24th Annual Scientific Sessions • June 29 – July 2, 2013
Minneapolis Convention Center, Minneapolis, MN

Disease Based Focus on the Role of Echo in Diagnosis and Guiding Therapy
MINNEAPOLIS MINNESOTA

Why Minneapolis?

SHOPPING: There is no sales tax on clothing or shoes in Minnesota.

You won’t want to miss the unique experience that is the Mall of America®. Did you know?

• If Mount Rushmore was divided into individual monuments, a president could reside in each of the Mall’s four courts.

• 86 hours is the length of time it would take to complete your visit to the Mall if you were to spend just 10 minutes in each store.

• 100+ pounds of food are fed daily to animals at SEA LIFE™ Minnesota Aquarium housed at the Mall of America.

• The 25 rides and attractions in Nickelodeon™ Universe have been ridden over 130 million times.

• You can enjoy free shuttle service from more than 50 hotels to the Mall of America® and there is convenient Light Rail Transit from downtown Minneapolis.

OUTDOOR FUN:

Minneapolis lies on the banks of the Mississippi River. Adding to the city’s beauty and excitement are miles of paths along the Mississippi river, a chain of lakes in the city and the Minnehaha parkway. The trails are suitable for walking, running, biking and even inline skating.

Bikes are available for rent throughout Minneapolis through Nice Ride Minnesota, a service allowing you to pick up and drop off bikes at various locations. Talk about taking your trip to ASE 2013 by the handlebars!

CULTURE

Minneapolis is a very cultural and lively city, home to several wonderful art museums and theatres. Just to name a few, the large Minneapolis Institute of Arts (free admission!), Walker Art Center, Weisman Art Museum, Cowles Centre for Dance and the Performing Arts, and an outdoor sculpture garden, the Minneapolis Sculpture Garden.

Experience international flavors from Sweden to Poland to Vietnam without ever leaving this Midwestern city. This diverse city offers many restaurants featuring a culture of locally-grown, globally-inspired foods to nourish body and soul. Visit www.minneapolis.org/visitor/food-wine for a full listing of Minneapolis’ culinary offerings.

Nicollet Mall in downtown Minneapolis, and just blocks from the convention center, has shops, shopping malls, restaurants, bars, arts, entertainment and sights to see. Nicollet Avenue has been downtown Minneapolis’ shopping district since the beginning of the 20th century, when department stores like the famous Dayton’s, and several others, opened on Nicollet Avenue and can now be found in many communities. You will also find an iconic statue of Mary Richards throwing up her hat in the opening credits of the Mary Tyler Moore Show.
Disease Based Focus on the Role of Echo in Diagnosis and Guiding Therapy

Judy Hung, MD, FASE, Program Chair, along with the Scientific Sessions Program Committee have developed a fresh, exciting Scientific Sessions Program in 2013. The American Society of Echocardiography’s (ASE) 24th Annual Scientific Sessions will focus on clinical practice to help you be the best practitioner you can be. This year’s disease based diagnosis and therapy theme will assist you in your every-day clinical needs. An increase in the amount of small sessions and faculty involvement will allow you to have the most meaningful conference experience possible. Old favorites and new features at ASE 2013 will provide you the quality education you expect from an ASE course. There will also be sessions on new technologies and what you will be seeing in the future. In addition, particular care has been taken to incorporate ASE guidelines into talks that will demonstrate how and why they should be applied in daily practice.

What’s new at ASE 2013 that I can’t afford to miss? Additional details will be posted on www.ASEScientificSessions.org as they become available.

Athlete’s Heart: 360 Perspective: ASE has invited world renowned experts to discuss how intense athletic training impacts the cardiovascular system. Issues addressed will be: Physiology of Training on Heart: How Does the Heart Adapt?, Sudden Death in Athletes: What are the Causes?, Can Imaging Help?, The Marathon: Endurance vs. High-Intensity Training, and a Perspective from a National Football League Team Physician.

Live Imaging and How-to Sessions: You won’t want to miss these live demonstrations on optimizing acquisition and quantification.

Cases, Cases, Cases: Almost all sessions will include cases and an opportunity to talk directly with faculty.

Interventional Echocardiography: Learn about the new valves, guiding the procedure, managing complications and what the ASE guidelines have to say about it.

Echo in Atrial Fibrillation and Stroke: What is the evidence on cardiac source of embolism and role of imaging in evaluation of stroke? Learn about role of imaging in device therapy for atrial fibrillation. How do you grade aortic atheroma?

Heart Failure: How to assess with echo and when to bring in other modalities; learn how echo can be used to guide treatment of heart failure, including mechanical assist devices.

