

# CARDIOLOGY 2019

22nd Annual Update on  
Pediatric and Congenital  
Cardiovascular Disease

## CHALLENGES, OPPORTUNITIES AND SOLUTIONS

Feb 13 – 17, 2019  
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Hyatt Regency Huntington  
Beach Resort and Spa,  
Huntington Beach, Calif.



# PRECONFERENCE PROGRAM

♥ WEDNESDAY, FEB. 13

## Optional Preconference No. 1

We Collaborate, We Learn and Our Patients Benefit:  
Quality Improvement in Pediatric and Congenital  
Cardiovascular Care  
*Catalina Room*

*Moderators: Shobha Natarajan, MD; Jeffrey Anderson, MD*

- 8 a.m. Introduction to QI Science and Principles  
*Jeffrey Anderson, MD*
- 8:30 a.m. Data and Registries in Congenital Heart Care  
*Sara Pasquali, MD*
- 9 a.m. The NPC-QIC  
*Gail Wright, MD*
- 9:20 a.m. PC3  
*Susan Schachtner, MD*
- 9:40 a.m. Break
- 10 a.m. IMPACT Registry  
*Jonathan Rome, MD*
- 10:20 a.m. Single Ventricle/Fontan  
*Adel Younoszai, MD*
- 10:45 a.m. ECHO  
*Anitha Parthiban, MD*
- 11:05 a.m. Fetal  
*Jay Pruetz, MD*
- 11:25 a.m. CLABSI Reduction in the Cardiac ICU  
*Marissa Brunetti, MD*
- 11:45 a.m. Questions & Answer  
*Faculty*
- 12:15 p.m. Lunch
- 12:30 p.m. Building a Comprehensive QI Effort:  
The CHOP Cardiac Center Experience  
*Shobha Natarajan, MD*
- 1 p.m. What Is Value in CHD Care?  
*Stephen Roth, MD*
- 1:30 p.m. Quality Improvement Roundtable discussion  
*Shobha Natarajan, MD; Jeffrey Anderson, MD;  
Sara Pasquali, MD; Gail Wright, MD;  
Susan Schachtner, MD; and Faculty*
- 3 p.m. Adjourn

## Optional Preconference No. 2

Heart Failure and Mechanical Circulatory Support  
in Pediatric and Congenital Cardiovascular Care  
*Driftwood Room*

*Moderators: Kurt Schumacher, MD; Kimberly Lin, MD*

- 8 a.m. How Does the Heart Fail I: Primary  
Cardiomyopathies in Children  
*Steven Lipshultz, MD*
- 8:20 a.m. How Does the Heart Fail II: Freidreich's Ataxia  
and Duchennes Muscular Dystrophy  
*Kimberly Lin, MD*
- 8:40 a.m. How Does the Heart Fail III: Cardiovascular  
Complications of Hemoglobinopathies  
*John Wood, MD*
- 9 a.m. Introduction to the Surgical Aspects: ECMO vs.  
VAD(s) – What Are the Differences?  
*Joseph Turek, MD*
- 9:20 a.m. The Indications for Mechanical Circulatory  
Support: When Is it Time to “Go on” Support?  
*Joseph Rossano, MD*
- 9:40 a.m. Break
- 10 a.m. The Spectrum of Devices in 2019: What's  
Available and When to Use Which Device?  
*Christopher Mascio, MD*



- 10:20 a.m. Experience with the Berlin Heart  
*Jondavid Menteer, MD*
- 10:40 a.m. Challenges and Limitations in Imaging the Heart While on ECMO or Mechanical Circulatory Support  
*Michael Quartermain, MD*
- 11 a.m. Antithrombotic Therapy While on Mechanical Circulatory Support  
*Christina Vanderpluym, MD*
- 11:20 a.m. Challenges and Solutions in Bridging the Pediatric Patient on Mechanical Circulatory Support to Heart Transplantation: Surgical Perspective  
*Jonathan Chen, MD*
- 11:40 a.m. Challenges and Solutions in Bridging the Pediatric Patient on Mechanical Circulatory Support to Heart Transplantation: Transplant Cardiologist Perspective  
*Kurt Schumacher, MD*
- Noon Faculty Panel Q & A
- 12:30 p.m. Lunch
- Moderators: Paul Kantor, MBBCh; Joseph Rossano, MD*
- 12:45 p.m. Myocardial Remodeling in Mechanical Circulatory Support  
*Shelley Miyamoto, MD*
- 1:05 p.m. Destination Therapy for Mechanical Circulatory Support in Pediatrics: Is It a Reality?  
*Kimberly Lin, MD*
- 1:25 p.m. Home: Outpatient Experience with Mechanical Circulatory Support in Pediatrics  
*Rachel White, RN, BSN*
- 1:40 p.m. Unique Challenges in the Fontan Circulation: What Might Be the Solution?  
*Mark Rodefeld, MD*
- 2 p.m. Case-based Scenarios in Mechanical Circulatory Support  
*Paul Kantor, MBBCh; Jondavid Menteer, MD; and Christina Vanderpluym, MD*
- 3 p.m. Adjourn

