of Echocardiography Israel Working Group on Echocardiography Italian Association of Cardiothoracic Anaesthesiologists Japanese Society of Echocardiography Korean Society of Echocardiography Mexican Society of Echocardiography and Cardiovascular Imaging National Association of Cardiologists of Mexico, A.C. National Society of Echocardiography of Mexico A.C. Philippine Society of Echocardiography Saudi Arabian Society of Echocardiography Thai Society of Echocardiography Venezuelan Society of Cardiology, Echocardiography Section Vietnamese Society of Echocardiography

The definition of the word "alliance" is a pact, coalition or friendship between two or more parties, made in order to advance common goals and to secure common interests. The goal of the ASE International Alliance Partners program is to share knowledge, expand thought leadership, and enhance standards and practices based on the best thinking worldwide for improved patient care.

IMAGINGINSIDERS2019 ASE SCIENCE AND TECHNOLOGY THEATER

HITACHI HEALTHCARE PRESENTS

...a lifetime of echocardiography

Friday June 21st 6:30pm



JOIN US FOR AN EVENING OF EDUCATIONAL PRESENTATIONS, DINNER, DRINKS, AND MUSIC

the next level of innovation for the fetus, child and adult



Hitachi Healthcare Americas 1995 Summit Commerce Park Twinsburg, OH 44087 www.hitachihealthcare.com ADVANCED TECHNOLOGY IN THE ASSESSMENT OF THE FETAL CIRCULATION Dr. James Huhta Pediatric Cardiology Associates

FINALLY A SOLUTION THAT PUTS PEDIATRIC PATIENTS FIRST Dr. Devyani Chowdhury Cardiology Care for Children

ECHOCARDIOGRAPHIC ISSUES IN THE ELDERLY Dr. Anthony DeMaria University of California San Diego

Science & Technology Theater sessions are not part of the official ASE Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE



Lantheus Medical Imaging invites you to a Lunch Symposium

ENHANCED ECHOCARDIOGRAPHY: IT'S WHAT YOU DON'T SEE THAT MATTERS

Unenhanced Echo

Come see what you may be missing!

Join expert faculty for an interactive panel discussion on enhanced echocardiography, followed by a moderated Q&A session. See the benefits that enhanced echocardiography has on diagnostic outcomes, patient management, and cost effectiveness across multiple care settings. Gain practical insight into the implementation and administration of an ultrasound enhancing agent.

Lunch is provided by ASE and is included in all Scientific Sessions registration fees. Space and boxed lunches are first-come, first served.



Ben Lin MD, PhD Director, Interventional Echocardiography Yale New Haven Hospital New Haven, CT



Theresa Green RDCS Echocardiography Advanced Coordinator Piedmont Hospital Atlanta, GA



Sean McMahon мд, FACC Associate Director, Echocardiography Laboratory Hartford Hospital Hartford, CT

Saturday, June 22, 2019 • 11:30 a.m.-1:00 p.m.

Science and Technology Theater • Exhibit Hall B Oregon Convention Center • Portland, OR Lunch provided • SDMS credit available

Register at Lantheus.com/rsvp



This activity is not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE. In accordance with PhRMA Code on Interactions with Healthcare Professionals and individual state compliance, attendance at this educational program is limited to healthcare professionals. Accordingly, attendance by quests or spouses is not permitted.

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Precision at the Speed of Life, Powered by Al

Science & Technology Theater Sponsored by Siemens Healthineers



Saturday, June 22, 2019 6:30 p.m.–8:00 p.m. Oregon Convention Center S&T Theater Learn about tomorrow's technology today and how knowledge based automation can expand precision medicine and improve consistency, efficiency and workflow!

Join us for cocktails and hors d'oeuvres as leaders in the field discuss AI-powered Ultrasound technology.

Register for the event by visiting our website.

siemens-healthineers.us/ase2019

This activity is not a part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.



PHILIPS

Ultrasound

Join us for a Science & Technology Theater Event

Elevating the role of echo in diagnosis, treatment and management

Leading cardiovascular imagers, researchers, and professors will present on current and emerging solutions for more optimally addressing your patients using improved cardiac ultrasound visualization, new heart chamber scanning and quantification techniques and enhanced performance in structural heart interventions.

