

Cardiology 2018

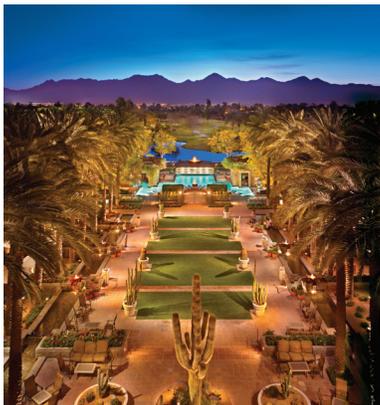
21st Annual
Update on Pediatric
and Congenital
Cardiovascular Disease

EFFECTIVE TEAMS, IMPROVING OUTCOMES

Final Program

Feb. 21 – 25, 2018

Hyatt Regency Scottsdale
Resort and Spa at Gainey Ranch
Scottsdale, Ariz.



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**Children's Hospital
of Philadelphia®**

Cardiac Center

WEDNESDAY, FEB. 21

Optional Preconference #1

Congenital Heart Disease and Postoperative Management:
A Comprehensive Review for Nursing and Front-line Providers
(ARIZONA I-III)

Moderators: *Kathryn Dodds, MSN, CPNP-AC; Courtney Howell, CPNP*

- 7:30 a.m. Terminology of "Normal" Cardiac Anatomy
Paul Weinberg, MD
- 7:45 a.m. How Soon Can We Know?
Jill Combs, MSN
- 8 a.m. Screening, Diagnosis and Preoperative Assessments
Kathryn Dodds, MSN, CPNP-AC
- 8:15 a.m. Open Heart Surgery: CPB, X clamp, Circulatory Arrest
Stephanie Fuller, MD
- 8:30 a.m. Early Postoperative 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
Matthew Schwartz, 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 – *Daniel Velez, MD*
Postoperative Care and Outcomes – *Kristen T. Sullivan, RN, MSN, CPNP-AC*
- 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, RN, CPNP-AC, PC*
- 11:20 a.m. Tetralogy of Fallot
Anatomy/Morphology – *Paul Weinberg, MD*
Surgery – *James O'Brien, MD*
Postoperative Care and Outcomes – *Lisa Laddish, DNP, RN, CPNP-AC, PC*
- 11:40 a.m. Truncus Arteriosus
Anatomy/Morphology – *Paul Weinberg, MD*
Surgery – *Daniel Velez, MD*
Postoperative Care and Outcomes – *Kathryn Dodds, MSN, CPNP-AC*
- Noon D-Transition of the Great Arteries/Arterial Switch
Anatomy/Morphology – *Paul Weinberg, MD*
Surgery – *Stephanie Fuller, 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 O'Brien, MD*
Postoperative Care and Outcomes – *Courtney Howell, CPNP-AC/PC*
- 1 p.m. Coarctation
Anatomy/Morphology – *Paul Weinberg, MD*
Surgery – *Daniel Velez, MD*
Postoperative Care and Outcomes – *Lisa Laddish, DNP, RN, CPNP-AC, PC*
- 1:15 p.m. Single Ventricle: Stage 1, Bidirectional Glenn, Fontan
Anatomy/Morphology – *Paul Weinberg, MD*
Surgery – *Stephanie Fuller, MD*
Postoperative Care and Outcomes – *Kathryn Dodds, MSN, CPNP-AC*
- 2:15 p.m. Discharge Planning and Home Monitoring
Courtney Howell, CPNP, AC-PC
- 2:30 p.m. Congenital Heart Disease and the Brain
Daniel Licht, MD
- 2:45 p.m. Growing Up with Congenital Heart Disease
Yuli Kim, MD
- 3 p.m. Q and A
- 3:30 p.m. Adjourn

Optional Preconference #2

Advanced Imaging in Pediatric and Congenital
Cardiovascular Disease (ARIZONA IV)

Moderators: *Mark Fogel, MD; Michael Quartermain, MD*

- 8 a.m. Advanced Techniques in Echocardiography
Michael Quartermain, MD
- 8:30 a.m. Echocardiography to Assess Ventricular Function:
Techniques, Strengths and Limitations
Laura Mercer-Rosa, MD
- 9 a.m. Computed Tomographic (CT) Imaging in CHD:
Indications and Utility
Anthony Hlavacek, MD
- 9:30 a.m. Cardiac MR: Anatomy and Tissue Characterization
Lars Grosse-Wortmann, MD



10 a.m. Break

10:15 a.m. “I Didn’t Know You Could Do That!”
New Techniques in Cardiac MRI
Mark Fogel, MD

10:30 a.m. MRI-based Cardiac Catheterization
Kanishka Ratnayaka, MD

10:50 a.m. Lymphatic Imaging: A Revolution in Circulatory Imaging Is Taking Place
Yoav Dori, MD, PhD

11:10 a.m. Cardiac MR: Ventricular Function and Flow
Kevin Whitehead, MD, PhD

11:30 a.m. 3D Printing of Complex Cardiac Structures
Mark Fogel, MD

11:50 a.m. Advanced Imaging Q & A
Advanced Imaging Faculty

Noon Lunch

12:30 p.m. Advanced Imaging in Specific Condition: Tetralogy of Fallot and Truncus Arteriosus – ECHO – *Shobha Natarajan, MD*

12:50 p.m. Advanced Imaging in Specific Condition: Tetralogy of Fallot and Truncus Arteriosus – MRI – *Lars Grosse-Wortmann, MD*

1:10 p.m. Advanced Imaging in Specific Condition: Cardiomyopathy/Myocarditis/Heart Failure – ECHO – *Matthew O’Connor, MD*

1:30 p.m. Advanced Imaging in Specific Condition: Cardiomyopathy/Myocarditis/Heart Failure – MRI – *Kevin Whitehead, MD, PhD*

1:50 p.m. Advanced Imaging in Specific Condition: Single Ventricle Throughout Stages of Reconstruction – ECHO
Peter Frommelt, MD

2:20 p.m. Advanced Imaging in Specific Condition: Single Ventricle Throughout Stages of Reconstruction – MRI
Rahul Rathod, MD

3 p.m. The Conventional, the Controversial and the Unusual (but Fascinating): Cases Where Advanced Imaging Altered Understanding and Care
Faculty

3:30 p.m. Adjourn

Optional Preconference #3
The Essentials for Successful Training and Early Career Skills in Pediatric Cardiology (ARROYO ROOM)
Moderators: Alan Friedman, MD; Meryl Cohen, MD

8 a.m. Fostering the Right Culture in the Workplace
Alan Friedman, MD

8:20 a.m. Research Training: Having the Right Training and Platform for a Successful Academic Career
Andrew Glatz, MD