Pericardial Disease: What is the role of multimodality imaging in pericardial disease? How and who to perform echo guided pericardiocentesis and who does it?

Mitral Regurgitation: How to identify and how can imaging guide treatment? Learn from the experts!

And if that is not enough, there is even more packed into ASE 2013! Echo Jeopardy is back and better than ever! A new format with more fun and learning allows attendees to participate in the action while learning as Team USA goes up against Team World.

Technology Forum: An Echo of the Future: Learn what the experts think will be the next evolution of echo.

Redesigned Breakfast Sessions: Learn from the leaders and luminaries in the field in small group sessions of 25 people. This is your opportunity to learn from the experts in an intimate setting.

WE’VE INCLUDED OPPORTUNITIES FOR YOU TO NETWORK WITH YOUR PEERS AND EXHIBITORS!

Toast the Opening of ASE 2013: Join us for the 2013 President’s Reception on Saturday, June 29.

Spend some time in the Exhibit & Poster Hall learning about what’s new from our industry partners: Two full days of our Exhibit & Poster Hall will give you plenty of opportunity to look at the newest equipment and solutions for your workflow.

Outdoor Networking Reception: Enjoy an after sessions networking event on the beautiful grounds of the Minneapolis Convention Center.

Who should attend ASE 2013? ASE 2013 will benefit all healthcare providers interested in the application of cardiovascular ultrasound imaging in the care of patients. Participants in all areas of cardiovascular ultrasound imaging and at all levels of experience will find sessions that meet their needs and help improve their practice. High quality lectures, debates, hands-on sessions and poster presentations offer a broad spectrum of educational opportunities in both large and small group settings. Adult and pediatric cardiologists, cardiothoracic and vascular surgeons, cardiac anesthesiologists, cardiac sonographers, and emergency and critical care physicians, as well as hospitalists, radiologists, research scientists, residents and fellows in training, students, and nurses, are encouraged to participate actively in sessions and interact with available faculty, get a broad overview of all topics, or delve deeply into one or two topics.
SCIENTIFIC PROGRAM
TRACKS AND KEY

**SYMPOSIUM S**
These daily tracks concentrate on clinical use of cardiovascular ultrasound. Each symposium discusses a specific topic in detail and instructs you on how to apply state-of-the-art cardiovascular ultrasound techniques in clinical practice. NEW for 2013 – innovative multi-specialty symposia bring you a comprehensive view of the issues.

**PERI-OPERATIVE/INTERVENTIONAL I**
This one day symposium, “Multidisciplinary Approach to Complex Intraoperative Decision Making” taking place on Saturday, June 29, has been designed by the ASE Council on Perioperative Echocardiography to bring surgeons, anesthesiologists, echocardiographers, and sonographers together. The session will feature true multidisciplinary integration with interactive panel discussions, porcine heart dissection, and multimedia presentations including surgical videos that comprehensively explore current concepts in mitral valve disease.

Interventional: Interventional echocardiography is a rapidly growing discipline. Learn more about this cutting-edge field.

**PEDIATRIC/CONGENITAL PC**
The Pediatric and Congenital Heart Disease Council has put together a program that promises to be jam-packed with cutting edge science, imaging pearls and hands-on instruction to benefit all members of the pediatric and adult congenital echocardiography community. The popular staples of the program return: Pediatric Echo Jeopardy; the Fireside Chat; case presentations; oral abstract sessions; and the always entertaining controversy debates. We will unveil the mysteries of some of the newer echo technologies and see how expert centers apply them in clinical practice. There will be a full serving of Adult Congenital topics throughout the meeting, with relevant sessions on each day of the meeting.

**RESEARCH R**
Investigators will present the latest advances in cardiovascular ultrasound throughout the program. Don’t miss the rapid fire abstract sessions or the prestigious Arthur E. Weyman Young Investigator’s Award Competition, where the four best abstracts submitted compete in front of a panel of luminaries for cash prizes and international recognition. Meet the investigators during dedicated poster viewing times, and the Scientific Sessions Wrap-Up will highlight the science you may have missed.

**PRACTICE PR**
There are ongoing rapid changes in the health care delivery system that affect the practice of cardiology and cardiovascular imaging. These sessions will help attendees gain knowledge about these developments and learn strategies for having a successful practice. Topics that will be covered include strategic planning, building the successful practice, and communication skills. The sessions will also address the role of echocardiography in a successful practice. The presentations are geared not only to cardiologists but also to practice administrators and hospital and physician executives with plenty of time for audience interaction with the panel of presenters.