Sunday June 23 11:45 a.m. – 1:15 p.m. Exhibit & Poster Hall

Co-Chairs

Roberto M. Lang, MD, FASE, FACC, FESC, FAHA, FRCP University of Chicago Medicine Chicago

Alexandra Gonçalves, MD, PhD, MMSc, FESC Sr. Medical Director – Philips Global Cardiology Ultrasound Andover, MA

Science & Technology Theater sessions are not part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE.

CME LUNCH SYMPOSIUM

OPTIMAL IMAGING MODALITIES FOR TODAY'S PRACTICE IN ULTRASOUND-ENHANCED ECHOCARDIOGRAPHY

Monday, June 24TH, 2019 - 11:45 AM TO 1:15 PM Oregon Convention Center - Science and Technology Theater

This activity is not a part of the official ASE 30th Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed by or affiliated with ASE. CME credit must be claimed separately through Northwest Imaging Forums/IMS. This Symposium is open to ASE Annual Meeting Attendees.



Thomas R. Porter, MD, FACC, FASE Professor of Medicine Theodore F. Hubbard Distinguished Chair of Cardiology University of Nebraska Medical Center Division of Cardiovascular Medicine - Omaha, Nebraska



11:45 am	Ballroom Opens & Symposium Overview
12:00	What are the ASE Guidelines and
	Recommendations on the Use of Imaging
	Modalities with UEAs? - Thomas R. Porter, MD, FACC, FASE
12:20	Putting it to Practice: Comparison of Different
	Low-Mechanical Index Imaging Techniques
	- Michelle Bierig PhD, ACS, RDCS, RDMS, RCS, CPHQ, FSDMS, FASE, AACC
12:40	Acoustic Principles of UEA
	- Sanjiv Kaul, MD, FACC, FASE, FAHA, FRCP
1:00	Discussion and Conclusions
1:15 pm	End of Symposium

Program Learning Objectives

- 1. Discuss Clinical Use of Ultrasonic Enhancing Agents (UEAs) in Echocardiography
- 2. Describe UEAs and Low Mechanical Index Modalities
- 3. Discuss Optimal Imaging Techniques of UEAs in Ultrasound









Sanjiv Kaul, MD, FACC, FASE, FAHA, FRCP Ernest C. Swigert Endowed Chair of Cardiology Professor of Medicine and Radiology Oregon Health And Science University Portland, Oregon



Michelle Bierig, PhD, ACS, RDCS, RDMS, RCS, CPHO, FSDMS, FASE, AACC Director, Cardiovascular at Hillcrest South Hillcrest Healthcare System

Accreditation

Tulsa. OK

Program Description / Statement of Need:

Clinicians have shown a growing interest in CEUS for diagnostic use and treatment monitoring in the clinical setting, due to new indications and the expansion of CEUS subjective and objective analytical capabilities. Therefore, there is a need to provide up to date information to clinicians on Clinical use of Ultrasonic Enhancing Agents (UEAs) in Echocardiography. Additionally, UEAs and Low Mechanical Index techniques will be explored with emphasis on how to implement these techniques in everyday practice.

Target Audience:

The content of this CME/SDMS Symposium is intended for healthcare professionals including Cardiologists, Echocardiographers and Other Physicians, Sonographers, Imaging Nurses, Administrators, Researchers, and Others.

Accreditation and CME Credit Statements:

This CME activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education thru the joint providership of The Institute for Medical Studies (IMS) and Northwest Imaging Forums, Inc. IMS is accredited by the ACCME to provide continuing medical education for physicians. The Institute for Medical Studies designates this live activity for a maximum of 1.0 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Nurses may claim credit for activities approved for AMA PRA Category 1 Credits ™ in most states, for up to 50% of the nursing requirement for recertification. This activity is designated for up to 1.0 AMA PRA Category1 Credits™.

This program has been submitted for approval of 1.0 hours of SDMS CME Credit Category AE by the Society of Diagnostic Medical Sonographers (SDMS).

Faculty and Planner Disclosures:

As an accredited provider of continuing medical education, it is the policy of The Institute for Medical Studies (IMS) to ensure balance, independence, objectivity, and scientific rigor in all of its live activities. In accordance with this policy, faculty and planners must disclose any financial relationships with commercial interests germane to program content. Additionally, in the event a conflict of interest (COI) does exist, it is the policy of IMS to ensure that the COI is resolved in order to ensure the integrity of the CME activity. The planner has nothing to disclose.