8:40 a.m. Choosing a Track: Subspecialty Interest, Academics and Developing a Busy Clinical Practice
Cheryl Kurer, MD

9 a.m. The Delicate Relationship Between Career and Home Life
Meryl Cohen, MD

9:20 a.m. Mentorship and Research Training for a Career in Pediatric Cardiology
Bruce Gelb, MD

9:40 a.m. Panel Discussion
Faculty

10 a.m. Break

10:20 a.m. Academics: How to Craft and Write a Great Paper (What Reviewers Are Looking for)
Tara Karamlou, MD

10:40 a.m. New Approaches to Learning: Cardiology Fellow Boot Camp
Catherine Krawczeski, MD

11 a.m. Academics: Crafting the Right Research Project
Laura Mercer-Rosa, MD

11:20 a.m. Mentorship and Research Training for a Career in Pediatric Cardiology
Jane Newburger, MD, MPH

11:40 a.m. Panel Discussion
Faculty

Noon Lunch

12:30 p.m. Academics: How to Give a Great Talk
Girish Shirali, MD, MBBS

1-3 p.m. Abstract Presentations: Presentations and Critique
David Goldberg, MD, and Faculty

3 p.m. Adjourn

WEDNESDAY, FEB. 21

Opening Plenary Session • 4 – 6:20 p.m.

4 p.m. Opening Remarks
Jack Rychik, MD

Let's Begin With the Future: What to Expect in the Next Decade (VAQUERO BALLROOM)

Moderators: Joseph Rossano, MD; Thomas L. Spray, MD

4:05 p.m. Genetics and the Potential for “Personalized Precision Medicine” in Congenital Heart Care
Bruce Gelb, MD

4:25 p.m. The Artificial Womb: Extracorporeal Support for the Fetus
Marcus Davey, PhD

4:45 p.m. How We Expect Data Will Drive Discovery and Innovative Care
Phillip B. (Jay) Storm, MD

5:05 p.m. Transcatheter Valves = “Plastics” ... (*The Graduate*)
Matthew Gillespie, MD

5:25 p.m. Congenital Heart Surgery: Are We Done with Surgical Innovation or Is There Room to Do More?
Sitaram Emani, MD

5:45 p.m. The Digital Transformation of Healthcare
Simon Kos, MBBS, MBA – CMO, Microsoft

6:05 p.m. The Increasing Role of Social Media in CHD Care
Kurt Schumacher, MD

6:25 p.m. Managing the Growing ACHD Population Worldwide and Their Unique Concerns
Thomas Glenn, MD

6:40 p.m. Our New Normal: Having a Child with Hypoplastic Left Heart Syndrome
Greg Olsen, Carolina Panthers

6:55 p.m. Adjourn

Dinner on your own



THURSDAY, FEB. 22

7 – 8 a.m. Sunrise Session I (ARIZONA I-III)
Electrocardiography: How to Read ECGs and Real Cases
Mitchell Cohen, MD; Maully Shah, MBBS; Edward Walsh, MD

Sunrise Session II (ARIZONA IV)
Understanding the Principles of Cardiac Catheterization
Stephen Kaine, MD; Matthew Schwartz, MD

Plenary Session II

Where Did We Come from and Where Are We Going: How Our History Informs the Future in the Field of ... (VAQUERO BALLROOM)

Moderators: Girish Shirali, MD; Jonathan J. Rome, MD

8 a.m. Cardiac Catheterization
Jonathan Rome, MD

8:20 a.m. Electrophysiology
Edward Walsh, MD

8:40 a.m. Echocardiography
Norman Silverman, MD

9 a.m. Congenital Heart Surgery
Thomas Spray, MD

9:20 a.m. Pediatric Heart Nursing
Patricia Hickey, PhD, MBA, RN

9:40 a.m. Heart Transplantation
Robert Shaddy, MD

10 – 11 a.m. Break/Visit the Exhibits/Poster Session I

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

NURSING: Truth or Fiction ... What Does the Evidence Say? (VAQUERO A-D)

Moderators: Denise Donaghue, MSN; Patricia Hickey, PhD

11 a.m. Can Patients Safely Go Home on Inotropic Infusion Therapy? – *Leigh Ann Difusco, MSN, RN, PCNS-BC*

11:15 a.m. Preventing Wound Infections: Is the Truth Out There? – *Catherine Woodward, DNP, PNP-AC*

11:30 a.m. So Which Is Safer at Home: GT or NGT? – *Belinda Large, RN, MSN, CPNP-AC/PC*

11:45 a.m. Is Thermoregulation Important? – *Stephanie Helman, MSN, RN, CCRN, CCNS*

Noon “What the Heck, Is It Really NEC?” – *Lisa Laddish, DNP, RN, CPNP-AC/PC*

12:15 p.m. What Are the Risks for Interstage Mortality? – *Alyson Stagg, MSN, CRNP*

12:30 p.m. Is Breastfeeding Possible in the Infant with HLHS? – *Britt Fredriksen, RN, MS*

12:45 p.m. Can't Digital Technology Improve Nursing Care? – *Molly McCarthy, RN, MBA*

1 p.m. Adjourn

THURSDAY, FEB. 22

Simultaneous Breakout Sessions continued

Exercise and Sports in Pediatric and Congenital Cardiovascular Conditions (ARROYO)

Moderators: Stephen Paridon, MD; Mitchell Cohen, MD

- 11 a.m. What to Recommend: Coronary Artery Anomalies – *Julie Brothers, MD*
- 11:15 a.m. Sexual Activity in CHD and Channelopathies: The Pink Elephant No One Wants to Discuss – *Mitchell Cohen, MD*
- 11:30 a.m. What to Recommend: Fontan Circulation – *Yves D’Udekem, MD*
- 11:45 a.m. Wellness Aspects of Physical Fitness: How the Physiology of Exercise Improves Physical Health, Mental Health and Quality of Life – *Todd Nowlen, MD*
- Noon What to Recommend: Aortic Valve Disease – *Stephen Paridon, MD*
- 12:15 p.m. Beyond Beta-blockers: Moving to Gene-specific Therapies for Channelopathies – *Maully Shah, MBBS*
- 12:30 p.m. What to Recommend: Tetralogy of Fallot – *Edward Walsh, MD*
- 12:45 p.m. Q and A – *Faculty*
- 1 p.m. Adjourn

The Era of Transcatheter Device and Interventional Therapies Has Arrived! (ARIZONA I-III)