### Optional Preconference No. 3

**Congenital Heart Disease and Postoperative Management: A Comprehensive Review for Nursing and Front-line Providers**  
*Fountain Room*

*Moderators: Kathryn Dodds, MSN, CPNP; Ellize Ergina, MSN, CPNP; Lisa Ladish, DNP, CPNP; Theresa Alquiros, MSN, CPN*

- 7:30 a.m. Understanding Segmental Cardiac Anatomy  
*Paul Weinberg, MD*
- 7:45 a.m. Screening, Diagnosis and Preoperative Assessments  
*Kathryn Dodds, MSN, CPNP-AC*
- 8 a.m. Open Heart Surgery: CPB, X Clamp, Circulatory Arrest  
*Christopher Mascio, MD*
- 8:20 a.m. ICU Management Issues and Concerns  
*Maryam Naim, MD*
- 8:45 a.m. Break
- 9 a.m. ECHO: Effusions, Function, Obstruction, Regurgitation, Thrombus and Holes  
*David Goldberg, MD*
- 9:15 a.m. What the Chest X-ray Can and Cannot Show You  
*Aaron DeWitt, MD*
- 9:30 a.m. How to Decipher Cardiac Catheterization Data  
*Andrew Glatz, MD*
- 9:45 a.m. Postoperative Arrhythmias: SVT, JET, Heart Block, VT  
*Maully Shah, MBBS*
- 10 a.m. ECMO and Mechanical Support in Children with CHD  
*Chitra Ravishankar, MD*
- 10:15 a.m. Sedation and Pain Management after Cardiac Surgery  
*Aaron DeWitt, MD*
- 10:30 a.m. Break
- 10:40 a.m. **Ventricular Septal Defect**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *Gary Raff, MD*  
Postoperative Care and Outcomes – *Ellize Ergina, MSN, CPNP*
- 11 a.m. **Complete Common Atrioventricular Canal Defect**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *James E. O'Brien, MD*  
Postoperative Care and Outcomes – *Lisa Laddish, DNP, CPNP*

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- 11:20 a.m. **Tetralogy of Fallot**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *James E. O'Brien, MD*  
Postoperative Care and Outcomes  
*Lisa Laddish, DNP, CPNP*
- 11:40 a.m. **Truncus Arteriosus**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *Gary Raff, MD*  
Postoperative Care and Outcomes  
*Kathryn Dodds, MSN, CPNP-AC*
- Noon **D-Transposition of the Great Arteries**  
Arterial Switch Anatomy/Morphology  
*Paul Weinberg, MD*  
Surgery – *Christopher Mascio, MD*  
Postoperative Care and Outcomes  
*Kathryn Dodds, MSN, CPNP-AC*
- 12:20 p.m. Lunch
- 12:40 p.m. **Total Anomalous Pulmonary Venous Return**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *James E. O'Brien, MD*  
Postoperative Care and Outcomes  
*Ellize Ergina, MSN, CPNP*
- 1 p.m. **Coarctation**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *Gary Raff, MD*  
Postoperative Care and Outcomes  
*Lisa Laddish, DNP, CPNP*
- 1:15 p.m. **Single Ventricle: Stage 1, Bidirectional Glenn, Fontan**  
Anatomy/Morphology – *Paul Weinberg, MD*  
Surgery – *Christopher Mascio, MD*  
Postoperative Care and Outcomes  
*Kathryn Dodds, MSN, CPNP-AC*
- 2:15 p.m. Discharge Planning and Home Monitoring  
*Theresa Alquiros, MSN, CPN*
- 2:30 p.m. Behavioral and Developmental Concerns in CHD  
*Daniel Licht, MD*
- 2:45 p.m. Growing Up with Congenital Heart Disease  
*Yuli Kim, MD*
- 3 p.m. Q & A
- 3:30 p.m. Adjourn

## CONFERENCE PROGRAM

### Opening Plenary Session I: 4 – 6:50 p.m. Grand Ballroom D–G

4 p.m. **Opening Remarks – Jack Rychik, MD**

Challenges and Opportunities: Tackling the Problem of ...

Moderators: *Joseph Rossano, MD; Jonathan Chen, MD*

4:05 p.m. Optimizing Healthcare for Children in a Changing Environment: The Children's Hospital Association  
*Amy Knight*

4:25 p.m. Bringing Personalized Medicine to Congenital Heart Care  
*James Priest, MD*

4:45 p.m. Bringing "Artificial Intelligence" and Machine Learning into the Practice of Medicine  
*Anthony Chang, MD*

5:05 p.m. Finding Solutions for a Challenging Condition: Neonatal Ebstein's Anomaly  
*Vaughn Starnes, MD*

5:25 p.m. The Fontan Conundrum(s)  
*Jack Rychik, MD*

5:45 p.m. The Difficult to Transplant Patient  
*Joseph Rossano, MD*

6:05 p.m. The Exponentially Growing ACHD Population: Gaps in Knowledge  
*David Celermajer, MD*

6:25 p.m. Why Are Cardiac Professionals So Heartless When It Comes to Self Care?  
*Liz Crowe*

6:50 p.m. Adjourn

6:50 – 7:45 p.m. Reception – *Grand Foyer*

8:30 – 10 p.m. Bonfire on the Beach!