Presented by: **Northwest Imaging Forums, Inc.** Supported by an unrestricted educational grant from **Bracco Diagnostics Inc.**

EXHIBITOR LOCATIONS LISTED ALPHABETICALLY

Company	Booth
3D/4D Open Echo Interoperability	106
3D Systems Simbionix	312
Abbott	516
Actelion	109
The Alliance for Physician Certification and Advancement [™] (APCA [™]) & and The American Registry for Diagnostic Medical Sonography [®] (ARDMS [®])	513
American Society of Echocardiography (ASE)	409
ASCEND Health Information Technology	208
Biodex Medical Systems, Inc.	313
Bracco Diagnostics Inc.	200
Butterfly Network, Inc.	100
CAE Healthcare	418
Canon Medical Systems USA, Inc.	709
Cardiovascular Credentialing International (CCI)	710
Cardiovillage, University of Virginia	805
Children's Hospital & Medical Center	111
CIVCO Medical Solutions	613
CS Medical, LLC	316
DiA Imaging Analysis	115
Diagnostic & Interventional Cardiology	311
Digisonics	209
Elsevier	708
Epsilon Imaging	803
Esaote North America	401
European Association of Cardiovascular Imaging (EACVI)	410
Fujifilm Medical Systems USA, Inc.	500
GE Healthcare	501

Company	Booth
Heritage Medical Products, Inc.	417
Hitachi Healthcare	400
ImageGuide Registry	415
Infinity Massage Chairs	807
Intersocietal Accreditation Commission (IAC)	616
JRC - DMS	614
Lantheus Medical Imaging, Inc.	509
Mayo Clinic Cardiovascular Education	309
MDocHaus	817
MedAxiom, an ACC Company	811
Medical Positioning, Inc.	612
Medical University of South Carolina	113
My Custom Tailor	914
National Board of Echocardiography (NBE)	317
Oregon Institute of Technology	210
Oxford University Press	215
Philips	300
ScImage, Inc.	813
Sheehan Medical, LLC	207
Siemens Healthineers	800
Sound Ergonomics, LLC	204
Studycast by Core Sound Imaging, Inc.	609
Texas Children's Hospital	408
TOMTEC Corporation	308
Ultraling Healthcare Solutions, Inc.	117
Valley Children's Hospital	212
Ventripoint Diagnostics Ltd.	214
West Coast Ultrasound Institute	416
Wolters Kluwer	405

EXHIBITOR LOCATIONS LISTED NUMERICALLY

Company	Booth
Butterfly Network, Inc.	100
3D/4D Open Echo Interoperability	106
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Sound Ergonomics, LLC	204
Sheehan Medical, LLC	207
ASCEND Health Information Technology	208
Digisonics	209
Oregon Institute of Technology	210
Valley Children's Hospital	212
Ventripoint Diagnostics Ltd.	214
Oxford University Press	215
Philips	300
TOMTEC Corporation	308
Mayo Clinic Cardiovascular Education	309
Diagnostic & Interventional Cardiology	311
3D Systems Simbionix	312
Biodex Medical Systems Inc.	313
CS Medical, LLC	316
National Board of Echocardiography (NBE)	317
Hitachi Healthcare	400
Esaote North America	401
Wolters Kluwer	405
Texas Children's Hospital	408
American Society of Echocardiography (ASE)	409

Company	Booth
European Association of Cardiovascular Imaging (EACVI)	410
ImageGuide Registry	415
West Coast Ultrasound Institute	416
Heritage Medical Products, Inc.	417
CAE Healthcare	418
Fujifilm Medical Systems USA, Inc.	500
GE Healthcare	501
Lantheus Medical Imaging, Inc.	509
The Alliance for Physician Certification and Advancement [™] (APCA [™]) & and The American Registry for Diagnostic Medical Sonography [®] (ARDMS [®])	513
Abbott	516
Studycast by Core Sound Imaging, Inc.	609
Medical Positioning, Inc.	612
CIVCO Medical Solutions	613
JRC - DMS	614
Intersocietal Accreditation Commission (IAC)	616
Elsevier	708
Canon Medical Systems USA, Inc.	709
Cardiovascular Credentialing International (CCI)	710
Siemens Healthineers	800
Epsilon Imaging	803
Cardiovillage, University of Virginia	805
Infinity Massage Chairs	807
MedAxiom, an ACC Company	811
ScImage, Inc.	813
MDocHaus	817
My Custom Tailor	914