**IMAGING ESSENTIALS E**
This track will instruct practitioners on techniques of assessment and quanttitation. This track is specifically designed for those who want to learn, review or solidify their practical skills.
**SCIENTIFIC PROGRAM TRACKS AND KEY**

**VASCULAR IMAGING**

ASE’s Council on Vascular Ultrasound has put together a rich program that will provide the attendee with an excellent overview on vascular ultrasound topics of interest to the practicing cardiologist/ultrasound technologist. Topics such as carotid imaging will be covered from basics to advanced techniques. Additional state-of-the-art and emerging technologies will be covered as well in what promises to be an exciting session.

**CARDIOVASCULAR SONOGRAPHER**

Sonographers’ advancement, leadership and contribution to patient care and safety are important to the ASE and discussed in multiple sessions.

**TICKETED BREAKFAST**

These sell-out sessions are case-based and explore one topic in detail in an informal setting with experts in the field. Registration is limited to facilitate active audience participation. The sessions have been reformatted for 2013 and are strictly limited to 25 attendees each. The cost for each ticket is $50.00. You may purchase these sessions during the registration process.

**2013 TICKETED BREAKFAST SESSIONS**

**SUNDAY, JUNE 30**
  - Echo in Patients with VADs
  - Prosthetic Valve Dysfunction
  - Contrast Echo for Improving Patient Care
  - Diastolic Function-How to Incorporate into Clinical Care
  - Constrictive, Restrictive, and Effusive-Constrictive Physiologies: How to Distinguish

**MONDAY, JULY 1**
  - Hemodynamics: Shunt Evaluations and Doppler Quantification
  - Case Studies in Advanced LV Mechanics - Twist, Torsion, Strain
  - Aortic Stenosis: Pseudo, Low Flow, Low Gradient: How to Tell
  - Basic Approach to Assessment of Congenital Heart Disease
  - Echo in the OR

**TUESDAY, JULY 2**
  - Aortic Trauma: Dissection, Intramural Hematoma, Transection-Differential Diagnosis
  - How to Run an Efficient Pediatric Echocardiography Laboratory
  - Stress Echo: Experts Bring Their Toughest Cases: Do You Agree With Their Interpretations?
  - How to Map the Mitral Valve: 2D and 3D
  - Workshop on CRT: Dyssynchrony and AV Optimization: How to Do

The American Society of Echocardiography is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.
**FRIDAY, JUNE 28 — REGISTRATION OPEN 12:00 – 7:00 PM**

**SATURDAY, JUNE 29 — REGISTRATION OPEN 6:30 AM – 6:30 PM, EXHIBITS OPEN 4:30 – 6:30 PM**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00-9:30 AM</td>
<td>Peri-Operative Symposium: Functional Mitral Regurgitation</td>
</tr>
<tr>
<td>10:00-11:30 AM</td>
<td>Peri-Operative Symposium: Transcatheter Aortic Valve Replacement: The New Paradigm vs the Last Resort for Aortic Stenosis</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Peri-Operative Symposium: Hypertrophic Cardiomyopathy</td>
</tr>
<tr>
<td>1:00-2:30 PM</td>
<td>Peri-Operative Symposium: Elective Aortic Valve Replacement with Dilated Aortic Root: Should the Root be Replaced? (followed by the Council on Perioperative Echocardiography Business Meeting)</td>
</tr>
<tr>
<td>3:00-4:30 PM</td>
<td>Live Scanning: Hand-held Echo and LV/RV Function</td>
</tr>
<tr>
<td>4:30-6:30 PM</td>
<td>Imaging Essentials: Can We agree on the numbers?</td>
</tr>
</tbody>
</table>

**SPECIAL LUNCH**

**INDUSTRYSYMPOSIAS**

- Atrial Septal Defects
- Functionally Single Ventricles
- Double Outlet Right Ventricle
- Pediatric Echo Jeopardy (Preceded by the Council on Pediatric and Congenital Heart Disease Business Meeting)

**IMAGING ESSENTIALS**

- Imaging Essentials: Stress Echocardiography
- Imaging Essentials: The Exam
- Imaging Essentials: Can We agree on the numbers?
- Imaging Essentials: Chamber and Function
- Imaging Essentials: Stress Echocardiography

**SPECIAL TRACKS**

- Beyond Lub Dub: The Nitty Gritty of Heart Mechanics (Joint ASE/EACVI Session)
- Echo in Systemic Disease
- Echo in Ischemic Heart Disease
- Getting to the Heart of the Matter: Practical Points on Quantitative Echo

