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Expanding Use of Pulmonary Flow Restrictors in Patients with Congenital Heart Disease

Stephen T. Clark, MD & Mark A. Law, MD

The management of critical congenital heart disease continues to evolve, with innovations and improvements in therapies aimed at improving survival and a host of other secondary outcomes. A recent innovation has been the off-label use of the Micro Vascular Plug (Medtronic; Minneapolis, MN) devices as a minimally invasive means of restricting pulmonary blood flow in a variety of different congenital and acquired cardiac diseases. Herein we describe our single center experience with the technical aspects of the procedure and patient results.

Several case reports and small single center studies have now been published detailing the use of modified Micro Vascular Plug (MVP) devices to restrict pulmonary blood flow. This procedure has been used for diverse palliative strategies, from transcatheter stage one palliation for hypoplastic left heart syndrome to

functional regeneration in infants with dilated cardiomyopathy. Our center employs this procedure as a temporary palliative strategy to address pulmonary overcirculation and systemic steal in patients with complex cardiac defects who are considered high-risk for surgical intervention.

Procedural Considerations

General components of the procedure have been previously described in the literature as well as in this publication. It is noteworthy, however, that there are many nuances to the procedure that appear to be quite variable between providers and institutions. Our approach has been to perform the procedure in the catheterization laboratory with patients mechanically ventilated under general anesthesia. Pre-procedural

FIGURE 1
Medtronic Microvascular Plug device, modified for pulmonary flow restrictor implantation.

A) Unmodified and unconstrained device with PTFE covering over proximal 2/3 of device with distal portion uncovered.

B) Modification of the device with

creation of a single 1.5-2mm circular fenestration in proximal 1/3 of device.

C) Image of intact explanted device at time of surgical repair/palliation.

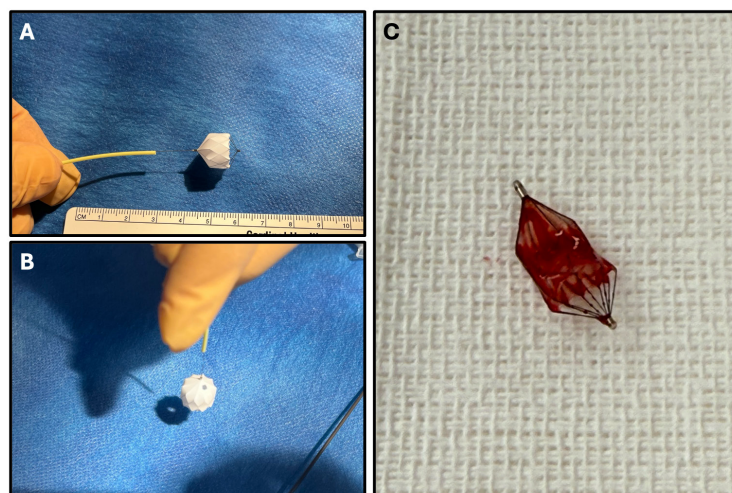


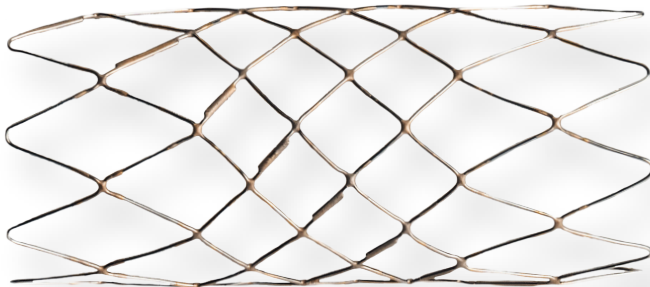


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Dr. Kalfa, our new chief of Cardiovascular Surgery, co-director of the institute and professor of surgery and pediatrics at FIU Herbert Wertheim College of Medicine, is internationally recognized for pioneering minimally invasive surgical techniques that improve outcomes and quality of life.

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echocardiography has been utilized to evaluate anatomy and estimate size of the branch pulmonary arteries. While cardiac CT angiogram images have been utilized when available, we have not felt that pre-procedural cross-sectional imaging is necessary.