3D/4D Open Echo Interoperability......106

2530 Meridian Parkway, Suite 450 Durham, NC 27713 United States Phone: 919-297-7176 Email: mmorovati@ASEcho.org

ASE and EACVI have partnered with echo companies to facilitate 3D/4D data connections and integrations across vendors. Join these vendors alongside leaders from ASE and EACVI for the first ever public demonstration of interoperable 3D/4D data and see how we are working together to provide seamless access. Demonstrations will take place during the morning breaks on Sunday and Monday.

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Experience a hands on demo of the Simbionix U/S Mentor crossspecialty simulator for ultrasound examinations and interventions. The U/S Mentor offers a multidisciplinary, realistic hands-on training for the ever-growing utilization of ultrasound in medicine especially at point of care (POC) setting. Request a demo at healthcare@3dsystems.com or www.simbionix.com.

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We are the leaders in PAH therapy and, with our PAH products, we will continue to lead well into the future.

1401 Rockville Pike, Suite 600 Rockville, MD 20852 United States Phone: 240-386-1604 (APCA); 800-541-9754 (ARDMS) apca.org ardms.org

The Alliance for Physician Certification and Advancement[™] (APCA[™]), established in 2016, exclusively serves the physician community of over 21,000 physicians in support of their enduring commitment to continual learning and providing high-quality and compassionate patient care through certification. For more information, visit **APCA.org**.

The American Registry for Diagnostic Medical Sonography[®] (ARDMS[®]), founded in 1975, administers examinations and awards credentials in the areas of diagnostic medical ultrasound. With over 85,000 credentialed professionals worldwide, ARDMS is considered the global standard of excellence in sonography. ARDMS is part of the non-profit Inteleos family of councils.

American Society of Echocardiography (ASE)..... 409

2530 Meridian Parkway, Suite 450 Durham, NC 27713 United States Phone: 919-861-5574 Email: ASE@ASEcho.org ASEcho.org

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 cardio-vascular system to enhance patient care. ASE membership is open to all echo enthusiasts. Join the most important voice in cardiovascular ultrasound!

ASCEND Health Information Technology208

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Butterfly Network100

530 Whitfield Street Guilford, CT 06437 United States Phone: 941-536-2845 butterflynework.com

Butterflynetwork.com Butterfly iQ is the world's first handheld whole-body ultrasound system, democratizing healthcare and providing global access to medical imaging. The device connects directly to a smartphone and will soon offer Al interpretation and AR tele-guidance to enhance patient care.



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Canon Medical Systems USA, Inc., headquartered in Tustin, Calif., markets, sells, distributes and services radiology and cardiovascular systems, including CT, MR, ultrasound, X-ray and interventional X-ray equipment. For more information, visit Canon Medical Systems' website at https://us.medical.canon.

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Since 1968, CCI has administered credentialing examinations as an independent credentialing agency. Examinations for ECG and rhythm analysis technicians, invasive/cath lab professionals, cardiac and vascular sonographers, phlebology sonographers, and electrophysiology professionals. CCI administers the only advanced level credential for sonographers, the Advanced Cardiac Sonographer (ACS). Visit CCI at booth #710.

CardioVillage, University of Virginia805

1415 Jefferson Park Avenue Charlottesville, VA 22908 United States Phone: 434-924-8394 cardiovillage.com

CardioVillage provides top-quality accredited online cardiovascular education. CardioVillage is designed to accommodate your busy schedule by providing easy access to meaningful and easily consumable content. Our mobile-friendly, relevant, and engaging learning focuses on Practicing Cardiovascular Medicine, Echocardiography, New Topics and Trends, and Fundamentals.



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8200 Dodge Street Omaha, NE 68114 United States Phone: 402-955-5746 childrensomaha.org

Children's Hospital & Medical Center, in affiliation with the University of Nebraska College Of Medicine, is Nebraska's only full-service pediatric specialty health center. Children's is home to a Level IV NICU and Level II trauma center; a regional heart center, it offers expertise in pediatric heart transplantation and ACHD.