**PRESIDENT’S RECEPTION**

IN THE EXHIBIT & POSTER HALL
<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
<th>Session 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00–9:30 AM</td>
<td>S Aortic Stenosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15–11:45 AM</td>
<td>I Interventional Echocardiography 1: Transcatheter Aortic Valves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:45 AM–1:15 PM</td>
<td></td>
<td>I Echocardiographic Imaging for Structural Heart Disease Intervention</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:15–2:45 PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S My Most Instructive Cases: Hypoplastic Left Heart Syndrome from Stage 1 to Stage 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30–5:30 PM</td>
<td></td>
<td></td>
<td>S Pericardial Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:30–6:30 PM</td>
<td>Special Lunch Symposium</td>
<td>ASE 24th Annual Edler Lecture and Awards</td>
<td></td>
<td>Outdoor Welcome Reception</td>
<td></td>
</tr>
</tbody>
</table>

**Schedule at a Glance**

**Sunday, June 30**

**Registration Open 6:30 AM–6:30 PM**

**Exhibits Open from 9:00 AM–4:00 PM**
**SCHEDULE AT A GLANCE**  
**MONDAY, JULY 1**

**REGISTRATION OPEN 6:30 AM – 6:30 PM**  
EXHIBITS OPEN from 9:00 AM – 4:00 PM

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
<th>Session 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 9:30 AM</td>
<td>Mitral Regurgitation</td>
<td>Takatsubo's Cardiomyopathy: History, Present and Future</td>
<td>Diastolic Function Assessment from Basics to Applications</td>
<td>3D Echocardiography and Contrast</td>
<td>Imaging Essentials: Vascular Exam</td>
</tr>
<tr>
<td>10:15 - 11:45 AM</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
</tr>
<tr>
<td>11:45 AM - 1:15 PM</td>
<td>Hypertrrophic Cardiomyopathy: State of the Art in Imaging and Decision Making</td>
<td>The Use of Imaging in the Failing Fontan Circulation</td>
<td>Live Scanning: Aortic Stenosis and HOCM</td>
<td>Fetal Hyperoxia: Physiology and Potential Implications for Fetal Treatment (Followed by Fireside Chat: Jeffrey Smallhorn)</td>
<td>Tissue Imaging: State of the Art and Clinical Application</td>
</tr>
<tr>
<td>1:15 - 2:45 PM</td>
<td>Hypertrophic Cardiomyopathy: State of the Art in Imaging and Decision Making</td>
<td>The Use of Imaging in the Failing Fontan Circulation</td>
<td>Live Scanning: Aortic Stenosis and HOCM</td>
<td>Fetal Hyperoxia: Physiology and Potential Implications for Fetal Treatment (Followed by Fireside Chat: Jeffrey Smallhorn)</td>
<td>Tissue Imaging: State of the Art and Clinical Application</td>
</tr>
<tr>
<td>3:30 - 5:00 PM</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
<td>2013 ARTHUR E. WEYMAN YOUNG INVESTIGATOR'S AWARD COMPETITION / 14TH ANNUAL FEIGENBAUM LECTURE</td>
</tr>
<tr>
<td>5:00 - 6:30 PM</td>
<td>ECHO JEOPARDY</td>
<td>ECHO JEOPARDY</td>
<td>ECHO JEOPARDY</td>
<td>ECHO JEOPARDY</td>
<td>ECHO JEOPARDY</td>
</tr>
</tbody>
</table>

**ECHO JEOPARDY**

- **SPECIAL LUNCH INDUSTRY SYMPOSIAS**
  - **S** Echo of the Future: Technologic Developments that May Change Practice
  - **S** Clinical Case Competition and Oral Abstracts
  - **E** Integrating Carotid Duplex in Patient Management
  - **V** Integrating Carotid Duplex in Patient Management

---

**ASE_2013_Preliminary_Program_8.125x10.875.indd** 8

2/4/13 4:00 PM
## Schedule at a Glance

**Tuesday, July 2**

### Registration Open 6:30 AM–5:00 PM

**Exhibits Closed**

<table>
<thead>
<tr>
<th>8:00–9:30 AM</th>
<th>10:00–11:30 AM</th>
<th>1:00–2:30 PM</th>
<th>3:00–4:30 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S</strong> Clash of the Titans: Debates Between the Greats</td>
<td><strong>S</strong> Athlete’s Heart: 360° Perspective</td>
<td><strong>S</strong> Interpreting with the Masters</td>
<td><strong>S</strong> Echo in Stroke</td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong> Live Scanning: Segmental Anatomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>R</strong> Pediatric Oral Abstract Sessions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong> Controversies in Pediatric Echocardiography</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PC</strong> Pulmonary Hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>E</strong> Imaging Essentials: IAC Accreditation and Lab Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>E</strong> Imaging Essentials: Systolic Heart Failure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Academic/Career Training in Echo</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Cases you should know about</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Scientific Sessions Wrap-Up</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>S</strong> Pregnancy and Heart Disease: Case-Based Discussion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PR</strong> Healthcare Trends: What You Need To Know Now</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>PR</strong> Effects of the Changing Healthcare Environment on Cardiac Ultrasound: Speed Rounds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SATURDAY, JUNE 29