Femoral venous access has been utilized primarily for the procedure. However, we have had good success using a jugular venous approach with patient in a flipped position on multiple occasions due to anatomical substrates. Sequential branch

pulmonary artery cannulation is performed utilizing various combinations of wires, microcatheters, and angled catheters. In a majority of cases, a 4 French angled glide catheter in combination with 0.035" guidewire and/or tip-deflecting wire have proven successful. After confirming vessel size by angiography, the appropriate MVP device size is chosen. We have found it necessary to oversize the device for vessel diameter to ensure device stability, often using a cutoff at least 15-20% above the manufacturer instructions for use (IFU) for device sizing. The device is then modified by creating a 1.5-2mm fenestration in the proximal Gore-Tex covering of the device utilizing a fine-tip high-temperature Bovie electrocautery pen (**Figure 1**). The device is then loaded into the delivery catheter and deployed into the branch pulmonary artery. After confirming device position by angiography and echocardiography—ideally demonstrating a peak velocity of 3 m/s with a diastolic tail—the device is released (**Figure 2-3**). Post-procedure, patients were admitted to the cardiac ICU intubated and sedated. Full-dose heparin infusion was used for the first 24 hours following the procedure, and patients were transitioned to a combination of aspirin and lovenox or rivaroxaban for anticoagulation. Follow-up chest radiographs and echocardiograms were utilized to monitor device position and assess pressure gradients.

Results

To date, we have implanted a total of 34 devices in 17 patients, one per each branch pulmonary artery. Patients had mean birth weight of 2.5kg (range 0.9 – 3.7kg) and 13/17 patients were born at <38 weeks gestation. Mean age at the time of the procedure was 24 days (range 4-84 days) and median weight was 2.7kg (range 2.0 - 4.3kg). Total of 13/17 patients had ductal-dependent systemic blood flow with other diagnoses including truncus arteriosus, and complete AV canal defect. One patient was on VA-ECMO support at the time of the procedure. Majority of patients were intubated prior to the procedure.

PFR devices were successfully implanted in all patients, with one device in each branch pulmonary artery with a procedure time just over one hour. We have not experienced a procedure mortality. In our experience, patients appear to tolerate the procedure quite well with minor hemodynamic instability. During device implantation, we often note a slight drop in the overhead pulse oximetry, but an immediate significant increase in arterial blood pressure. In the immediate post-procedure period, we have found that patients generally do not require significant vasoactive support or escalation in ICU care. Serum creatinine, perhaps a marker of end-organ perfusion, has decreased by an average of nearly 25% within 48 hours of the procedure. All but two patients have been successfully extubated within seven days of the procedure.

Three patients died prior to PFR explantation. One patient had been discharged home and was doing well a week prior to the anticipated surgical intervention when she died suddenly. A second patient was discharged home with comfort care after the family decided against any further medical interventions. The third patient was born at 31 weeks, underwent delayed

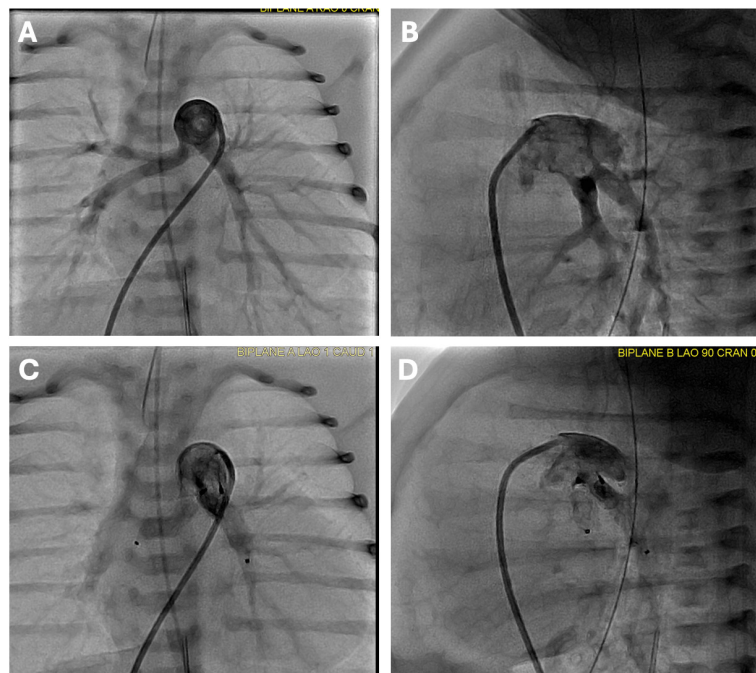


FIGURE 2 Pulmonary angiography prior to and following PFR implantation.