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## ♥ THURSDAY, FEB. 14

6:45-7:45 a.m. **Sunrise Session I: How to Read an ECG ... and Never Get it Wrong!** – *Huntington Ballroom*  
Pearls of Wisdom and Didactic  
Case Reviews

*Mitchell Cohen, MD; Maully Shah, MBBS;  
Ronn Tanel, MD*

**Sunrise Session II: Had No Clue What to do ... but Somehow it Turned out Fine!** – *Vista Ballroom*  
Clinical Conundrums and Successful  
Solutions Found

*Richard Ohye, MD; Christopher Petit, MD;  
Christina Vanderpluym, MD*



### Plenary Session II: 8 – 10 a.m.

*Grand Ballroom D-G*

The “Other” Circulation: The Lymphatic System

*Moderators: Jonathan J. Rome, MD; Daniel Penny, MD, PhD*

- 8 a.m. Mechanics and Physiology of the Lymphatic System  
*Vibeke Hjortdal, MD, PhD*
- 8:20 a.m. Imaging and Treatment of Lymphatic Insufficiency  
*Yoav Dori, MD, PhD*
- 8:50 a.m. Surgical Strategies for Rerouting the Lymphatic System  
*Viktor Hraska, MD*
- 9:10 a.m. Challenges and Opportunities in Building and Maintaining a Novel Clinical Program for Lymphatic Care  
*Erin Pinto, MSN, CNRP*
- 9:30 a.m. Illustrative Cases and Panel Discussion: Demonstration of What We Know, What We Don’t Know, and What We Need to Know ...  
*Jonathan Rome, MD*
- 10 a.m. Adjourn

### Break/Visit the Exhibits: 10 – 11 a.m.

#### Poster Session No. 1

*Conference Lobby*

### Simultaneous Breakout Sessions

11 a.m. – 1 p.m.

*Grand Ballroom D*

Focus on: Double Outlet Right Ventricle

*Moderators: Andrew Glatz, MD; Mark Fogel, MD*

- 11 a.m. Anatomy – *Paul Weinberg, MD*
- 11:15 a.m. Imaging: Prenatal and Neonatal Preop  
*Craig Fleishman, MD*
- 11:30 a.m. MRI and 3D Printing for Surgical Planning in Complex DORV  
*Mark Fogel, MD*
- 11:45 a.m. Surgical Strategies for Repair of DORV  
*Viktor Hraska, MD*
- Noon Science and Surgical Practice of Conduits  
*Joseph Turek, MD*
- 12:15 p.m. Catheter-based Rehabilitation of Right Ventricle to Pulmonary Artery Conduits: Now and the Future  
*Andrew Glatz, MD*
- 12:30 p.m. Intermediate and Long-term Outcomes  
*Yuli Kim, MD*
- 12:45 p.m. Faculty Panel Q & A
- 1 p.m. Adjourn

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## Challenges and Opportunities in Heart Care Before Birth *Huntington Ballroom North*

*Moderators: Zhiyun Tian, MD; Anita Moon-Grady, MD*

- 11 a.m. How Can We Increase Prenatal Detection of Heart Disease?  
*Mark Sklansky, MD*
- 11:15 a.m. Principles of Fetal Therapy: Can We Modify the Course of Nature Before Birth?  
*Jack Rychik, MD*
- 11:30 a.m. Proving the Barker Hypothesis: Fetal “Programming” and Lifelong Health  
*James Priest, MD*
- 11:45 a.m. The Psychological Impact of Prenatal Counseling for Congenital Malformations  
*Nadine Kasparian, PhD*
- Noon Characterization and Management of Mitral Valve Conditions in the Fetus  
*Shaine Morris, MD*
- 12:15 p.m. Characterization and Management of Pulmonary Venous Anomalies in the Fetus  
*Jay Pruetz, MD*
- 12:30 p.m. Fetal Detection of Coarctation of the Aorta  
*Anita Moon-Grady, MD*
- 12:45 p.m. Fetal Pacing: A Dream or Reality?  
*Yaniv Bar-Cohen, MD*
- 1 p.m. Adjourn



## Challenges and Solutions in Cardiac ICU Care and Anesthesia: Case-based Scenarios *Huntington Ballroom South*

*Moderators: Maryam Naim, MD; James Steven, MD*

- 11 a.m. Pearls of Wisdom and Didactic Case Reviews  
*Maryam Naim, MD (lead); James Steven, MD (lead); Aaron DeWitt, MD; Barry Markovitz, MD; Frank McGowan, MD; Stephen Roth, MD; Kurt Schumacher, MD; and Sarah Tabbutt, MD*
- 1 p.m. Adjourn