President’s Reception..............................4:30 pm - 6:30 pm
All attendees are invited to celebrate ASE 2013 at the President’s Reception, hosted by ASE President, Patricia Pellikka, MD, FASE. The President’s Reception takes place in the Exhibit & Poster Hall. This is your first opportunity to network with colleagues and friends while learning more about the newest equipment and services in the cardiovascular field. Complimentary hors d’oeuvres and cocktails will be available from many stations throughout the hall. Admission is included in your registration fee and guest tickets can be purchased during the registration process.

SUNDAY, JUNE 30

Welcome Reception.................................5:30 pm - 6:30 pm
Toast the start of the 24th Annual Scientific Sessions at this complimentary outdoor welcome reception only steps from your sessions. Enjoy the gorgeous Minneapolis weather while conversing with colleagues and friends.

MONDAY, JULY 1

ASE 5K Run/1 mile Walk, co-sponsored by SIEMENS and IAC........6:00 am - 7:00 am
The 5K starts/finishes at the Minnesota Convention Center. The course is relatively flat and winds through the Loring Park and Minneapolis Sculpture Garden. Come have some fun in the sun while doing something healthy during the ASE Annual Scientific Sessions! You can register online here: www.regonline.com/runforecho2

2013 Arthur E. Weyman Young Investigator’s Award Competition and Annual Feigenbaum Lecture..........................10:15 am - 11:45 am
Enjoy this presentation of the 14th Annual ASE Scientific Sessions Feigenbaum Lecture. The Feigenbaum Lecturer is named in honor of the founder and the first president of ASE, Harvey Feigenbaum, MD, FASE. This lectureship is awarded to a young investigator in recognition of a significant contribution to research in the field of echocardiography as well as their potential to continue at a high level of achievement. The 2013 Arthur E. Weyman Young Investigator’s Award Competition, supported by the National Board of Echocardiography™ (NBE) in honor of their first president, Arthur E. Weyman, MD, FASE, will also be held during this time. Several outstanding young investigators will present their research and compete for first prize.

TUESDAY, JULY 2

Clash of the Titans: Debates Between the Greats..............8:00 am - 9:30 am
This session will address clinically important questions with debates, “Can echo reliably assess LV filling pressures?” and “Low Flow Low Gradient AS? Does it Exist? Does AVR Help?” and “Should Echo be Done in Screening for Athletes?” Don’t miss ASE 2013 luminary faculty as they debate the hottest topics in cardiovascular ultrasound.

Interpreting with the Masters......................1:00 pm - 2:30 pm
Join us for the first annual Kalmanson Lecture on Doppler Echocardiography. Invited presenters include Rick Nishimura, Alan Pearlman, Jamil Tajik, Navin Nanda, Colette Veyrat, and Marcia Barbosa who will share their most challenging cases.

Industry Symposia....Saturday, Sunday and Monday Lunch
Last year, these events were packed with interested professionals wanting to find out the latest information from an Industry perspective. Lunch is provided by ASE and is included in your registration fee, but space and lunch boxes are first-come, first-served. The registration process will be handled by the company hosting each session. Industry supported symposia sessions are not a part of the official ASE 24nd Annual Scientific Sessions, as planned by the Program Committee, or in any way endorsed or affiliated with ASE. These sessions are not eligible for CME credit. Topics will be announced via the ASE Scientific Sessions Web site (www.ASEScientificSessions.org).
ATTENDEE REGISTRATION AND TRAVELING AROUND MINNEAPOLIS

ASE highly recommends pre-registration to ensure that you are able to attend ticketed sessions of choice. Nonmember registrants will receive a complimentary 2013 membership with their registration for the ASE 24th Annual Scientific Sessions.

Your full registration to the ASE Scientific Sessions includes CME/CEU Credit, admission to the Exhibit & Poster Hall, morning continental breakfasts, lunch at the Industry Symposia (space permitting) and coffee breaks twice a day. Also included is a cocktail reception honoring President Patricia Pellikka, MD, FASE in the Exhibit & Poster Hall on Saturday evening, a Welcome Reception for ASE members on Sunday night, and a closing reception on Monday afternoon in the Exhibit & Poster Hall.

Ticketed breakfast sessions on a variety of topics are available for $50 each. Tickets may be purchased during the registration process.