A-B) Frontal and lateral plane images are useful in assessing branch PA location, size, and distal branching pattern. Special attention is paid to location of take-off of right upper lobe branch (near level of NG tube) on frontal plane and relation of left pulmonary artery to the ductus arteriosus on lateral plane. **C-D)** Follow-up angiography after PFR placement shows proximal device position in both branch pulmonary arteries.

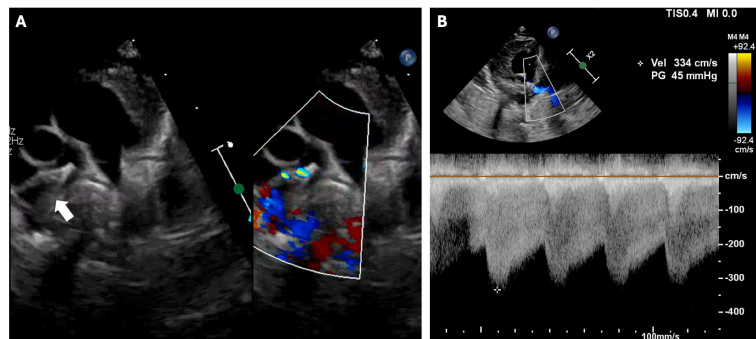


FIGURE 3 Echocardiographic assessment of PFR devices.

A) Color Doppler image showing device in situ in the proximal right pulmonary artery (arrow) with color flow Doppler aliasing at site of device fenestration. **B)** Continuous wave Doppler tracing of flow across PFR device fenestration with elevated peak velocity > 3 m/s with flow continuation throughout diastole.



PFR placement at 82 days of life, and had multiple comorbidities including a genetic syndrome, severe bronchopulmonary dysplasia with tracheostomy and ventilator dependence, and ultimately succumbed to sepsis. Notably, a total of 3 patients were found to have bacteremia and line infection weeks after implant, an average of 22 days following PFR placement, and required prolonged IV antibiotic treatment. Fourteen patients have undergone successful PFR explantation at an average of 49 days post-implant (range 14-196 days). Devices have been easy to remove with no patients requiring patch angioplasty of the branch pulmonary arteries. Of the 14 patients who have undergone surgical explantation and repair/palliation, one remains admitted to the hospital, one passed away after hospital readmission eight months following surgical repair, and the remaining 12 are doing well at home at follow-up of 4-19 months post-PFR explantation.

Future Directions

The use of internal pulmonary flow restrictor (PFR) devices represents a novel and evolving strategy in the management of complex congenital heart disease. While many reports have now been published touting the utility and feasibility of the procedure, we still have much to learn about the scope and impact it may have on our field. Future directions include continued optimization of device design, ideally including a purpose-built pulmonary flow restrictor device. An ideal device would have improved shape to align with pulmonary artery anatomy, be available in various sizes, and have an

adjustable fenestration or flow-limiting mechanism to improve precision and reduce the need for intra-procedural modification. Consideration should be made to utilize materials and coatings that minimize thrombosis and facilitate atraumatic removal. The device should also be easy to deliver with consideration for a dedicated delivery catheter. Until such a device can be created and commercially available, standardization of procedure technique through multicenter collaboration may help define best practices for device sizing, oversizing, and placement, particularly in the setting of variable branch pulmonary artery anatomy.

Integration of PFR implantation with hybrid or staged palliation strategies may allow these devices to delay, simplify, or replace surgical palliations, and investigations into the optimal timing of device placement relative to other procedures could improve systemic and pulmonary flow balance. Comparative (randomized versus case-controlled) studies against traditional pulmonary artery banding could clarify benefits in morbidity, survival, and long-term pulmonary artery growth. Long-term outcomes and prospective multicenter registries will be critical to evaluate hemodynamic effects, growth of branch pulmonary arteries, neurodevelopmental outcomes, post-explant recovery, and complications such as thrombosis and pulmonary artery injury or distortion. Evaluating these outcomes has the potential to refine transcatheter pulmonary flow restriction and expand its utility in high-risk patients with Congenital Heart Disease and beyond.