Moderators: Stephen Kaine, MD; Audrey Marshall, MD

- 11 a.m. Innovations in Device Technology for Congenital Heart Care – *Daniel Levi, MD*
- 11:15 a.m. Who Are the Candidates for Pulmonary Valve Implantation and How Should We Evaluate Candidacy? – *Andrew Glatz, MD*
- 11:30 a.m. How Should We Follow Patients after Transcatheter Valve Implantation? What Are the Outcomes Thus Far? – *Bryan Goldstein, MD*
- 11:45 a.m. The Spectrum of Current Devices for Pulmonic and Aortic Valves and Techniques for Implantation – *Audrey Marshall, MD*
- Noon Transcatheter Creation of a Cavopulmonary Connection: Evolution of a New Strategy – *Kanishka Ratnayaka, MD*
- 12:15 p.m. Future Innovations and Applications – *Matthew Gillespie, MD*
- 12:30 p.m. Case Reviews – *Stephen Kaine, MD, and Faculty Panel*
- 1 p.m. Adjourn

Focus On: The Tricuspid Valve (VAQUERO E-G)

Moderators: Stephenie Fuller, MD; Craig Fleishman, MD

- 11 a.m. Anatomy of the Tricuspid Valve: Normal and Abnormal – *Paul Weinberg, MD*
- 11:20 a.m. Tricuspid Valve Disease: Manifestations in the Fetus – *Norman Silverman, MD*
- 11:40 a.m. Imaging and Grading Tricuspid Valve Dysfunction and Its Impact on RV Performance – *Laura Mercer-Rosa, MD*
- Noon Tricuspid Valve Disease: Manifestations in the Child and Young Adult – *Craig Fleishman, MD*
- 12:20 p.m. The Spectrum of Surgical Interventions for Tricuspid Valve Conditions and Their Outcomes – *Ram Kumar Subramanyan, MD, PhD*
- 12:40 p.m. Managing the Faulty Tricuspid Valve When It Is the Systemic Atrioventricular Valve – *Stephanie Fuller, MD*
- 1 p.m. Adjourn

Surgical Strategies for Complex Conditions (ARIZONA IV)

Moderators: James O’Brien, MD; J. William Gaynor, MD

- 11 a.m. Techniques for Approaching the Challenging Mitral Valve – *Sitaram Emani, MD*
- 11:20 a.m. Aortic Valve Repair – *James Kirklin, MD*
- 11:40 a.m. Aortic Arch Hypoplasia – *E. Dean McKenzie, MD*
- Noon Solutions for TGA, VSD and LV Outflow Obstruction – *Victor Morell, MD*
- 12:20 p.m. The “Double-Switch” for Corrected TGA – *Richard Ohye, MD*
- 12:40 p.m. Q&A – *Faculty Panel*
- 1 p.m. Adjourn

Let’s Get Mechanical: Mechanical Assist and ECMO (DUNES)

Moderators: Tami Rosenthal, CCP, MBA; Edward Harman, MS, CCP

- 11 a.m. Bivalrudin Use for Mechanical Assist – *Aaron DeWitt, MD*
- 11:15 a.m. Challenges and Lessons Learned for ECMO Transport – *Klayton Buckley, CCP*
- 11:30 a.m. Use of Revolution for Short-term VAD/ECMO – *Daniel Velez, MD*
- 11:45 a.m. Roller Versus Centrifugal Pump for ECMO – *Tami Rosenthal, CCP, MBA*
- Noon Hemostasis and Anticoagulation – *Venkat Shankar, MBBS*
- 12:15 p.m. Heartware: Unique Pediatric Applications – *Brandon Shade, CCP, LP*
- 12:30 p.m. Outcomes of Pediatric Patients Supported with Continuous Flow VAD – *Joseph Rossano, MD, MS*
- 12:45 p.m. Panel Discussion
- 1 p.m. Adjourn

THURSDAY, FEB. 22

Boxed Lunch • 1 – 2 p.m.

- 1:15 – 1:45 p.m. **Lunch Talk: Focus on ... (VAQUERO A-D)**
Quality Improvement in Congenital Heart Care
Discussion Leader: Shobha Natarajan, MD
Michael Gaies, MD; Stephen Kaine, MD; Anitha Parthiban, MD; and Susan Schachtner, MD
- 2:15 – 3:15 p.m. **Moderated Panel of Experts (VAQUERO BALLROOM)**
Decision-making in Complex Situations: We Are Going to Do the Following ...
Panel Leader: Jack Rychik, MD
Yves D'Udekem, MD; Carlos Mery, MD; Victor Morell, MD; Richard Ohye, MD; Ram Kumar Subramanyan, MD; and Glen Van Arsdell, MD
- 3:15 – 4:15 p.m. **Oral Abstracts (VAQUERO BALLROOM)**
Moderators: David Goldberg, MD; Anitha Parthiban, MD

Plenary Session III

Effective Teams, Improving Results (VAQUERO BALLROOM)

Moderators: Daniel J. Penny, MD; Denise D. Donaghue, RN, MSN

- 4:15 p.m. **The Organization and Dynamics of Teams in Achieving High-level Outcomes (Organizational Structure, Communication, Authority/Independence)**
James Steven, MD
- 4:30 p.m. **Node of Transitional Care I: From Prenatal to Postnatal Life – Role of the Obstetrical Specialist in Congenital Heart Care**
Julie Moldenhauer, MD
- 4:45 p.m. **Node of Transitional Care II: Delivery, Stabilization and Neonatal Care**
Natalie Rintoul, MD
- 5 p.m. **Node of Transitional Care III: Between the Operating Room and Intensive Care Unit – Continuity, Hand-off and Communication**
Geoffrey Bird, MD
- 5:15 p.m. **Node of Transitional Care IV: Between Inpatient and Outpatient Care Services**
Stuart Berger, MD
- 5:30 p.m. **Nursing Care as a Team Sport in Pediatrics**
Kim Delaney, RN, BSN
- 5:45 p.m. **I Am Not a Cardiologist! (Paraphrasing *The Elephant Man*)**
Daniel Licht, MD
- 6 p.m. **Panel Discussion**
- 6:15 p.m. **Adjourn**

Dinner on your own



FRIDAY, FEB. 23

7 – 8 a.m. Sunrise Session I (ARIZONA I-III)
Understanding the Benefits and Limitations of Echocardiography for the Frontline Provider
Meryl Cohen, MD; Shobha Natarajan, MD; Michael Quartermain, MD

Sunrise Session II (ARIZONA IV)
My Favorite “Category” of Medications: What Should You Know About These Medications?
*Moderators: Kathryn Dodds, MSN, CPNP-AC; Stacy Reynolds, DNP, CPNP
Stephanie Culver, DNP, CPNP-BC; Susan Park, CPNP, CCTC*