Register at www.ASEScientificSessions.org and receive an immediate confirmation via email. Those wishing to mail or fax their registration in may do so using the form found on pages 12-14 of this program.

EXHIBIT & POSTER HALL

The ASE Scientific Sessions Program Committee encourages you to visit the ASE Exhibit & Poster Hall. The exchange of information and access to new concepts, technology, devices and research is a vital component of 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.

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 annual meeting. Spend time in the poster area and gain firsthand knowledge and insight from scientific investigators.

EXHIBIT & POSTER HALL HOURS

Saturday, June 29
President’s Reception ................................. 4:30 pm – 6:30 pm
Sunday, June 30 ........................................ 9:00 am – 4:00 pm
Monday, July 1 ........................................... 9:00 am – 4:00 pm
Closing Reception ....................................... 2:45 pm – 3:30 pm

THE MINNEAPOLIS-ST PAUL INTERNATIONAL AIRPORT (MSP)

MSP has 34 million passengers traveling through each year and an extremely high number of non-stop flights available. Southwest Airlines’ recent arrival offers greater affordability while MSP’s central location offers a quick 15-30 minute trip to all ASE 2013 hotels and the convention center.

Walking around the city is safe and suitable for many, but there are other great options for getting around. A very inexpensive yet convenient way to navigate is the Metro Transit, operating one of the largest public transportation systems in the country. Keep your eyes peeled for buses marked “Free Ride” and pay no fare when riding along Nicollet Mall, downtown’s main street for shopping and dining. For an even more efficient way to trip, zip around town on the light-rail transit (LRT) which connects downtown Minneapolis with the airport, Mall of America and 18 other stations.

ACCOMMODATIONS

ASE 2013 will be held at the Minneapolis Convention Center located at 250 Marquette Avenue South, Minneapolis, MN.

ASE has secured a block of rooms at four convenient hotels, Hilton Minneapolis, Hyatt Minneapolis, and Ivy Hotel at a rate of $189 per night (tax and other fees not included).

The W Minneapolis is available at a rate of $219 per night (tax and other fees not included).

All hotels are conveniently located within walking distance of the convention center, restaurants and many more attractions.

To make your reservations online, please visit https://resweb.passkey.com/go/ASE24.

To reserve by phone, please call 888.947.2233 (domestic) or 612.767.8200 (international) between 9:00 am - 3:00 pm CST, Monday - Friday and reference ASE Housing.

The room block will be held until June 3, 2013, or until the block is sold out. After this date, reservations will be accepted on a space-available basis. A major credit card number or a check for one night’s room and tax is required to secure each room before a reservation can be processed. Early departures are subject to penalty fees set by the hotel. A charge of first night’s room and tax will be applied or forfeited on non-used reservations if you do not cancel and do not arrive (no-show). After June 3, 2013, cancellations will be charged a $25.00 cancellation fee. Cancellations within 72 hours prior to the day of arrival will be charged a first night’s room and tax. Credit cards will only be charged if cancelled within the penalty period.
ABOUT ASE

About ASE
As the largest global organization for cardiovascular ultrasound imaging, The American Society of Echocardiography (ASE) is the leader and advocate, setting practice standards and guidelines. Comprised of over 15,000 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 serves its members in numerous ways by providing education, advocacy, research, practice guidelines and a community for their profession. Did you know your ASE membership affords you over $400 of FREE credits a year, in addition to discounts on all ASE educational courses and products? Also included is a monthly subscription to the Journal of the American Society of Echocardiography (JASE), help with legislative coding and reimbursement issues and other career resources. Non-member attendees will receive a complimentary ASE membership through December 31, 2013 with their registration for the ASE 24th Annual Scientific Sessions.

As a reminder, your membership in ASE gives you all these great benefits and more:

Journal of the American Society of Echocardiography (JASE)
JASE brings you the very latest clinical, scientific, legal and economic information regarding the use of cardiac ultrasound. The journal’s original, peer-reviewed articles cover conventional procedures as well as newer techniques such as 3D echo, contrast echo, tissue Doppler imaging, speckle tracking/deformational analysis and more. Your ASE Membership includes a monthly subscription to JASE, a $350 value. All members also have access to the enhanced online platform for JASE, allowing you to search for particular articles of interest.

Connect@ASE
ASE launched a social networking platform designed specifically for our members. This site is the new host for our active discussion forums, our image library containing over 250 moving images and our easy-to-access member directory to connect with colleagues (http://connect.asecho.org).

Advocacy
ASE is the advocacy voice of cardiovascular ultrasound. Your membership supports ASE, your watchdog of legislative, payer and regulatory issues. The ASE advocacy program has made a difference for practitioners. Once a year, ASE sends important Coding and Reimbursement newsletters to members.