## Nursing Hot Topics: What Does the Evidence Say? *Grand Ballroom E–G*

*Moderators: Jill Combs, MSN; Stacy Reynolds, DNP, CPNP*

- 11 a.m. Implementation of a RED Discharge Initiative: Can We Improve the Discharge Process?  
*Melanie Guerrero, DNP, CPN*
- 11:15 a.m. Innovative Strategies for Onboarding CICU Nurses: Can We Do This Better and Should We?  
*Sherrie Kubis, RN, BSN, CCRN*
- 11:30 a.m. Preventive Cardiology: Is This a Pediatric Issue?  
*Connie Cephus, PhD, CPNP*
- 11:45 a.m. Scope of Practice: Are We There?  
*Denise Donaghue, RN, MSN*
- Noon How Can We Best Assess Delirium in Cardiac Post-op Period? – *Carol Okuhara, MSN, PCP-AC, CFNP*
- 12:15 p.m. Research Clinical Trials: Do They Matter and Are They Worth it? – *Donna Sylvester, RN, BSN, MHA*
- 12:30 p.m. Post-operative EEGs: Do They Make a Difference?  
*Lisa Laddish, DNP, CPNP*
- 12:45 p.m. Can Nurses Create a Healing Environment and Reduce Opioid and Sedative Use?  
*Sandra Staveski, PhD, CPNP*
- 1 p.m. Adjourn

## Implementing Techniques to Get the Best Results in the OR *Catalina Room*

*Moderators: Tami Rosenthal, MBA, CCP; Molly Dreher MA, CCP*

- 11 a.m. Effective Measures for Safe Use of VAVD  
*Tami Rosenthal, MBA, CCP*
- 11:15 a.m. Autotransfusion in Pediatric Cardiac Surgery: Big Devices for Small Volumes – *Molly Dreher, CCP*
- 11:30 a.m. NPC-QIC Norwood Conduct of Perfusion Survey Results: Does Practice Variation Make a Difference  
*James Reagor, CCP*
- 11:45 a.m. Good Enough Just Isn't Good Enough: Best Measure of Perfusion on Cardiopulmonary Bypass  
*Chelsea Capone, CCP*

- Noon Innovative Strategies for Priming Cardiopulmonary Bypass Circuits – *Julie Fenske, CCP*
- 12:15 p.m. Normothermic Cardiopulmonary Bypass: Not for the Faint (or Slow) of Heart – *Frank McGowan, MD*
- 12:30 p.m. Panel Discussion – How We Do it and Why: Faculty Will Share Techniques and Rationale. Open to Audience Questions  
*Faculty*
- 1 p.m. Adjourn

**1 – 2 p.m. Buffet Lunch** – *Hyatt Courtyard*

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### Moderated Panel of Experts 2 – 3 P.M.

*Grand Ballroom D–G*

Behavioral, Mental Health and Neurological Concerns in CHD

**Panel Leader:** *Adrienne Kovacs, PhD, and Daniel Licht, MD*

**Panel Participants:** *J. William Gaynor, MD; Nadine Kasparian, PhD; Amy Jo Lisanti, PhD; William Mahle, MD; Shabnam Peyvandi, MD; and Nancy Pike, PhD*

### Top 5 Finalists for Best Scientific Abstracts 3 – 4:15 p.m.

*Grand Ballroom D–G*

*David Goldberg, MD, and Sara Pasquali, MD*

4:15 – 4:30 p.m. Break

### Plenary Session III: 4:30 – 6:30 p.m.

*Grand Ballroom D–G*

Papers, People and Projects: Impact and Influence on Me Personally and on the Field of CHD Care – Speaker Selects Three Items of Personal Impact/Influence Professionally and on the Field of CHD and Discusses

*Moderators: Meryl Cohen, MD; James O'Brien, MD*

- 4:30 p.m. David Celermajer, MD  
4:45 p.m. James Tweddell, MD  
5 p.m. Meryl Cohen, MD  
5:15 p.m. Jacqueline Kreutzer, MD  
5:30 p.m. Robert Shaddy, MD  
5:45 p.m. Roberta Williams, MD  
6 p.m. Daniel Penny, MD, PhD  
6:15 p.m. Faculty Panel Discussion Q&A  
6:30 Adjourn