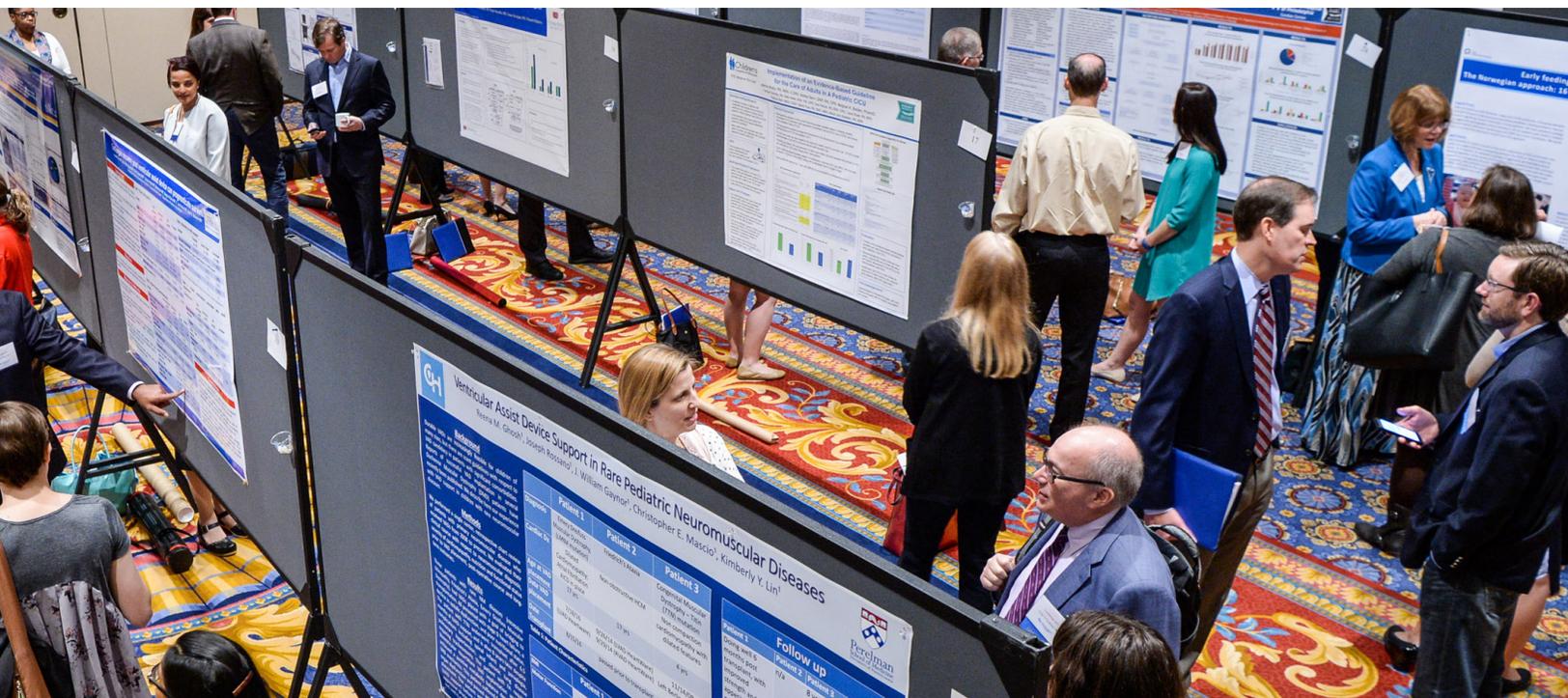
Plenary Session IV

Surviving and Thriving With ... (VAQUERO BALLROOM)

Moderators: Meryl Cohen, MD; Yuli Kim, MD

- 8 a.m. **Ebstein’s Anomaly**
Frank Cetta, MD
- 8:20 a.m. **Tetralogy of Fallot**
Elizabeth Goldmuntz, MD
- 8:40 a.m. **Aortic Valve Disease**
Yuli Kim, MD
- 9 a.m. **D-Transposition of the Great Arteries**
Jane Newburger, MD, MPH
- 9:20 a.m. **Hypoplastic Left Heart Syndrome**
Jack Rychik, MD
- 9:40 a.m. **Panel Discussion**
Faculty
- 10 a.m. **Adjourn**

10 – 11 a.m. Break/Visit the Exhibits/Poster Session II



FRIDAY, FEB. 23

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

NURSING: The Top 8 Nursing Abstracts Will Be Formally Presented and Discussed (VAQUERO A-D)
Nursing Faculty • Moderators: Cathy S. Woodward, DNP; Lisa Laddish, DNP

Heart Care Before Birth (ARIZONA I-III)

Moderators: Christopher Lindblade, MD; Tara Swanson, MD

- 11 a.m. The Fetal Surgery MMC Experience: A Model for How a Systematic Prenatal Approach for a Birth Defect Impacts Long-term Outcomes – *Julie Moldenhauer, MD*
- 11:20 a.m. Characterizing Severity and Counseling for Heterotaxy Syndrome Before Birth – *Christopher Lindblade, MD*
- 11:40 a.m. Twin-twin Transfusion Syndrome: Prenatal Pathophysiology Influences Long-term Outcomes – *Jay Pruetz, MD*
- Noon Maternal Hyperoxygenation: Utility as a Provocative Test in Fetal Cardiovascular Evaluation – *Jack Rychik, MD*
- 12:20 p.m. Will We Ever Be Able to Prenatally Predict the Need for Postnatal Balloon Atrial Septostomy in the Fetus with TGA? – *Norman Silverman, MD*
- 12:40 p.m. Integrated Counseling for the Fetus and Family in Prenatal Heart Disease – *Tara Swanson, MD*
- 1 p.m. Adjourn

This Is so Frustrating! How do I Deal with and Handle ... (VAQUERO E-G)

Moderators: Paul Stephens, MD; Girish Shirali, MD

- 11 a.m. Characterizing and Deciding the Significance of a Post-operative Residual Ventricular Septal Defect – *Meryl Cohen, MD*
- 11:20 a.m. Plastic Bronchitis after Fontan – *Yoav Dori, MD, PhD*
- 11:40 a.m. The Restrictive Conoventricular VSD (But with High Qp: Qs) That Won't Spontaneously Close – *Daniel Levi, MD*
- Noon Vessel "Resistance" to Intervention: Recurrent Aortic Arch Narrowing or Branch Pulmonary Artery Narrowing – *Audrey Marshall, MD*
- 12:20 p.m. Fetal Heart Block with Impending Fetal Hydrops – *Jay Pruetz, MD*
- 12:40 p.m. Recurrent Syncope of Unclear Etiology – *Paul Stephens, MD*
- 1 p.m. Adjourn