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Congenital Heart

PUBLIC HEALTH CONSORTIUM



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The following resources developed by the Congenital Heart Public Health Consortium (CHPHC) are intended to support efforts in reducing risk of congenital heart defects and improving outcomes for affected children and adults.

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Access to Care for Congenital Heart Defects

Link: bit.ly/CHPHC-access-to-care



PUBLIC POLICY

Congenital Heart Disease Research and Surveillance: Current Initiatives and Identified Gaps

Link: bit.ly/CHD-gaps

Telehealth Care and Congenital Heart Disease

Link: bit.ly/CHPHC-Telehealth-Care



COLLEGE HEALTH

Equipping Campus Health to Care for Young Adults with Congenital Heart Disease

Link: bit.ly/CHPHC-Campus-Health



INSURANCE

Medical Bill Help: Understanding Your Charges (English & Spanish)

Link: bit.ly/CHPHC-medical-bill-video

Link: bit.ly/CHPHC-medical-bill-video-esp

How to Read Your Child's Medical Bills & Insurance Forms

Link: bit.ly/CHPHC-medical-bill

Choosing Your Family's Health Insurance Coverage

Link: bit.ly/CHPHC-insurance-coverage



Who are we?

In 2009, various organizations from federal, state, and local communities united to form the Congenital Heart Public Health Consortium. This volunteer-based, unincorporated organization includes professional associations, research groups, patient/parent advocacy groups, and federal liaisons, all working together to prevent congenital heart defects and improve outcomes for affected children and adults.

Contact Us: chphc@aap.org

The Congenital Heart Public Health Consortium (CHPHC) is supported through a cooperative agreement between the American Academy of Pediatrics and the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS). The outputs of the CHPHC are solely the responsibility of the CHPHC and do not necessarily represent the official views of, nor an endorsement by the member organizations of the CHPHC, CDC/HHS, or the U.S. Government.



US Hospitals Continue Closing Pediatric Inpatient Units, Straining Rural Access

Emily Bucholz, MD, PhD

Research Study Background

According to a recent analysis published in JAMA Pediatrics, nearly 30% of the nation's pediatric inpatient units and almost 20% of pediatric beds closed between 2008 and 2022. This significantly outpaces declines in adult inpatient capacity, which during the same period, decreased units and beds by 4% and 3%, respectively.

Emily M. Bucholz, MD, PhD, a fetal and pediatric cardiologist at Children's Hospital Colorado, co-authored the report, which updates a prior study with the inclusion of COVID-19 related data. Study authors used American Hospital Association annual survey data (excluding specialty and long-term hospitals) to compare pediatric and adult hospital access. Of the 4,808 hospitals analyzed in the study, 2,074 reported ever having inpatient beds set up and staffed for pediatric care.

"The closure of adult inpatient units particularly in rural areas has attracted a lot of attention. However, pediatric inpatient units closed at a rate of seven to eight times higher than adult units from 2008 to 2022. These closures have been most dramatic in rural areas, leaving millions of children without direct access to pediatric inpatient care."

– Emily M. Bucholz, MD, PhD

As inpatient capacity continues to decline in the US, more children are being transferred from general hospitals to large pediatric specialty centers, requiring patients to travel farther distances. Among pediatric units open at any time during the study period, 52% closed in rural areas, compared to 41% in micropolitan and 33% in metropolitan areas.

The only significant immediate change to pediatric inpatient capacity related to the onset of the pandemic was a 3.4% decrease in pediatric beds. Before the pandemic, pediatric units declined by 2.2% per year and beds by 1.4% per year, while adult units and beds declined 0.4% and 0.3% per year, respectively.



Clinical Implications

Potential contributors to the sustained decrease in pediatric inpatient capacity included narrower revenue margins compared to adult beds, ongoing pediatric staffing shortages, the need for specialized pediatric resources and some pandemic-related bed conversions going unchanged.

