# **Division Introduction**

The Pediatric Cardiology Division provides comprehensive care for children with heart disease, conducts seminal research, and oversees a nationally recognized training program.

In February 2015, Gerald Greil, M.D., Ph.D., joined the faculty at UT Southwestern as Professor of Pediatrics, Radiology and Advanced Imaging Research and assumed the role of Division Chief of Pediatric Cardiology. He holds the Pogue Family Distinguished Chair in Pediatric Cardiology.

The Division provides services at Children's Medical Center Dallas and Children's Medical Center Plano in:

- Outpatient clinics (~8,000 visits/year)
- A 22-bed inpatient telemetry floor dedicated to cardiac patients
- A 20-bed dedicated Cardiac Intensive Care Unit
- Two catheterization laboratories for diagnostic and interventional procedures, including catheter ablation
- A 1.5T cardiac MRI scanner fully dedicated to Pediatric Cardiac Imaging with and without general anesthesia. The
  close proximity of this scanner to the cardiac catheterization laboratory allows combined MRI cardiac
  catheterization procedures (XMRI).
- All imaging facilities are in close proximity to the OR allowing intra- and perioperative assessment of surgical and cardiac catheterization procedures.
- An echocardiography suite, including special areas for fetal echocardiography, as well as a complete non-invasive monitoring laboratory

# **Faculty**

The Division has 25 board-certified pediatric cardiologists, each with a special area of expertise, including critical care medicine, interventional catheterization, electrophysiology, advanced imaging including cardiac Magnetic Resonance Imaging (MRI) and Computed Tomography (CT), fetal cardiology, cardiac transplantation, heart failure, prevention, and adults with congenital heart disease.

In addition to Dr. Greil, four new faculty members joined the Pediatric Cardiology team in 2015.

- Gerald Greil, M.D., Ph.D.
   Professor, Division Chief
- Maria Bano, M.D. Instructor
- Tarique Hussain, M.D., Ph.D. Associate Professor
- Sadia Malik, M.D., M.P.H. Associate Professor
- Animesh Tandon, M.D., M.S. Assistant Professor



**Pediatric Cardiology Faculty and Staff** 

# Gerald F. Greil, M.D., Ph.D.

Professor, Division Chief, Pogue Family Distinguished Chair in Pediatric Cardiology



M.D., Ph.D.

Technical University of Munich, Germany, 1994 M.D. Thesis in Medicine, Ludwig Maximilian University, Munich, Germany, 1995 Ph.D., University of Tübingen, Germany, 2007

#### **Postdoctoral Training**

Internship, Pediatric Cardiology

German Heart Center, Munich, Germany, 06/1994-12/1995

Residency, Pediatrics/Pediatric Cardiology

Children's Hospital Tübingen, University of Tübingen, Germany, 01/1996-12/1998

Senior Fellowship, Pediatric Cardiology

Children's Hospital Boston, Harvard Medical School, 01/1999-06/2001

Fellowship, Pediatrics/Pediatric Cardiology

Children's Hospital Tübingen, University of Tübingen, Germany

Since completing his fellowship training in November 2006, Dr. Greil has been a Consultant at Evelina Children's Hospital (Guy's & St. Thomas' NHS Foundation Trust) in London, UK and Clinical Lead of the Congenital Cardiac MRI Imaging Service. He was affiliated with King's College London, where he was working as a clinical academic until February 2015. Dr. Greil was appointed Professor of Pediatrics and Division Chief of Pediatric Cardiology at UT Southwestern. He also holds the Pogue Family Distinguished Chari in Pediatric Cardiology. To further facilitate his research Dr. Greil holds appointments in the department of Radiology and the Advanced Imaging Research Center (AIRC) at UT Southwestern.

Part of his research is diagnostic and interventional cardiac MRI in patients with acquired and congenital heart disease using XMR systems. In this setting, 3D datasets (echocardiography, MRI or MDCT) are used for image fusion for diagnostic, electrophysiology and interventional cardiac catheterization procedures. Also invasive pressure data and non-invasive imaging data are combined for precise assessment of the cardiovascular system. For assessment of ventricular function, Dr. Greil also used reduced data acquisition methods (e.g. kt-BLAST). Dr. Greil focuses on vascular imaging of the lumen and vessel wall including the coronary arteries using new contrast agents, 32 channel coil technology and high field MRI technology. He is implementing these basic science developments into clinical practice, for example, in patients with Kawasaki disease. In close cooperation with Great Ormond Street Hospital London he and his team evaluated novel imaging technologies for non-invasive assessment of the cardiovascular system including imaging of the coronary artery lumen and vessel wall for improved follow-up of patients after heart transplantation.