Focus on: Aortopathy in the Young (ARROYO)

Moderators: Marie Gleason, MD; Stephen Paridon, MD

- 11 a.m. Anatomical Considerations – *Paul Weinberg, MD*
- 11:15 a.m. Genetic Considerations in Aortopathy – *Harry Dietz, MD*
- 11:30 a.m. The Spectrum of Disease: William's Syndrome – *Marie Gleason, MD*
- 11:45 a.m. Aortic Dilation in CHD: When Is It Normal? When Is It Abnormal? – *Yuli Kim, MD*
- Noon The Spectrum of Disease: Marfan's Syndrome – *Stephen Paridon, MD*
- 12:15 p.m. Imaging Guidelines for Intervention in Aortopathy – *Michael Quartermain, MD*
- 12:30 p.m. Surgical Strategies for Treating Aortopathy in the Young – *Luca Vricella, MD*
- 12:45 p.m. Panel Discussion – *Faculty*
- 1 p.m. Adjourn

Cardiomyopathy, Heart Failure and Transplantation (ARIZONA IV)

Moderators: Joseph Rossano, MD, MS; Stephen Zangwill, MD

- 11 a.m. Cardiac Transplant in the Adult with CHD – *Victor Morell, MD*
- 11:15 a.m. Cardiomyopathies in Noonan Syndrome and the Other RASopathies – *Bruce Gelb, MD*
- 11:30 a.m. Functional Status of Survivors of Mechanical Assist Devices and of Heart Transplantation – *Christopher Almond, MD*
- 11:45 a.m. Human Leukocyte Antibodies (HLA) in Pediatric Heart Transplantation – *Matthew O'Connor, MD*
- Noon Medical Frailty: A New Approach to Characterizing Chronic Pediatric Cardiovascular Conditions – *Anitha Parthiban, MD*
- 12:15 p.m. Resource Utilization and the Growing Cost of Care for Pediatric Heart Failure – *Joseph Rossano, MD, MS*
- 12:30 p.m. Drug Therapy for Pediatric Heart Failure: The Old, the New and the Future – *Robert Shaddy, MD*
- 12:45 p.m. Transplant Rejection: Mechanisms, Diagnosis and Current Treatment Strategies – *Steven Zangwill, MD*
- 1 p.m. Adjourn

Let's Get Innovative in Blood Management (DUNES)

Moderators: Tami Rosenthal, CCP, MBA; Brandon Shade, CCP, LP

- 11 a.m. Bloodless Cardiopulmonary Bypass: Is It Possible for Everyone? – *James Steven, MD*
- 11:20 a.m. VAVD: Does Sucker Return Make a Difference? – *Brandon Shade, CCP*
- 11:40 a.m. Use of TEG to Customize Blood Management – *Klayton Buckley, CCP*
- Noon Modified Ultrafiltration: Is It Worth Your Time? – *Edward Harman, MS, CCP*
- 12:20 p.m. Current Practice and Trends: Interactive Audience Participation Session: Audience Will Be Presented with a Series of Questions, Responses Will Be Posted and a Panel-led Discussion Will ensue – *Perfusion Faculty*
- 1 p.m. Adjourn

Boxed Lunch • 1 – 2 p.m.

- 1:15 – 1:45 p.m. **Lunch Talk: Focus on ... (VAQUERO A-D)**
Vascular Health and Angiogenesis in Congenital Heart Care
Andrew Glatz, MD; Ram Kumar Subramanyan, MD, PhD
- 2:15 – 3:15 p.m. **Situation Room: Moderated Panel of Experts (VAQUERO BALLROOM)**
Crisis in the ICU: What to Do About ...
Panel Leader: Joseph Rossano, MD, MS
Chris Feudtner, MD, PhD; Michael Gaies, MD; Catherine Krawczeski, MD; Maryam Naim, MD; Venkat Shankar, MBBS
- 3:15 – 4:15 p.m. **Oral Abstracts (VAQUERO BALLROOM)**
Moderators: Matthew O'Connor, MD; Catherine Krawczeski, MD

Plenary Session V

What Besides the Heart Influences Outcomes in Congenital Heart Disease? (VAQUERO BALLROOM)

Moderators: J. William Gaynor, MD; Andrew Costarino, MD

- 4:15 p.m. **Team Culture, Operational/Organizational Systems and Error Reduction in Congenital Heart Surgery**
Glen Van Arsdell, MD
- 4:30 p.m. **The Unmeasured Variables Surrounding Care**
Michael Gaies, MD
- 4:45 p.m. **Life Before Birth: Impact of Prenatal Environment**
J. William Gaynor, MD
- 5 p.m. **The Blue Print: Our Genes**
Elizabeth Goldmuntz, MD
- 5:15 p.m. **Psychological and Social Factors**
Adrienne Kovacs, PhD
- 5:30 p.m. **Extracardiac Malformations and Their Influence on Surgical Outcomes**
Carlos Mery, MD
- 5:45 p.m. **Nutrition and Weight Gain in the Infant with CHD**
Chitra Ravishankar, MD
- 6 p.m. **Panel Discussion**
Faculty
- 6:15 p.m. **Adjourn**

6:15 p.m. Sunset Reception

Sponsored by



SATURDAY, FEB. 24

Exercise your body and your mind!

HEART RUN 5K

CARING FOR KIDS' HEARTS

Time: 6:15 – 8 a.m.

Where: Hyatt Regency Scottsdale Resort and Spa
at Gainey Ranch



Sponsored by



Plenary Session VI

Awards and Featured Lectures (VAQUERO BALLROOM)

- 8 a.m. 16th Annual William J. Rashkind Memorial Lecture in Pediatric Cardiology
Introduction: Joseph Rossano, MD
Tal Geva, MD
- 8:20 a.m. 18th Annual C. Walton Lillehei Memorial Lecture in Cardiovascular Surgery
Introduction: Thomas L. Spray, MD
James Kirklin, MD
- 8:40 a.m. 10th Annual Jack Downes Lecture in Cardiac Anesthesia and Critical Care
Introduction: James Steven, MD
Dean Andropoulos, MD
- 9 a.m. Seventh Annual Featured Lecture in the Cardiovascular Basic and Translational Sciences
Introduction: Stephen Paridon, MD
Harry Dietz, MD
- 9:20 a.m. 18th Annual Featured Lecture in Cardiovascular Nursing: T. Garrett Rauch Memorial Lecture
Introduction: Denise Donaghue, RN, MSN
Kathryn Dodds, MSN, CRNP-AC
- 9:40 a.m. Presentation of the Outstanding Investigator and Nursing Scientist Awards
David Goldberg, MD; and Kathryn M. Dodds, MSN, CRNP-AC