"While it may not be economically or logistically feasible to have pediatric inpatient units within 60 minutes of every area of the country, we can do better to allocate these units and develop referral networks to rapidly triage and care for children," Dr. Bucholz said.

Innovative approaches could help halt further declines, noted study authors. They are planning a future study to evaluate if pediatric outcomes and costs have been impacted by these closures.



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Driving Innovation in Pediatric Cardiac Devices: Highlights from the 2025 PICS Shark Tank Competition

Emma Moran, PhD & Katie Bales, MS

Introduction

The Pediatric and Adult Interventional Cardiac Symposium (PICS) has long been a hub for advancing innovation in congenital and pediatric cardiology. Yet, despite the extraordinary talent and commitment of this community, one challenge remains front and center: the shortage of appropriate, on-label devices designed specifically for children with heart disease.

To help address this gap, CobiCure MedTech and the EverPulse Foundation co-sponsored the 2025 PICS Shark Tank pitch competition—an initiative designed to spark, showcase, and accelerate the next generation of pediatric cardiac device solutions. The competition awarded \$50,000 in non-dilutive funding, expert mentorship, and visibility to the most promising innovators (Figure 1).



FIGURE 1 Shark Tank winner with judges and PICS Directors (left to right): Mark Galantowicz, MD; Darren Berman, MD; Jenny Zablah, MD; Emma Moran, PhD; Andreas Escher, PhD; Katie Bales, MS; Beverly Tang, PhD; Damien Kenny, MD; and Ziyad Hijazi, MD. Photo credit: Christina Mendenhall & Carina Mask / Through the Shutter.

Winner: Dynamic Fontan Graft

The first prize was awarded to Dr. Andreas Escher (Massachusetts Institute of Technology) for his groundbreaking work on a growth-responsive Fontan graft with embodied mechanical intelligence.

The Fontan procedure, essential for children born with single-ventricle physiology, relies on a conduit to channel blood from the lower body into the pulmonary arteries. Current grafts, however, are inert: they cannot adapt to somatic growth or changing hemodynamics, often leading to venous hypertension, inefficiency, and eventual Fontan failure.

Dr. Escher's concept integrates soft robotic actuators into a novel Fontan graft that can contract in sync with respiratory cycles to minimize retrograde flow (Figure 2). By reducing the need for surgical revisions and improving long-term hemodynamics, this innovation could dramatically improve both survival and quality of life for patients.

The PICS Shark Tank award of \$50,000 in non-dilutive funding and strategic support will allow Dr. Escher and his team to accelerate prototype development and preclinical testing, with the goal of advancing toward clinical translation. Reflecting on the experience, Dr. Escher shared:

"The PICS Shark Tank provided not just funding, but a platform to connect with clinicians, mentors, and peers who truly understand the challenges of pediatric device development. Winning this competition accelerates our work on the dynamic Fontan graft and brings us one step closer to improving the lives of children living with single-ventricle physiology."

Early clinical feedback has been strongly supportive, with pediatric cardiologists and surgeons emphasizing the profound potential of conduit innovation to address decades of unmet need.

Why This Competition Matters

Pediatric device development has historically lagged far behind adult cardiovascular innovation, hindered by small patient populations and limited commercial incentives. Competitions like the PICS Shark Tank provide a vital platform to elevate ideas at their earliest stages and connect innovators with the clinical and strategic guidance they need to succeed.