Educational Product Discounts
Discounts are available on educational products through ASEMarketPlace (average of 35% savings). Members also receive discounts on ASE educational courses throughout the year, saving up to $900 per year. Discounts are also available for ASE co-sponsored courses. A full listing is available at www.asecho.org/education.

Free CME
ASEUniversity, www.ASEUniversity.org, offers approximately 15 new & free CME credit hours per year for ASE members (a $375 value).

Automatic CME Reporting to ARDMS
ASE automatically reports CME/CEU credits earned through ASE to ARDMS and CCI. To get the process started, simply provide your registry number for ARDMS in your ASE member profile online.

Liability Insurance for Sonographers
Also available is the ASE-Endorsed Professional Liability Insurance Program, a comprehensive and affordable liability insurance program administered by Healthcare Providers Service Organization (HPSO). This insurance program provides 24-hour protection on the job, outside the primary place of employment, and even during job changes.

The Echo Magazine and Weekly e-Newsletters
These timely news sources contain important news to keep you informed about the changes in your industry and ASE news and upcoming events.

Contact us:
American Society of Echocardiography
2100 Gateway Centre Blvd., Suite 310
Morrisville, NC 27560
Phone: 919-861-5574
Fax: 919-882-9900
registrar@asecho.org
www.ASEScientificSessions.org
www.asecho.org
American Society of Echocardiography  
24th Annual Scientific Sessions • June 29-July 2, 2013  
Minneapolis Convention Center, Minneapolis, MN • www.ASEScientificSessions.org  
Disease Based Focus on the Role of Echo in Diagnosis and Guiding Therapy

Register online at www.ASEScientificSessions.org and receive immediate email confirmation.  
To register by mail or fax, please complete this form and return to ASE Headquarters.  
ASE Tax ID: 31-0899106

STEP ONE – REGISTRANT INFORMATION
(Please print clearly or type)
First Name: ____________________________ Middle Initial: _____ Last Name: ____________________________
Preferred Title: Dr. Mr. Mrs. Ms.
Credentials: MD DO PhD RN RDCS RCS FASE Other ___________________________
ASE Membership #: __________________ ARDMS Registry #: __________________ CCI Registry #: __________________
Primary Area of Practice: Adult Echo Anesthesiology Cardiovascular Sonography Cardiac Surgery Critical Care
Electrophysiology/Heart Rhythm Emergency Medicine Geriatric Cardiology Internal Medicine
Interventional Cardiology Intraoperative Echo Maternal Fetal Medicine Specialist
Medical Student Neurology Nuclear Cardiology Nursing Pediatric Echo
Radiologist Research Thoracic Surgery Vascular Medicine Other _____________________________
Hospital/Practice/Clinic Name: ______________________________________________________________
Primary Mailing Address: Line 1: ______________________________________________________________
Line 2: ________________________________________________________________________________
Line 3: ________________________________________________________________________________
City: ___________________ State: ______ Postal Code: _________ Country: _________________
Which address is this? Business Home
Business Phone: ___________________________ Business Fax: ___________________________
(Include country and city access numbers for international phone numbers)
Email Address: _____________________________________________________
Registration confirmations will be emailed to this email address. Please confirm the email address is entered and written clearly.

JASE ad ASE Preliminary Program Other Medical Journal ad ASE member newsletter
ASE exhibit booth
Advertisements at other conferences (AHA, ACC or EuroEcho) Colleague Other _____________________________

□ ASE uses a lead retrieval system on its exhibit floor. Your attendee name badge also functions as your expo badge, providing
exhibitors with your name and contact information, including your email address, if you permit your badge to be scanned. If you
would prefer to NOT have your email address included on your expo badge, please check this box.

STEP TWO – FULL CONFERENCE REGISTRATION FEES
Your full registration to the ASE Scientific Sessions includes CME/CEU Credit, admission to the Exhibit & Poster Hall, morning
continental breakfasts, lunch at the Industry Symposia (space available) and coffee breaks twice a day. Also included is a
cocktail reception honoring President Patricia Pellikka, MD, FASE in the Exhibit & Poster Hall on Saturday evening, a Welcome
Reception for ASE members on Sunday night, and a closing reception on Monday afternoon in the Exhibit & Poster Hall. Full
conference registrants will also receive a conference bag, while supplies last. Please note that some sessions will require a
purchased ticket for admission. All fees are listed in U.S. dollars (USD).

□ ASE will have official show photographers taking pictures for future promotion of the Scientific Sessions. By virtue of your
attendance, you permit ASE to use any photographs taken in the meeting areas, in the Exhibit & Poster Hall and during ASE-
sponsored events for promotional purposes.
REGISTRATION FORM

STEP TWO (CONTINUED)

Member Rates:
Members of ASE are eligible for reduced registration fees!