- 6:45-7:45 a.m. **Sunrise Session III: It's All about IMAGE: Thrilling Case Studies in Echo and Magnetic Resonance!** – *Huntington North*  
 Pearls of Wisdom and Didactic Case Reviews  
*Mark Fogel, MD; Leo Lopez, MD; and Michael Quartermain, MD*
- 6:45-7:45 a.m. **Sunrise Session IV: Well, I've Never Seen This Before! Clinical Case Scenarios and Important Lessons Learned** – *Huntington South*  
*Jacqueline Kreutzer, MD; Daniel Penny, MD, PhD; Chitra Ravishankar, MD; and Adel Younoszai, MD*
- 6:45-7:45 a.m. **Sunrise Session V: Nursing Sunrise Session: Vasoactive Medications** – *Vista Ballroom*  
*Kathryn Dodds, MSN, CPNP-AC; Stacy Reynolds, DNP, CPNP; Dione Paras, MSN, CPNP; and Sandra Staveski, PhD, CPNP-AC*

### Plenary Session IV: 8 – 10 a.m.

*Grand Ballroom D–G*

**Problems and Solutions: Let's Talk About Exercise, Sudden Cardiac Death and Arrhythmias**

*Moderators: Maully Shah, MD; Stuart Berger, MD*

- 8 a.m. Electrical and Genetic Causes of Sudden Cardiac Death  
*Ronn Tanel, MD*
- 8:15 a.m. The Young Athlete with Heart Disease  
*Michael Silka, MD*
- 8:30 a.m. A Public Healthcare Model I: Youth Heart Watch  
*Victoria Vetter, MD*
- 8:45 a.m. A Public Healthcare Model II: Project ADAM  
*Stuart Berger, MD*
- 9 a.m. Congenital Anomalies of the Coronary Arteries  
*Alan Friedman, MD*
- 9:15 a.m. Premature Ventricular Contractions: What Do They Mean? When Is Too Many? How to Treat?  
*Mitchell Cohen, MD*
- 9:30 a.m. Exercise Stress Testing: Is it a Valuable Tool to Predict Risk and Prognosis?  
*Paul Stephens, MD*
- 9:45 a.m. Encouraging Exercise as Therapy in CHD: Is the Paradigm Shifting?  
*Stephen Paridon, MD*
- 10 a.m. Adjourn

### Break/Visit the Exhibits 10 – 11 a.m.

#### Poster Session No. 2

*Conference Lobby*

### Simultaneous Breakout Sessions 11 a.m. – 1 p.m.

**NURSING: The Top 8 Nursing Abstracts Will Be Formally Presented and Discussed** – *Grand Ballroom E–G*

*Moderators: Kathryn Dodds, MSN, CPNP; Connie Cephus, PhD, CPNP*

**Challenges and Opportunities: Healthcare Administration in Congenital and Pediatric Cardiovascular Care**

*Huntington Ballroom South*

*Moderators: Paul Viviano; Lawrence Barnes*

- 11 a.m. Supporting and Promoting a Premier Cardiovascular Program in a Children's Hospital: Perspective from the Chair of Pediatrics – *Joseph St. Geme III, MD*
- 11:15 a.m. Creating a Successful and Sustainable Care Network of Pediatric Healthcare  
*Steven Docimo, MD*
- 11:30 a.m. Fostering and Developing Leadership Skills  
*Stuart Berger, MD*
- 11:45 a.m. Workforce Challenges in Pediatric Cardiac Care: Are We Training Enough Practitioners?  
*William Mahle, MD*
- Noon Balancing Clinical, Research and Administrative Priorities – *Stephen Roth, MD*
- 12:15 p.m. The Cardiac Center Strategic Planning Process: Creating a Meaningful Plan with a Culture of Engagement and Collaboration  
*Mark Schwartz, MBA, MEd*
- 12:30 p.m. Faculty Panel Discussion – *Led by Lawrence Barnes and Paul Viviano*
- 1 p.m. Adjourn

### Advances in Imaging in CHD

*Grand Ballroom D*

*Moderators: Michael Quartermain, MD; Leo Lopez, MD*

- 11 a.m. Strain, Synchrony and Other Advanced Tools for Assessing Heart Function Using ECHO  
*Laura Mercer-Rosa, MD, MSCE*
- 11:20 a.m. Perioperative 3D Echocardiography in Congenital Heart Disease: Present and Future  
*Matthew Jolley, MD*
- 11:40 a.m. The Altered Tissue: Importance and Methods of Characterization of Fibrosis in CHD  
*Mark Fogel, MD*
- Noon Appropriate Use Criteria for Outpatient Echocardiography – *Mark Lewin, MD*





12:20 p.m. Developing Contemporary Data on Normative Values: The Z-Score Projects  
*Leo Lopez, MD*

12:40 p.m. 3D ECHO: Case-based Examples Demonstrating Clinical Value – *Anitha Parthiban, MD*

1 p.m. Adjourn

### Challenges and Solutions: The Failing Heart

*Moderators: Paul Kantor, MBCh; Steven Lipshultz, MD*

11 a.m. The Biology of Right Ventricle Failure  
*Shelley Miyamoto, MD*

11:20 a.m. Laboratory Models of Right Ventricle Dysfunction/ Injury and Protection – *Frank McGowan, MD*

11:40 a.m. Imaging and Characterization of the “Failing” Right Ventricle – *Laura Mercer-Rosa, MD, MSCE*