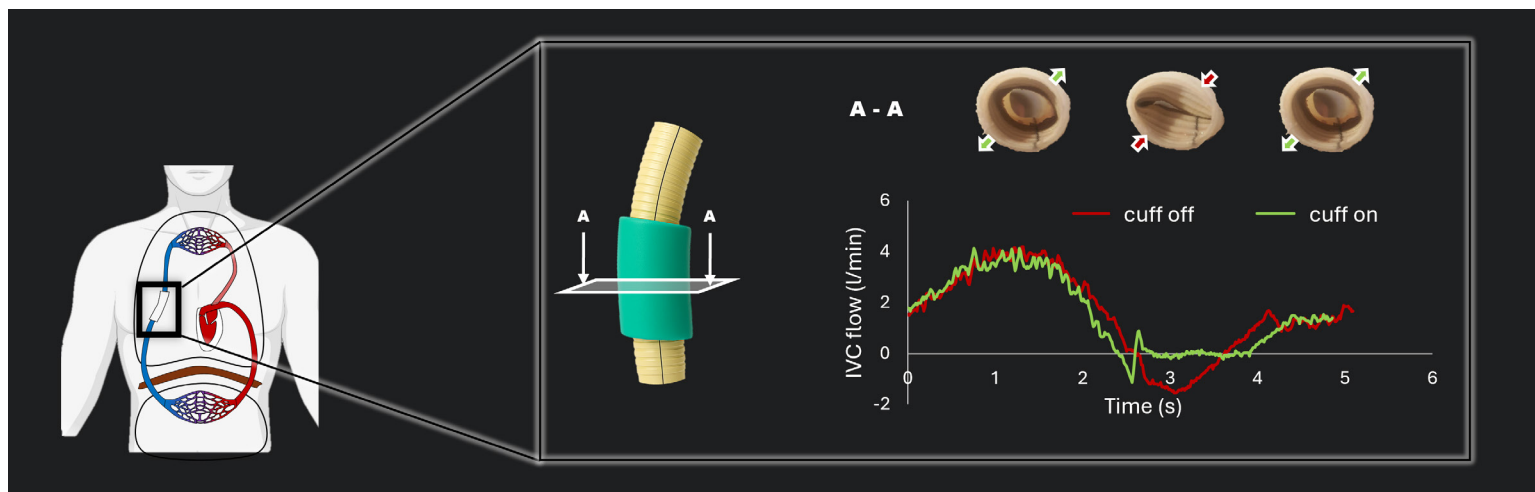
As Dr. Damien Kenny, PICS Co-Director and one of this year's shark tank judges, stated: "The PICS Shark Tank has become an important driver of change for our field. By giving innovators a stage and tangible support, we're directly impacting the future of care for children with congenital heart disease. These projects are more than ideas—they are the beginnings of solutions that could transform lives."

Spotlight on the Other Finalists

While Dr. Escher's Fontan graft ultimately won top honors, the other four finalists demonstrated extraordinary vision and commitment to pediatric heart care:



FIGURE 2 Illustration of the winning pitch: A dynamic cuff for placement over the Fontan graft. Powered by the movement of the diaphragm, the cuff expands and contracts the graft, mitigating retrograde IVC flow.



- **Corin Williams, PhD** - Extremely Low-Profile Regenerative Medicine-Based Transcatheter Heart Valve for Fetal to Early Childhood Use. Dr. Williams, a biomedical engineer, is developing a novel transcatheter valve designed specifically for the smallest and most fragile patients, from fetal life through early childhood.
- **Friso Rijnberg, MD, PhD** - Auxetic Fontan Conduit: A Lifelong Solution for Children with Single Ventricles. Dr. Rijnberg, a cardiothoracic surgery resident at Leiden University Medical Center, is pioneering a conduit design informed by fluid dynamics research, aimed at addressing the lifelong hemodynamic challenges of the Fontan circulation.
- **Elena Amin, MBChB** - Intellistent: A Minimally Invasive Device to Dynamically Adjust Pulmonary Blood Flow. Dr. Amin, Chief Medical Officer of HeartPoint Global and Associate Professor of Pediatrics at UCSF, brings deep expertise in interventional cardiology and pulmonary hypertension to a transcatheter device designed to allow real-time adjustment of pulmonary blood flow.
- **Omid Rajabi Shishvan, PhD** - CurrentView: A New Pulse on Perfusion Assessment. Dr. Rajabi Shishvan, a postdoctoral researcher at the University at Albany, is advancing electrical impedance tomography to improve real-time perfusion assessment, potentially transforming bedside monitoring in congenital heart care.

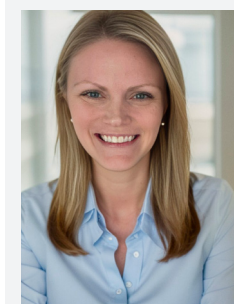
If pediatric patients are to benefit equitably from the same pace of innovation seen in adult cardiovascular medicine, the field must continue to foster new ideas, invest in early-stage technologies, and rally around innovators dedicated to serving this vulnerable population.