10 – 11 a.m. Break/Visit the Exhibits/Poster Session III

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

NURSING — Challenging Cases: It Takes a Village to Care for Patients (VAQUERO A-D)

Moderators: Britt Fredriksen, RN, MSN; Courtney Howell, CPNP

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

Acquired Heart Disease in the Young: What's New in 2018? (ARROYO)

Moderators: Alan Friedman, MD; Lloyd Tani, MD

- 11 a.m. Hyperlipidemia – *Julie Brothers, MD*
11:20 a.m. Endocarditis – *Alan Friedman, MD*
11:40 a.m. Kawasaki Disease – *Jane Newburger, MD, MPH*
Noon Myocarditis – *Matthew O'Connor, MD*
12:20 p.m. Rheumatic Fever – *Lloyd Tani, MD*
12:40 p.m. Obesity and Its Impact on CHD – *Meryl Cohen, MD*
1 p.m. Adjourn

Focus on: The Atrioventricular Canal Defect (VAQUERO E-G)

Moderators: Peter Frommelt, MD; Girish Shirali, MD

- 11 a.m. Anatomical Considerations – *Paul Weinberg, MD*
11:20 a.m. Imaging Considerations and Assessment of Valve Balance – *Meryl Cohen, MD*
11:40 a.m. Neonatal Down Syndrome: Implications and its Influence on Care and Management – *Natalie Rintoul, MD*
Noon Surgical Repair I: Initial Approach to Repair – *James O'Brien, MD*
12:20 p.m. Imaging Techniques for Assessment after Surgery – *Anthony Hlavacek, MD*
12:40 p.m. Surgical Repair II: Late Complications (Residual Valve Insufficiency, Valve Replacement, LV Outflow Obstruction) –
Stephanie Fuller, MD
1 p.m. Adjourn

Healthcare Administration in CHD: Creating and Sustaining a High-functioning Team (ARIZONA IV)

Moderators: Lawrence Barnes, MBA; Mark Schwartz, MBA

- 11 a.m. How Does One Innovate as a Team? The Tension Between Creative Innovation and Safety in Healthcare –
Daniel Penny, MD, PhD
11:15 a.m. Transparency and Patient Satisfaction in CHD Care Through the “EASE” App – *Hamish Munro, MD, FRCA*
11:30 a.m. Building the Integrated Clinical Service Line: Strategy and Implementation • The Chicago Perspective –
Benjamin Black, MBA
11:45 a.m. Defining and Quantifying the Pediatric Cardiac Service Line: Understanding the Service Line's Full Economic and
Financial Impact • The CHOP Perspective – *Mark Schwartz, MBA*
Noon Regional Geographic Program Development: Benefits, Challenges and Opportunities – *Thomas Dole*
12:15 p.m. Building the Culture You Desire and Achieving Objectives in Your Organization: Perspective from the CEO of
Phoenix Children's Hospital – *Robert Meyer*
12:30 p.m. Building the Culture You Desire and Achieving Objectives in Your Organization: Perspective from the CEO of
Los Angeles Children's Hospital – *Paul Viviano*
12:45 p.m. Panel Discussion – *Faculty*
1 p.m. Adjourn

SATURDAY, FEB. 24

Critical Care and Anesthesia for Congenital Heart Care: 2018 (ARIZONA I-III)

Moderators: Andrew Costarino, MD; James Steven, MD

- 11 a.m. Troubleshooting Mechanical Circulatory Device Complications in the Intensive Care Unit – *Christopher Almond, MD*
- 11:20 a.m. Utility of Dexmedetomidine in Congenital Heart Care – *Dean Andropoulos, MD*
- 11:40 a.m. Don't Forget the **Kidney** in the **Cardiac** Intensive Care Unit! – *Catherine Krawczeski, MD*
- Noon EEG Monitoring after Neonatal Cardiac Surgery – *Maryam Naim, MD*
- 12:20 p.m. Challenges in Anticoagulation in the Cardiac Intensive Care Unit – *Venkat Shankar, MBBS*
- 12:40 p.m. Panel Discussion – *Faculty*
- 1 p.m. Adjourn

Let's Get Operating: Pediatric Congenital Surgery (DUNES)

Moderators: Brandon Shade, CCP, LP; Klayton Buckley, CCP

- 11 a.m. Selected Cerebral Perfusion: Is There a Best Practice – *James O'Brien, MD*
- 11:20 a.m. The RCA Event: Cause and Effect – *Tami Rosenthal, CCP, MBA*
- 11:40 a.m. Lessons Learned Creating/Using a Mini Bypass Circuit – *Edward Harman, MS, CCP*
- Noon Pediatric CPB: Does Practice Affect Outcomes? – *J. William Gaynor, MD*
- 12:20 p.m. How We Do It and Why: Panel of Multidisciplinary Faculty Will Share Their Techniques and Rationale (with Audience Participation) – *Perfusion Faculty*
- 1 p.m. Adjourn

Lunch • 1 –2 p.m.

- 1:15 – 1:45 p.m. **Lunch Talk: Focus on ... (VAQUERO A-D)**
Overcoming Adversity: The Struggles of Living with CHD (school age, teenage years and adult)
Discussion Leader: Yuli Kim, MD
Adrienne Kovacs, PhD; Stacey Lihn; Thomas Glenn, MD; Scott Leezer
- 2:15 – 3:15 p.m. **Situation Room: Moderated Panel of Experts**
So This Is When You Need an Experienced Clinician ... (VAQUERO BALLROOM)
Panel Leader: Frank Cetta, MD
Craig Fleishman, MD; Peter Frommelt, MD; Daniel Penny, MD, PhD; Chitra Ravishankar, MD; Norman Silverman, MD; Lloyd Tani, MD

Plenary Session VII

Professional Challenges for the Healthcare Provider (VAQUERO BALLROOM)

Moderators: Jack Rychik, MD; Denise Donaghue, RN, MSN

- 3:15 p.m. **Techniques and Methods for Delivering Bad News**
Aaron DeWitt, MD
- 3:30 p.m. **How to Approach the Ethical Dilemma ...**
Chris Feudtner, MD, PhD
- 3:45 p.m. **Balancing the Personal and the Professional**
E. Dean McKenzie, MD
- 4 p.m. **Special Session: Dealing with and Managing Conflict: A Workshop that Will Provide You with the Tools to Change Your Professional Life!**
Autumn Fiester, PhD
- 5:15 p.m. Adjourn

5:15 – 6:15 p.m. Highlighted Poster Session: Wine and Wisdom

6:15 – 7:15 p.m. QUIZ BOWL! (VAQUERO BALLROOM)