Noon The Physiological Benefits of Inter-atrial Shunting  
*David Celermajer, MD*

12:20 p.m. The Failing Myocardium in Pulmonary Hypertension – *David Frank, MD, PhD*

12:40 p.m. Faculty Panel Discussion Specifically on the Challenges and Solutions of Right-sided Heart Failure – *Faculty*

1 p.m. Adjourn

### Trending Topics in Pediatric and Adult Congenital Perfusion *Catalina Room*

*Moderators: Tami Rosenthal, MBA, CCP; Jim Reagor MPS, CCP*

11 a.m. Cardiopulmonary Bypass for the Micro-neonate  
*Chelsea Capone, CCP*

11:15 a.m. Patient Blood Management: Maximal Effort  
*Tami Rosenthal, MBA, CCP*

11:30 a.m. Managing the Complex Adult Congenital Patient  
*Gary Raff, MD*

11:45 a.m. Acute Kidney Injury and the Perfusionist: What Role Do We Play – *Molley Dreher, CCP*

Noon Perfusion Challenges of an ABO Incompatible Heart Transplant: A Case Study  
*Tiffany Robb, CCP*

12:15 p.m. Audience Participation: Current Practice and Trends. Audience will be presented with a group of questions to answer. The responses will be posted and discussion led by a panel of faculty.

1 p.m. Adjourn

## FREE AFTERNOON

*Enjoy Huntington Beach and Southern California!*

SATURDAY MORNING  
*Fitness Fest*

# HEART R N 5K

CARING FOR KIDS' HEARTS



SATURDAY 6:15 – 7:45 a.m.

Where: Hyatt Regency Huntington Beach Resort and Spa

Fee: \$25 (includes 5K Heart Run event T-shirt)

*Registration required and limited to the first 200 registrants.*



## NEW THIS YEAR!

### YOGA FOR YOUR HEART (AND MIND)

Saturday 6:15 – 7:30 a.m.

Where: Huntington Beach

Fee: \$10

**Plenary Session V: 8 – 10 a.m.**

*Grand Ballroom D–G*

**Awards and Featured Lectures**

- 8 a.m. 11th Annual Jack Downes Lecture in Cardiac Anesthesia and Critical Care  
**Is Your ICU Good Enough?**  
*Introduction: James Steven, MD  
Randall Wetzel, MBBS*
- 8:20 a.m. 8th Annual Featured Lecture in the Cardiovascular Basic and Translational Sciences  
**Modeling the Genetic Landscape of Congenital Heart Disease with Systems Genetics**  
*Introduction: David Frank, MD, PhD  
Cecilia Lo, PhD*
- 8:40 a.m. 19th Annual Featured Lecture in Cardiovascular Nursing: T. Garrett Rauch Memorial Lecture  
**Nursing Research Journey: Understanding the Heart and Mind in Single Ventricle Heart Disease**  
*Introduction: Denise Donaghue, RN, MSN  
Nancy Pike, PhD*
- 9 a.m. 17th Annual William J. Rashkind Memorial Lecture in Pediatric Cardiology  
**Gaps in Pediatric Cardiac Care: Opportunities to Make a Difference**  
*Introduction: Joseph Rossano, MD  
Girish Shirali, MBBS*
- 9:20 a.m. 19th Annual C. Walton Lillehei Memorial Lecture in Cardiovascular Surgery  
**Customizing Single Ventricle Care: Make It Mine**  
*Introduction: J. William Gaynor, MD  
Jonathan Chen, MD*
- 9:40 a.m. Presentation of the Outstanding Investigator and Nursing Scientist Awards  
*David Goldberg, MD, and  
Kathryn Dodds, MSN, CRNP-AC*
- 10 a.m. Adjourn

**Break/Visit the Exhibits 10 – 11 a.m.**

**Poster Session No.** – *Conference Lobby*

**Simultaneous Breakout Sessions 11 a.m. – 1 p.m.**

**NURSING: Nursing Challenges and Opportunities:**

**Case Presentations – Grand Ballroom E–G**

*Moderators: Denise Donaghue, MSN; Melanie Guerrero, DNP*

Join the nursing faculty in a presentation of challenging cases that highlight the importance of working as a team.

*Karen McCandless, MSN, CRNP; Stacy Reynolds, DNP, CPNP; Erin Messing, MSN, CPNP; Erin Pinto, MSN, CRNP; Connie Cephus, PhD, CPNP; Kathryn Dodds, MSN, CRNP; and Jill Combs, MSN, and Liz Crowe*

**Focus on: Pulmonary Atresia with Intact Ventricular Septum**  
*Grand Ballroom D*

*Moderators: Jonathan J. Rome, MD; Craig Fleishman, MD*

- 11 a.m. Anatomy – Paul Weinberg, MD
- 11:20 a.m. Imaging: Prenatal and Neonatal Preop  
*Michael Puchalski, MD*
- 11:40 a.m. Catheter-based Therapies – *Christopher Petit, MD*
- Noon Surgical Therapies – *James St. Louis, MD*
- 12:20 p.m. Intermediate and Long-term Outcomes  
*Craig Fleishman, MD*
- 12:40 p.m. Faculty Panel Discussion Q & A
- 1 p.m. Adjourn