Note: Your 2013 ASE membership dues must be paid in full in order to qualify for the member rates.

Non-Member Rates:
Your registration fees will include a complimentary 2013 ASE membership!

☐ Yes, I accept the 2013 ASE membership included in my registration free.

☐ No, thank you, I do not wish to join ASE at this time.

Student/Resident Non-Member registrants must provide a letter of confirmation from their division or department head or a copy of a hospital ID card when registering. If registering online, you will need to present proof of in-training status at the registration counter in Minneapolis, MN.

Abstract Presenter Rates:
Abstract Presenter registration will open March 15, 2013. Please select the appropriate registration fee below:

ASE 2013 REGISTRATION RATES

<table>
<thead>
<tr>
<th>Registration Type</th>
<th>Pre-Registration For ASE Members Only prior to May 31</th>
<th>Registration ASE Members after May 31</th>
<th>Non-Member Includes 2013 ASE Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician/ Scientist/ Lab Manager</td>
<td>☐ $575</td>
<td>☐ $675</td>
<td>☐ $945</td>
</tr>
<tr>
<td>Sonographer/ Nurse</td>
<td>☐ $350</td>
<td>☐ $450</td>
<td>☐ $575</td>
</tr>
<tr>
<td>Fellow/ Resident</td>
<td>☐ $245</td>
<td>☐ $345</td>
<td>☐ $450</td>
</tr>
<tr>
<td>Sonographer/ Student</td>
<td>☐ $245</td>
<td>☐ $345</td>
<td>☐ $450</td>
</tr>
<tr>
<td>Corporate/ Industry Rep/ Other</td>
<td>☐ $870 (ASE Membership not included in this registration)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Weekend Rate (Saturday/ Sunday Only)</td>
<td>☐ $340 (ASE Membership not included in this registration)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STEP THREE – OPTIONAL TICKETED BREAKFAST SESSIONS

Note: Space is limited to 25 attendees in these sessions to allow for more interaction between faculty and attendees. Registrants may only select one (1) session per day. Ticket price includes a hot breakfast.

Sunday, June 30
☐ $50.00 Session - Echo in Patients with VADs
☐ $50.00 Session - Prosthetic Valve Dysfunction
☐ $50.00 Session - Contrast Echo for Improving Patient Care
☐ $50.00 Session - Diastolic Function-How to Incorporate into Clinical Care
☐ $50.00 Session - Constrictive, Restrictive, and Effusive-Constrictive Physiologies: How to Distinguish

Monday, July 1
☐ $50.00 Session - Hemodynamics: Shunt Evaluations and Doppler Quantification
☐ $50.00 Session - Case Studies in Advanced LV Mechanics - Twist, Torsion, Strain
☐ $50.00 Session - Aortic Stenosis: Pseudo, Low Flow, Low Gradient: How to Tell
☐ $50.00 Session - Basic Approach to Assessment of Congenital Heart Disease
☐ $50.00 Session - Echo in the OR

Tuesday, July 2
☐ $50.00 Session - Aortic Trauma: Dissection, Intramural Hematoma, Transection-Differential Diagnosis
☐ $50.00 Session - How to Run an Efficient Pediatric Echocardiography Laboratory
☐ $50.00 Session - Stress Echo: Experts bring their toughest cases: Do you agree with their interpretations?
☐ $50.00 Session - How to Map the Mitral Valve: 2D and 3D
☐ $50.00 Session - Workshop on CRT: Dyssynchrony and AV optimization: How to do

STEP FOUR – GUEST REGISTRATION FEES

Registered guests are permitted admission to the Exhibit & Poster Hall and may sit in on non-ticketed educational sessions as space allows, but they are not eligible for a conference bag or to claim CME/CEU credits. Guests must be at least 12 years of age.

Note: Guest registration fees will appear as a separate transaction from the Scientific Sessions attendee registration fee if using a credit card for payment.

Guest Registration – Full Conference
☐ $65.00 Guest (First, Last): ________________
☐ $65.00 Guest (First, Last): ________________
☐ $65.00 Guest (First, Last): ________________

TOTAL DUE FROM STEP TWO: ____________________________
STEP FIVE – SPECIAL SERVICES

☐ ASE makes every effort to accommodate attendees with disabilities or other needs. Please check here if you require special accommodations to fully participate. Explain accommodation needs below:

________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________________
THE WORLD OF ECHOCARDIOGRAPHY IS COMING TO MINNEAPOLIS. SEE YOU THERE?