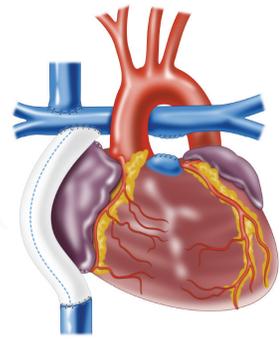
Your Host: Matthew Gillespie, MD

- 7:15 p.m. Adjourn



SUNDAY, FEB. 25

CHOP and The International Fontan Interest Group Present a Symposium: The Challenges of the Fontan Circulation — Where We Are, Where We Need to Be



The Fontan population is steadily growing, and close to half of them are young adults who are active members of our society. As this success unfolds, we are uncovering the burden and challenges posed by the Fontan circulation. We need to find solutions to the hurdles ahead. This one-day symposium will be composed of formal presentations by experts in the field followed by a dynamic brainstorming discussion and presentations of new ideas and projects. We want all of those interested in this extraordinary circulation to join us to share views, debate ideas and build projects. This day will see the creation of a vibrant, dynamic platform involving all the key players, including healthcare providers, patients and families.

Full conference registrants can attend until 11 a.m., but may extend for the full-day symposium for \$75. One-day symposium attendees may register as follows:

Sunday, Feb. 25, 7:45 a.m. to 5:45 p.m.

Physicians	\$200
Other Healthcare Professionals	\$125
Parents/Guardians	\$100

Session I AMA PRA Category 1 Credit(s)TM = 2.75
Session II AMA PRA Category 1 Credit(s)TM = 6.25

Day 5 Total AMA PRA Category 1 Credit(s)TM = 9.0

Register online: chop.cloud-cme.com

Session I: What We Believe We Know (VAQUERO BALLROOM)

- 7:45 a.m. Orientation to the Day's Activities and Sessions
Yves D'Udekem, MD; Jack Rychik, MD
- 8 a.m. Introduction: As a Patient/Parent What I Hope to Get Out of Today ...
Stacey Lihn
- 8:15 a.m. Survival Outcomes after Fontan Operation
Frank Cetta, MD
- 8:30 a.m. Pathophysiology and Mechanisms of Fontan Failure
Marc Gewillig, MD
- 8:45 a.m. Aortopulmonary Collateral Flow: Natural Adaptation or Harmful Development?
Andrew Glatz, MD
- 9 a.m. Thromboembolic Disease after Fontan
Alexander Egbe, MBBS
- 9:30 a.m. Concern about End-organ Consequences: The "Fontan Circulatory Syndrome"
Jack Rychik, MD
- 10 a.m. Concern about Neurodevelopmental Outcomes
Jane Newburger, MD, MPH
- 10:15 a.m. Concern about Mental Health and Quality of Life
Nancy Pike, PhD, RN, CPNP-AC
- 10:30 a.m. Summary and Discussion: What We (Believe) We Know
Faculty Panel
- 10:45 a.m. **ADJOURN FOR FULL CONFERENCE ATTENDEES**
- 10:45 – 11 a.m. **BREAK**

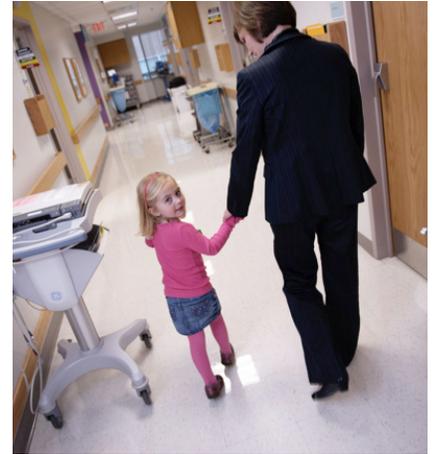


continued>

SUNDAY, FEB. 25

Session II: What We Are Currently Trying to Do (VAQUERO E-G)

- 11 a.m. **Patient and Family-centered Advocacy Goals: Where Are We with Influencing the Healthcare Community and Other Societal Agencies?**
Scott Leezer
- 11:15 a.m. **Clinical Surveillance Strategies Are Emerging: Building Consensus**
Adel Younoszai, MD
- 11:30 a.m. **Establishment of the Model for a Specialized Fontan Clinic: Challenges and Benefits**
Kathryn Dodds, MSN, CPNP-AC
- 11:45 a.m. **Developing a Specialized Fontan Clinic: The Stanford Experience**
Gail Wright, MD
- Noon **BOXED LUNCH** for participants registered for the full day only
- 12:15 p.m. **Data-driven Quality Care Initiatives Through the NPC-QIC: A Methodology for Improving Outcomes after Fontan Operation**
Carole Lannon, MD, MPH
- 12:30 p.m. **Trying to Find the Right Medications to Improve the Fontan Circulation**
David Goldberg, MD
- 12:45 p.m. **Techniques for More Accurate Characterization of the Fontan Circulation: Provocative Assessments**
Bryan Goldstein, MD
- 1 p.m. **Characterization of the Lymphatic System and Treating Complications after Fontan Operation**
Maxim Itkin, MD
- 1:15 p.m. **Transplant Can Work for Some but Is Not for All and Is Not a Cure**
Daphne Hsu, MD
- 1:30 p.m. **Mechanical Circulatory Support for the Failing Fontan**
Yves D'Udekem, MD

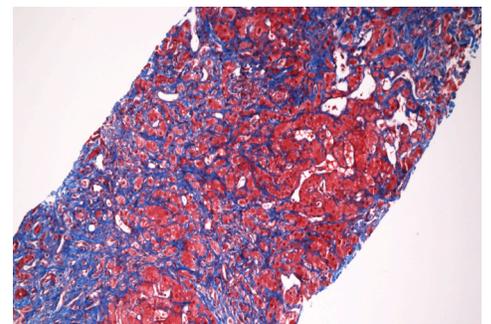


Session III: Where We Need to Be

- 1:45 p.m. **Brainstorming with Our "Fontan Think Tank"**
Faculty Panel
- 2:30 p.m. **BREAK**

Session IV: Exploring the Next Steps • Future Research and New Ideas: 10-minute Presentations; 10 Minutes of Discussion

- 2:45 p.m. **Open Session with Solicitation of Abstracts • One-page Formatted Submissions to be Reviewed and Chosen**
Panel Discussions
- 5:45 p.m. **ADJOURN**
- 6:30 p.m. **RECEPTION**