The energy and ingenuity on display at the 2025 PICS Shark Tank left no doubt: the future of pediatric cardiac care will be shaped by those willing to push boundaries. As a community, we have both the responsibility and the opportunity to ensure these innovations reach the patients who need them most.



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Looking Ahead and Call to Action

The PICS Shark Tank competition is just one example of how collaboration between clinicians, scientists, engineers, and non-profit organizations can create meaningful momentum in a historically underfunded space. Organizations like PICS, CobiCure, and EverPulse share a mission: to build an ecosystem that not only rewards bold ideas, but also supports them through the long, complex journey from bench to bedside.



PDA Stenting Symposium 2025

Evolving Strategies, Delaying Surgery, Protecting the At-Risk Brain

October 30TH – November 1ST, 2025 | Loews Coronado Bay Resort, San Diego, CA

We are thrilled to welcome you to San Diego for the PDA Stenting Symposium 2025! This meeting is designed for the entire congenital heart community—cardiologists, surgeons, intensivists, neonatologists, nurses, respiratory therapists, technologists, and researchers. Together we will explore evolving strategies that delay surgery and protect the developing brain.

We begin on Thursday, October 30th with registration and a lively Welcome Reception. We are especially excited that Dr. Sanjay Sinha and his band will be performing live to kick off the meeting in style. With a Halloween theme, seaside views, and a moving family story, the symposium blends high-level science with community and celebration.

Keynote Talks

- From Urgency to Strategy: Reimagining the Surgical Timeline - Speaker: Gil Wernovsky
- The Goal Is Not Just Survival to the Next Stage – But Quality of the Final Repair Speaker: Marc Gewillig
- PDA Stenting: View from 10,000 Feet (Let's not overlook first principles) - Speaker: John Moore

Day 0 – Thursday Evening, October 30TH

- Registration & Welcome Reception
- Kick off the symposium with networking and community building.
- Evening highlight: Live performance by Dr. Sanjay Sinha and his band at the seaside reception.
- Halloween-themed celebration with food, music, and a family story to set the stage for the meeting.

Day 1 – Friday, October 31ST

- **Session 1: Brains in Bloom – Why Delayed Initial Surgery Makes All the Difference**
 - Topics: Brain injury in neonates, neurodevelopmental outcomes, environmental influences, parental mental health
 - Speakers: Terrie Inder, Peter Anderson, Bobbi Pineda, Alyssa Morris
- **Session 2: From Urgency to Strategy– A New Era in Neonatal Surgery:**

Different Methods of Delaying the Norwood

- Topics: Surgical strategies for delaying the Norwood, balancing survival and neurodevelopment, different ways to restrict flow from all over the world, the result of flow restrictor registry as well as the surgeons prospective on how to handle them.
- Speakers: Yves Dudekim, Shyam Sathanandam, Frank Ing, David Balzer, Daisuke Kobayashi, Gary Raff
- **Session 3: PDA Stent Optimization – The Imaging Toolbox**
 - Topics: Advances in fetal MRI, computational modeling, 3D printing, genetics in Congenital Heart Disease.
 - Speakers: Karim Diab, Eleanor Schuchardt, Justin Ryan, Jin Lee
- **Session 4: Innovate to Elevate – New Approaches Transforming Care**
 - Topics: Innovative surgical techniques, novel interventional devices and self-expanding PDA stents.
 - Speakers: Dr Zoheir Al Halees present on Fontan completion. Howaida El-Said will present on self-expanding PDA stents and Henri Justino will share exciting pulmonary valve technology
- **Session 5: Into the Fire – Tackling the Toughest Cases (Roundtable)**
 - Topics: PDA dissection, stent thrombosis, oversized/migrated stents, rescue techniques.
 - Speakers: Jesse Lee, Shyam Sathanandam, Sherine Abdelsalam, Shyam Sathanandam, Zahid Amin, Sanjay Sinha, Kiram Mallula, Peter Guyon

Day 2 – Saturday, November 1ST

- **Session 6: Wired for Success – Technical Considerations in PDA Stenting**
 - Topics: access strategies, stent delivery, troubleshooting, complication prevention. We are excited to have Dr. Reeves teach us how pediatric cardiologists can use coronary bifurcation techniques for PDA stenting.