**The Brain in CHD: Fetus to Adult**

*Huntington Ballroom North*

*Moderators: J. William Gaynor, MD; David Goldberg, MD*

- 11 a.m. Fetal Origins of Neurocognitive Deficits in CHD  
*Shabnam Peyvandi, MD*
- 11:15 a.m. Blood Flow Patterns and Oxygenation in the Fetus with CHD – *Vibeke Hjortdal, MD, PhD*
- 11:30 a.m. Impaired Cerebral Autoregulation in the Neonate with CHD – *Jodie Votava-Smith, MD*
- 11:45 a.m. Structural and Functional Abnormalities of the CNS in the Newborn with Child CHD – *Daniel Licht, MD*
- Noon What Are the Modifiable Factors to Neurocognitive Deficit in CHD? – *J. William Gaynor, MD*
- 12:15 p.m. Blood Flow to the Brain in the Reconstructed Single Ventricle: What We have Learned from Serial MRI  
*Mark Fogel, MD*
- 12:30 p.m. Neurocognitive Deficits in the Adolescent and Adult with CHD – *Nancy Pike, PhD*
- 12:45 p.m. Can Psychological Care Make a Difference in Congenital Heart Health? – *Nadine Kasparian, PhD*
- 1 p.m. Adjourn

**The Premature Infant with Cardiovascular Disease**

*Huntington Ballroom South*

*Moderators: Andrew Costarino, MD; Alan Friedman, MD*

- 11 a.m. The Patent Ductus Arteriosus: Gauging Impact and Strategies for Closure – *Alan Friedman, MD*
- 11:15 a.m. Lung Disease and Pulmonary Hypertension in the Premature Infant – *David Frank, MD, PhD*
- 11:30 a.m. Comprehensive Care Outside of the Heart: Supporting the Premature Organ Systems When There Is CHD  
*Natalie Rintoul, MD*
- 11:45 a.m. Unique Aspects of Nursing Care for the Premature Infant with CHD – *Megan Steigerwalt, BSN, RN*
- Noon Ventilatory Strategies in Prematurity  
*Andrew Costarino, MD, MSCE*

*continued>*

- 12:15 p.m. Surgery for the Premature Infant with CHD: Operate or Wait? – *Edward Hickey, MD*
- 12:30 p.m. Outcomes for the Premature Newborn with CHD  
*Loren Sacks, MD*
- 12:45 p.m. Faculty Panel Discussion Q & A
- 1 p.m. Adjourn

### What Everyone Ought to Know about ECMO in the Current Era *Catalina Room*

*Moderators: Chelsea Capone, CCP, FPP; Molly Dreher, MA, CCP*

- 11 a.m. Alternative Anticoagulation for ECMO  
*Myke Federman, MD*
- 11:20 a.m. Cardiohelp Use in Children: The CCHMC Experience  
*James Reagor, CCP*
- 11:40 a.m. ECMO in the Current Era of the Pediatric ICU  
*Marissa Brunetti, MD*
- Noon Timing and Optimization for Separating from ECMO  
*Maryam Naim, MD*
- 12:20 p.m. Practice Makes Perfect: Drills and Simulation  
*Kim Delacruz, CCP*
- 12:40 p.m. Faculty Panel Discussion Q & A
- 1 p.m. Adjourn

### 1 – 2 p.m. Boxed Lunch

- 1:15-1:45 p.m. Lunchtime Roundtable 1: Genetic Testing for CHD: Time to Incorporate into Standard Clinical Care (Brief Presentation and Roundtable Discussion)  
*Elizabeth Goldmuntz, MD, and James Priest, MD*
- 1:15-1:45 p.m. Lunchtime Roundtable 2: Telemedicine in Pediatric and Congenital Cardiovascular Health (Brief Presentation and Roundtable Discussion)  
*Mark Lewin, MD, and Gary Satou, MD*
- 1:15-1:45 p.m. Lunchtime Roundtable 3: Early Signs of Adult Onset Cardiovascular Disease in the Young (Brief Presentation and Roundtable Discussion)  
*Steven Lipshultz, MD, and Jonathan Wagner, DO*

### 1 – 2 p.m. Special Nursing Buffet Lunch

*Hyatt Courtyard*

Sponsored by



### 2 – 3:30 p.m. Moderated Panel of Experts:

**Innovation in CHD: How to Promote it?  
How to Bring it into the Realm of Clinical Care?**

*Grand Ballroom D–G*

What Is Innovation in Pediatric and Congenital Cardiovascular Disease – *Anthony Chang, MD (Session Leader)*