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CS Medical, LLC 316

2179 E. Lyon Station Road Creedmoor, NC 27522 United States Phone: 919-255-9472 csmedicalllc.com

CS Medical LLC is a leader in developing, manufacturing, and marketing medical devices that are designed to provide high-level disinfection of ultrasound TEE probes. Our products are engineered and developed with one single objective in mind: to minimize the potential of patient exposure to improperly reprocessed TEE ultrasound probes.

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DiA Imaging Analysis.....115

77 HaEnergia Street Beer Sheva, HaDarom 84102 Israel Phone: 972-77-7648318 dia-analysis.com

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EACVI European Association of Cardiovascular Imaging

The European Heart House Les Templiers - 2035 route des colles CS 80179 Biot Sophia Antipolis Cedex 06903 France Phone: +33 (0)4 92 94 76 00 escardio.org/EACVI

We are a not-for-profit organisation driven by renowned cardiovascular imaging experts. We support our 14,000 members and all healthcare professionals in the field worldwide so they can deliver the best possible care to patients. Our Mission: to promote excellence in clinical diagnosis, research, technical development, and education in cardiovascular imaging.

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ImageGuideRegistry

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Intersocietal Accreditation Commission (IAC) ... 616

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6021 University Boulevard, Suite 500 Ellicott City, MD 21043 United States Phone: 443-973-3251 jrcdms.org

The JRC-DMS makes accreditation recommendations for diagnostic medical sonography (DMS) programs to the Commission on Accreditation of Allied Health Education Programs. Programmatic accreditation is awarded to programs who through a self study and site visit demonstrate substantial compliance to published Standards and Guidelines specific to DMS.



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Lantheus Medical Imaging **www.lantheus.com**, a global leader in the development, manufacture and commercialization of innovative diagnostic imaging agents and products serving Echocardiography and Nuclear Medicine specialties, is headquartered in North Billerica, Massachusetts with offices in Puerto Rico and Canada.

Mayo Clinic Cardiovascular Education......309

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National Board of Echocardiography (NBE).......317

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The National Board of Echocardiography, Inc. is a physician, volunteer-led not-for-profit corporation. Established in 1996 to develop and administer examinations in the field of Clinical Echocardiography. A board certification process has been developed to publicly recognize Diplomates of the National Board of Echocardiography.

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Oregon Institute of Technology

Oregon Institute of Technology210

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Canadian Society of Echocardiography

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ASE Foundation Events in Portland

Visit the Foundation Booth located outside the Exhibit Hall to learn more.

SATURDAY, JUNE 22

7:50 am - 9:45 am	Join us to congratulate the 2019 ASEF Travel Grant and Scholarship Recipients Opening Plenary: Exhibit Hall A
9:00 am – 5:00 pm	Sign up for the Cardiovascular Challenge and Tie-A-Knot for pediatric patients! ASE Foundation Booth
9:00 AM	Images from the Heart Gallery Opening ASE Foundation Booth

SUNDAY, JUNE 23

9:00 am – 5:00 pm	Log your steps for the Cardiovascular Challenge ASE Foundation Booth	
1:15 pm - 2:45 pm	Inaugural Gardin Lecture presented by New York Times Bestselling author Barbara Natterson-Horowitz, MD Exhibit Hall A	
2:45 рм - 3:30 рм	<i>Zoobiquity</i> book signing with Barbara Natterson-Horowitz, MD ASE Foundation Booth	
3:30 рм – 5:00 рм	Brian Haluska Sonographer Research Award Competition Portland Ballroom 253-254	
7:30 pm – 11:00 pm	10th Annual ASE Foundation Research Awards Gala: Celebrating Cardiovascular Ultrasound Research Hilton Downtown Portland Private event; tickets required	

MONDAY, JUNE 24

10:15 ам – 11:45 ам	2019 Kalmanson Lecture presented by Matt Bruce, MD Portland Ballroom 256
2:00 pm	Last chance to log your steps for the Cardiovascular Challenge ASE Foundation Booth
3:15 рм	Announcement of Cardiovascular Challenge Winners ASE Booth in the Exhibit & Poster Hall
3:30 рм – 5:30 рм	2019 Arthur E. Weyman Young Investigator's Award Competition Exhibit Hall A

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ASEFoundation.org/Gala



GENERAL INFORMATION

ABOUT ASE



As the largest global organization for cardiovascular ultrasound imaging, ASE is the leader and advocate, setting practice standards and guidelines. Comprised of over 17,000 physicians, sonographers, nurses, and scientists, ASE is a strong voice providing guidance, expertise, and education to its members with a commitment to improving the practice of ultrasound and imaging of the heart and cardiovascular system for better patient outcomes.