Register Now!

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Target Audience: Physicians, Fellows, Residents, Nurse Practitioners, Physician Assistants, Registered Nurses, Techs, Leaders

- Speakers: Omar Deyaa, Henri Justino, Tom Roberts, Shabana Shahanavaz, Ryan Reeves, Brent Gordon
- **Session 7: How Do You Decide on the Length – Global Perspectives**
 - Topics: technical and clinical decision-making on stent length, roundtable discussion. Exciting session where the speakers will debate each other in a round table discussion.
 - Speakers: Frank Ing, Omar Deyaa, Shakeel Qureshi, Alwi Mazeni, David Balzer, Gunter Kerst
- **Session 8: From Cath Lab to ICU, Cardiac ICU to Cath and Back Again – The Critical Hours Around PDA Stenting**
 - Topics: anticoagulation, feeding, early extubation, ICU care, team building
 - Speakers: Marc Gewillig, Shilpa Vellore, Christina Fernandez Lubczyk, Nancy Ghanayem,



- Aparna Rao, Paul Checchia, Ryan Reeves, Rohit Rao
- **Session 9: From Stent to Surgery – Managing PDA Stents Over Time**
 - Topics: Home monitoring, AI-driven surveillance, transition to surgery and outcomes of single ventricle patients that have had PDA stents.
 - Speakers: Kevin King, Nancy Ghanayem, Nathalya Sweeney, Srujan Ganta, Laith Alshawabkeh
- **Session 10: Innovation Mix – A Potpourri of Creative Solutions**
 - Topics: Innovative clinical cases, bronchial stenting, opening the pulmonary valve through collaterals, stenting the vertical vein in TAPVR and more.

- Speakers: Sherine Abdelsalam, Marjan Hesari, Matthew Brigger, Shyam Sathanandam, Howaida El-Said, Diego Porras
- **Session 11: Special Session: Virtual is Real – How 3D and Simulation are Reshaping PDA Stenting**
 - Topics: Focused discussions (details per agenda)
 - Speakers: Holly Bauser & Jenny Zablah
- **Session 12: Data Drives Change – Should We Have a Registry?**
 - Topics: collaborative outcomes research, building registry infrastructure.
 - Speakers: John Moore, Howaida El-Said, Brent Gordon, Laith Alshawabkeh, Daisuke Kobayashi

The PDA Stenting Symposium 2025 will be an unforgettable celebration of innovation, collaboration, and community. Together, we will push boundaries, challenge conventions, and spark new ideas that will shape the future of care for children with Congenital Heart Disease. With world-class science, spirited debates, hands-on learning, and a Halloween-inspired San Diego backdrop, this is more than a meeting—it's a movement. We cannot wait to see you there!

For more information, visit: <https://web.cvent.com/event/4950d349-ce42-4a10-8923-193f47ac0c43/summary>.



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18TH

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27TH-28TH

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Rome, Italy

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NOVEMBER

07TH-10TH

Scientific Sessions 2025

New Orleans, LA, USA

<https://exhibitatsessions.org/scientific-sessions/>

DECEMBER

07TH-09TH

ICI 2025 - Innovation in Cardiovascular Interventions

Tel Aviv, Israel

<https://icimed.org/ici-for-all/>

09TH-12TH

WCPCCS 2025 - 9TH World Congress

Hong Kong, China

<https://wcpccs2025.org/en/default.asp>

10TH-14TH

2025 SCAI Fellows Course

Miami, FL, USA

<https://scai.confex.com/scai/ff25/meetingapp.cgi>

CHIP NETWORK

Program Directory 2025-2026

Published Mid-August

Directory of Congenital & Pediatric Cardiac Care Providers in North America

Electronically available on CCT's website

[CongenitalCardiologyToday.com/
Program-Directory](https://CongenitalCardiologyToday.com/Program-Directory)

Each program's contact information for Chief of Pediatric Cardiology & Fellowship Director

Lists each program's Pediatric Cardiologists & Cardiothoracic Surgeons

Lists Pediatric Cardiology Fellowships

Distributed to Division Chiefs by mail

Need to update your listing?

Contact Kate Baldwin

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