Pacing Technology – *Yaniv Bar-Cohen, MD*

Virtual Reality – *Loren Sacks, MD*

Novel Catheter-based Ideas – *Yoav Dori, MD, PhD*

Surgical Innovation – *Richard Ohye, MD*

Innovations in Heart Transplantation – *Joseph Turek, MD*

Roundtable Discussion – *Faculty Panel*

### 3:30 – 3:45 p.m. Break

### Plenary Session VI: 3:45 – 5:45 p.m.

*Grand Ballroom D–G*

**What Influences Outcomes in Pediatric and Congenital Cardiovascular Disease?**

*Moderators: Adel Younoszai, MD; Stephen Roth, MD*

3:45 p.m. Genomics and Personalized Medicine: Statin Use in the Young  
*Jonathan Wagner, DO*

4 p.m. The Maternal-fetal Environment  
*J. William Gaynor, MD*

4:15 p.m. Operational Variables: The Individual Healthcare Provider, the Team, the Institution and the System  
*Edward Hickey, MD*

4:30 p.m. Early Healthcare Exposures and Experiences  
*Amy Jo Lisanti, PhD*

4:45 p.m. A Healthy Lifestyle: Obesity and Overweight  
*Meryl Cohen, MD*

5 p.m. Socioeconomic Status and Resource Availability  
*Shaine Morris, MD*

5:15 p.m. A Model: Factors Impacting Outcomes in TOF  
*Elizabeth Goldmuntz, MD*

5:30 p.m. Psychological Resilience  
*Adrienne Kovacs, PhD*

5:45 p.m. Adjourn

**5:45 – 6:30 p.m. Highlighted Poster Session: Wine and Wisdom**  
*Conference Lobby*

Come review the science and meet the presenters of our fine selection of superb poster abstracts for the discerning mind!

**6:30 p.m. Adjourn**



♡ **SUNDAY, FEB. 17**

**Plenary Session VII: 7 – Noon**

*Grand Ballroom D–G*

**Hypoplastic Left Heart Syndrome: 40 Years of Challenges, Opportunities & Solutions – Fetus to Adult**

*Moderators: Jack Rychik, MD; James Tweddell, MD*

- 7 a.m. Anatomical Variability of Left Ventricular Inadequacy  
*Paul Weinberg, MD*
- 7:15 a.m. The Complex Genetics of HLHS  
*Cecilia Lo, PhD*
- 7:30 a.m. Fetal Diagnosis of HLHS and the Diagnostic Challenges of Borderline LV Inadequacy  
*Michael Puchalski, MD*
- 7:45 a.m. Catheter-based Intervention in the Fetus with HLHS: Are Outcomes Improved Through Fetal Intervention?  
*Anita Moon-Grady, MD*
- 8 a.m. Surgical Strategies for Reconstruction: Options in 2019 and How to Choose?  
*James Tweddell, MD*
- 8:15 a.m. Ethical Challenges: When and How to Stand Down  
*Aaron DeWitt, MD*
- 8:25 a.m. Intensive Care for the Sick Neonate with HLHS Before and After Surgery: Physician Perspective  
*Sarah Tabbutt, MD*
- 8:35 a.m. Intensive Care for the Sick Neonate with HLHS Before and After Surgery: Nurse Perspective  
*Margaret Cates, RN, BSN*
- 8:45 a.m. Faculty Panel Discussion Q & A
- 9 a.m. Break

*Moderators: Chitra Ravishankar, MD; Yuli Kim, MD*

- 9:15 a.m. Interstage Monitoring: Yes, it Makes a Difference!  
*Therese Giglia, MD*
- 9:25 a.m. Feeding Challenges and Growth  
*Chitra Ravishankar, MD*
- 9:35 a.m. Strategies for Stage II Bidirectional Glenn and Fontan Completion  
*Christopher Mascio, MD*
- 9:45 a.m. Failure (at Any Stage) and the Role of Mechanical Circulatory Support  
*Kimberly Lin, MD*
- 10 a.m. After Planned Surgeries, There Is Still Work to be Done: Catheter Interventions  
*Andrew Glatz, MD*
- 10:15 a.m. After Planned Surgeries, There Is Still Work to be Done: Medical Therapies  
*David Goldberg, MD*
- 10:30 a.m. After Planned Surgeries, There Is Still Work to be Done: Is Transplantation the Anticipated “Stage 4” in All?  
*Kurt Schumacher, MD*
- 10:45 a.m. Faculty Panel Discussion Q & A
- 11 a.m. Surveillance and Care: The Early (Wonder) Years  
*Adel Younoszai, MD*
- 11:10 a.m. Surveillance and Care: The Challenges of Adulthood  
*Yuli Kim, MD*
- 11:30 a.m. Stem Cells: Hope or Hype?  
*Ram Subramanian, MD, PhD*
- 11:45 a.m. The Vision: Where to Next for HLHS? What Still Needs to Get Done ...  
*Jonathan Chen, MD*
- Noon Adjourn

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Jonathan Chen, MD, Philadelphia  
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