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, help with coding and reimbursement issues, an image library, and other career resources. ASE membership through December 31, 2019 is included with most nonmember registrations for the ASE 30th Annual Scientific Sessions.

CONTACT US

American Society of Echocardiography 2530 Meridian Parkway, Suite 450 Durham, NC 27713

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BOARD, COUNCIL, AND COMMITTEE MEETINGS

FRIDAY, JUNE 21st

Board of Directors Meeting	12:00 – 2:30 PM	C-124
Council on CV Sonography Steering Committee	3:00 – 5:00 PM	A-108
Rising Star Task Force	3:00 – 4:00 PM	B-110
Council on PCHD Steering Committee	3:00 – 5:00 PM	B-111
New Committee Chair/ Co-Chair Orientation	3:30 – 4:30 PM	A-107
CASE Editorial Board	5:00 – 6:00 PM	A-106

SATURDAY, JUNE 22ND

POCUS Task Force B Meeting	10:00 – 11:00 AM	A-108
Membership Steering Committee	10:00 – 11:30 AM	A-106
ImageGuideEcho Registry Committee	11:30 AM – 1:00 PM	A-107
COPE Council Steering Committee Meeting	11:30 AM – 1:00 PM	B-112
Leadership Academy	11:45 AM - 12:45 PM	C-120
Pediatric Echo Lab Directors	1:00 - 2:00 PM	C-124
3D Echo Interoperability Task Force	1:30 – 3:30 PM	A-106
Council on PCHD Business Meeting	3:00 – 3:15 PM	Portland Ballroom 251
Council on Perioperative Echocardiography Business Meeting	3:00 – 3:15 PM	Portland Ballroom 256
International Relations Advisory Committee	3:00 - 4:30 PM	A-107
Critical Care Workgroup	3:00 - 4:30 PM	A-108

SUNDAY, JUNE 23RD

Governance Task Force	7:00 – 7:45 AM	B-111
ASEF Annual Appeal Committee	8:00 – 9:30 AM	A-107
Advocacy Committee	8:30 – 10:00 AM	A-106
Awards Committee	9:30 – 10:15 AM	B-112
Research Committee	10:00 – 11:30 AM	A-106
ASE Cares Task Force	10:00 – 11:00 AM	B-111
Technology Task Force	11:00 AM - 12:00 PM	A-108
Education Committee	11:30 AM – 12:30 PM	B-110
FASE Advisory Committee	11:45 AM - 12:45 PM	B-112
International Leadership Luncheon	11:45 AM – 1:15 PM	C-123
Industry Roundtable Committee	12:00 – 1:30 PM	A-106
ImageGuideEcho Research & Publications Committee	12:00 – 1:30 PM	B-111
Council on Circulation & Vascular Ultrasound Steering Committee	1:15 – 2:30 PM	B-112
SHD Task Force	3:30 – 4:30 PM	A-108
Twitter Journal Club Task Force	3:30 – 4:30 PM	B-110
JASE Editorial Board	4:00 – 5:30 PM	A-106

MONDAY, JUNE 24TH

Bylaws & Ethics Committee	7:00 – 7:45 AM	B-112
Public Relations Committee	9:30 – 10:30 AM	A-107
CPELP Workgroup	11:00 AM - 12:00 PM	B-112
CME Committee	11:30 – 12:30 PM	B-110
Guidelines Committee	11:45 AM – 1:15 PM	A-107
Council on CV Sonography Business Meeting	1:15 – 1:35 PM	Portland Ballroom 253-254
Finance Committee	2:00 - 3:30 PM	B-110
Nominations Committee	2:30 – 3:30 PM	B-112