Organizing Committee

Jack Rychik, MD – Course Director, Philadelphia
Lawrence Barnes, MBA, Philadelphia
Geoffrey Bird, MD, Philadelphia
Robert Campbell, MD, Atlanta
Meryl Cohen, MD, Philadelphia
Mitchell Cohen, MD, Phoenix
Andrew Costarino, MD, Philadelphia
Kathryn Dodds, MSN, CRNP-AC, Philadelphia
Craig Fleishman, MD, Orlando
Alan Friedman, MD, New Haven
Stephanie Fuller, MD, Philadelphia
David Goldberg, MD, Philadelphia
Yuli Kim, MD, Philadelphia
Daniel Penny, MD, PhD, Houston
Jonathan Rome, MD, Philadelphia
Tami Rosenthal, CCP, MBA, Philadelphia
Joseph Rossano, MD, MS, Philadelphia
Robert Shaddy, MD, Los Angeles
Maully Shah, MBBS, Philadelphia
Girish Shirali, MBBS, Kansas City
James Steven, MD, Philadelphia
Mark Schwartz, MBA, Philadelphia

Faculty

Christopher Almond, MD, Palo Alto
Dean Andropoulos, MD, Houston
Stuart Berger, MD, Chicago
Benjamin Black, MBA, Chicago
Julie Brothers, MD, Philadelphia
Klayton Buckley, CCP, Philadelphia
Frank Cetta, MD, Rochester, Minn.
Jill Combs, MSN, Philadelphia
Stephanie Culver, DNP, CPNP-BC, Phoenix
Yves D'Udekem, MD, Melbourne, Australia
Marcus Davey, PhD, Philadelphia
Kim Delaney, RN, BSN, Philadelphia
Aaron DeWitt, MD, Philadelphia
Harry Dietz, MD, Baltimore
Leigh Ann Difusco, MSN, RN, PCNS-BC, Philadelphia
Thomas Dole, Philadelphia
Denise Donaghue, RN, MSN, Philadelphia
Yoav Dori, MD, PhD, Philadelphia
Alexander Egbe, MBBS, Rochester, Minn.
Sitaram Emani, MD, Boston
Chris Feudtner, MD, PhD, Philadelphia
Autumn Fiester, PhD, Philadelphia
Mark Fogel, MD, Philadelphia
Britt Fredriksen, RN, MS, Oslo, Norway
Peter Frommelt, MD, Milwaukee

Michael Gaies, MD, Ann Arbor
J. William Gaynor, MD, Philadelphia
Bruce Gelb, MD, New York
Tal Geva, MD, Boston
Marc Gewillig, MD, Leuven, Belgium
Matthew Gillespie, MD, Philadelphia
Andrew Glatz, MD, Philadelphia
Marie Gleason, MD, Philadelphia
Thomas Glenn, MD, Newark
Elizabeth Goldmuntz, MD, Philadelphia
Bryan Goldstein, MD, Cincinnati
Lars Grosse-Wortmann, MD, Toronto
Edward Harman, MS, CCP, Salt Lake City
Stephanie Helman, MSN, RN, CCRN, CCNS, Philadelphia
Patricia Hickey, PhD, MBA, RN, Boston
Anthony Hlavacek, MD, Charleston, S.C.
Courtney Howell, CPNP-AC/PC, Phoenix
Daphne Hsu, MD, New York
Max Itkin, MD, Philadelphia
Stephen Kaine, MD, Kansas City
Tara Karamlou, MD, Phoenix
James Kirklin, MD, Birmingham
Simon Kos, MBA, MBBS, CMO, Microsoft
Adrienne Kovacs, PhD, Portland, Ore.
Catherine Krawczeski, MD, Palo Alto
Cheryl Kurer, MD, Philadelphia
Lisa Laddish, DNP, RN, CPNP-AC/PC, Kansas City
Carole Lannon, MD, MPH, Cincinnati
Belinda Large, RN, MSN, CPNP-AC/PC, Phoenix
Scott Leezer, Washington, DC
Daniel Levi, MD, Los Angeles
Daniel Licht, MD, Philadelphia
Stacey Lihn, Phoenix
Christopher Lindblade, MD, Phoenix
Audrey Marshall, MD, Boston
Molly McCarthy, RN, MBA, Microsoft
E. Dean McKenzie, MD, Atlanta
Laura Mercer-Rosa, MD, Philadelphia
Carlos Mery, MD, Houston
Robert Meyer, Phoenix
Julie Moldenhauer, MD, Philadelphia
Kathleen Monforto, PhD, RN, CPN, Nurse Planner,
Philadelphia
Victor Morell, MD, Pittsburgh
Hamish Munro, MD, FRCA, Orlando
Maryam Naim, MD, Philadelphia
Shobha Natarajan, MD, Philadelphia
Jane Newburger, MD, MPH, Boston
Todd Nowlen, MD, Phoenix
James O'Brien, MD, Kansas City

Matthew O'Connor, MD, Philadelphia
Richard Ohye, MD, Ann Arbor
Greg Olsen, Charlotte
Stephen Paridon, MD, Philadelphia
Susan Park, CPNP, CCTC, Phoenix
Anitha Parthiban, MD, Kansas City
Nancy Pike, PhD, RN, CPNC-AC, Los Angeles
Jay Pruetz, MD, Los Angeles
Michael Quartermain, MD, Philadelphia
Rahul Rathod, MD, Boston
Kanishka Ratnayaka, MD, San Diego
Chitra Ravishankar, MD, Philadelphia
Stacy Reynolds, DNP, CPNP, Kansas City
Natalie Rintoul, MD, Philadelphia
Susan Schachtner, MD, Philadelphia
Kurt Schumacher, MD, Ann Arbor
Matthew Schwartz, MD, Charlotte, S.C.
Brandon Shade, CCP, LP, Philadelphia
Venkat Shankar, MBBS, Philadelphia
Norman Silverman, MD, Palo Alto

Thomas Spray, MD, Philadelphia
Alyson Stagg, MSN, CRNP, Philadelphia
Paul Stephens, MD, Philadelphia
Phillip B. (Jay) Storm, MD, Philadelphia
Ram Kumar Subramanyan, MD, PhD, Los Angeles
Kristen T. Sullivan, RN, MSN, CPNP-AP, Phoenix
Tara Swanson, MD, Kansas City
Lloyd Tani, MD, Salt Lake City
Glen Van Arsdell, MD, Toronto
Daniel Velez, MD, Phoenix
Paul Viviano, Los Angeles
Luca Vricella, MD, Baltimore
Edward Walsh, MD, Boston
Paul Weinberg, MD, Philadelphia
Kevin Whitehead, MD, PhD, Philadelphia
Cathy Woodward, DNP, PNP-AC, San Antonio
Gail Wright, MD, Palo Alto
Adel Younoszai, MD, Denver
Steven Zangwill, MD, Phoenix