TUESDAY, JUNE 25TH

Council on Circulation & Vascular Ultrasound Business Meeting	7:00 – 7:10 AM	Portland Ballroom 255
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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 exceeded its \$250,000 fundraising goal for the 2018 Annual Appeal, raising \$287,915. All contributions to the Foundation support the following initiatives:

- Demonstrating the Value of Cardiovascular Ultrasound
- Guideline Translations and Global Dissemination
- Global Health Outreach Events
- Patient Awareness
- Research Investigator Support
- Research Studies
- Travel Grants and Scholarships

Stop by the ASE Foundation booth, located in the Pre-function C Lobby on Level 1 to:

- Learn more about fundraising events being hosted in Portland, such as the Annual Research Awards Gala, the Cardiovascular Challenge, and how to assemble a blanket for a pediatric patient at the Oregon Health & Science University Doernbecher Children's Hospital.
- · View the photo exhibition 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 - 5:00 PM

Sunday, 9:00 AM - 5:00 PM

Monday, 9:00 AM - 5:00 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 for donations from others. Donate today and help us to make a world of difference!

TIE-A-KNOT FOR PEDIATRIC PATIENTS

Stop by the ASEF booth to make a tie-knot blanket for pediatric patients at the Oregon Health & Science University Doernbecher Children's Hospital! We'll have pre-cut fabric that's ready to be tied. Printed instructions will also be available - but you'll get the hang of it quickly! Donate at least \$10 to the ASE Foundation and you can participate in this fun, creative, and rewarding activity. Put a smile on a child's face with a blanket you made just for them! Money raised through this effort will be allocated to Patient Awareness projects in 2020.

CARDIOVASCULAR CHALLENGE

Compete with your feet and get moving with the ASE Foundation! ASEF is highlighting physical activity, which can dramatically lower an individual's risk of cardiovascular disease, improve mental health, and



lower the risk of obesity related diseases. Key areas around the Oregon Convention Center will display step targets. The top three participants will win a prize! A \$150 Amazon gift card will be awarded to the winner, second place will receive a \$75 Amazon gift card, and the person with the third highest step count will receive a limited edition ASEF hat. Record your steps taken at the conference and check in each day with the ASEF Booth to log your steps and keep an eye on the competition. The winners will be announced Monday, June 24th during the afternoon break in the Exhibit & Poster Hall.

Special thanks to our 2019 Cardiovascular Challenge sponsors:



IMAGES FROM THE HEART GALLERY

Back this year, ASEF is presenting a curated display of photos taken by ASE members while they traveled the world participating in various medically-related outreach events. ASE members entered photographs that captured faces of people met along the way, landscapes, cultural observations, etc., and wrote a few heartfelt memories about what the photos meant to them. Stop by the ASEF booth in the Pre-function C Lobby to view the incredible photos and read the stories. Want to take these photos home? Many will be available for a donation to the ASE Foundation in the photographer's name.

THE GARDIN LECTURE

Endowed to the ASE Foundation through a generous long-term gift from Julius Gardin, MD, FASE, we are proud to announce the establishment of the Gardin Lecture. Dr. Gardin has been associated with the ASE for nearly four decades. He served as the ninth President of ASE (1993-1995), chaired the first Scientific Sessions in 1990, presented the Edler Lecture in 1997, and recently completed a 10-year term as associate editor of JASE. He has a passion for education which will be supported by this lecture series because it will provide the funding resources to bring a luminary speaker to the Scientific Sessions every year. The inaugural Gardin Lecture will be presented by New York Times best-selling author Barbara Natterson-Horowitz, MD. Her lecture entitled "Species-Spanning Echocardiography: Cardiovascular Insights for Humans and Other Animals" will take place during the Echo Technology at the Cutting Edge of Knowledge session. Dr. Natterson-Horowitz will be at the ASE Foundation booth on Sunday, June 23rd from 2:45 – 3:30 PM signing copies of her book, Zoobiquity.

THANK YOU - CUMULATIVE GIVING RECOGNITION

This list recognizes cumulative giving from individual donors as of December 31, 2018. 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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9:00 - 11:00 AM

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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 #409 in the Exhibit Hall, during the morning and afternoon breaks on Sunday and Monday, to talk one-on-one with a member of the FASE Advisory Group or ASE staff about any questions you have about achieving the FASE designation.

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