In collaboration with other institutions (DKFZ Heidelberg, Germany and the Cardiac Registry, Children's Hospital Boston, Harvard Medical School, Boston, USA) Dr. Greil used high resolution 3D images of the heart and great vessels including multi-detector computed tomography (MDCT) datasets for 3D virtual and real stereolithographic reconstructions of rare congenital heart defects for teaching, clinical use and research. These datasets were implemented in novel techniques such as virtual surgery. MDCT has been investigated for special indications (e.g. pulmonary vascular blood supply in patients with pulmonary atresia) as part of Dr. Greil's research. Dr. Greil investigated with MRI cardiovascular morphology and function as well as the water-fat distribution within the human body in twins in cooperation with the Twin Research & Genetic Epidemiology Department, King's College London, to assess the influence of environmental and genetic risk factors of cardiovascular disease.

Since arriving at UT Southwestern in February of 2015, his research has been further implemented into clinical practice. Through national and international collaborations with other leading institutions, Dr. Greil will focus on translational research in patients with acquired and congenital heart disease to improve patient outcome and safety.

# Maria Bano, M.D.

Instructor



M.B.B.S.

Aga Khan Medical College, Karachi, Pakistan, 2006

**Postdoctoral Training** 

Residency, Pediatrics

Baylor College of Medicine, Houston, Texas, 2008-2011

Fellowship, Pediatric Cardiology

Emory University, School of Medicine, Atlanta, Georgia, 2012-2015

Dr. Bano arrived at UT Southwestern in 2015 and is a member of the Heart Transplant team. Her current projects include right ventricle dysfunction after cardiac transplantation in children and cardiac MRI for early detection of transplant related coronary artery vasculopathy. Dr. Bano's research interests include novel imaging techniques to assess right heart dysfunction and imaging techniques in transplant related coronary artery disease. She has special interests in heart failure and transplantation and mechanical circulatory support for end stage heart failure.

# M. Tarique Hussain, M.D., Ph.D.

**Associate Professor** 



**B.A.,** Physiology, 1<sup>st</sup> class honors

Queens' College, University of Cambridge, 1997

M.B.B.Chir

Queens' College, University of Cambridge, 1999

**Master of Arts** 

Queens' College, University of Cambridge, 1999

Ph.D

King's College, London, 2013

After graduating from Queens' College, University of Cambridge (UK), where he was elected as a Queens' college scholar for his academic achievements, Dr. Hussain undertook cardiology fellowships at Birmingham Children's Hospital (UK) and the Royal Hospital for Sick Children in Glasgow (UK).

He further underwent advanced cardiac magnetic resonance imaging (MRI) and cardiac computed tomography training (CT) at King's College London, where he completed his doctoral degree (PhD) in Imaging Sciences. His thesis was on the subject of magnetic resonance imaging in pediatric coronary vasculopathy with a special focus on post-transplant coronary vasculopathy and aortic correlates of coronary disease.

Since then, Dr. Hussain continued to work as an academic senior lecturer and staff pediatric cardiologist with an interest in clinical cardiac imaging (including X-ray angiography; MRI, CT and echocardiography). During this time he has been prolific in his research work and has been internationally acclaimed for his use of cutting edge technology to improve the healthcare of children.

Dr. Hussain moved to UT Southwestern in 2015 to take up the position of director of congenital cardiac magnetic resonance imaging at Children's Medical Center. His current research interests are in congenital heart disease, heart transplantation and cardiomyopathies.

# Sadia Malik, M.D., M.P.H.

**Associate Professor** 



M.B.B.S.

Aga Khan University Medical College, Karachi, Pakistan, 1993 M.P.H.

UT School of Public Health, Houston, TX, 2002

#### **Postdoctoral Training**

Internship, Pediatrics

National Institute of Child Health, Karachi, Pakistan, 1993-1994

Residency, Pediatrics

University of Texas, Austin, 1995-1998

Fellowship, Pediatric Cardiology

UT Southwestern, 1998-2001

Dr. Malik joined the faculty at UT Southwestern in 2015. Her research focus is on Genetics and is collaborating with the McDermott Institution at UT Southwestern to further her research.

# Animesh Tandon, M.D., M.S.

**Assistant Professor** 



B.A., summa cum laude

Washington University, St. Louis, MO, 2003

M.D.

Cincinnati Children's Hospital Medical Center, Cincinnati, OH, 2008

M.S.

University of Cincinnati College of Medicine, Cincinnati, OH, 2014

# **Postdoctoral Training**

Residency, Pediatrics

Cincinnati Children's Hospital Medical Center, Cincinnati, OH, 2008-2011

Fellowship, Pediatric Cardiology

Cincinnati Children's Hospital Medical Center, Cincinnati, OH, 2011-2014

Fellowship, Advanced Pediatric Cardiac Imaging

Emory University School of Medicine/Children's Healthcare of Atlanta, GA, 2014-2015

Dr. Tandon joined the faculty at UT Southwestern after completing his fellowship training. During his medical training at the University of Michigan Medical School, he performed a research fellowship at the NINDS/NIH through the Howard Hughes Medical Institute/NIH Research Scholars (Cloister) Program.

Current clinical and research interests are focused on the use of cardiac MRI (CMR) to aid in noninvasive histology and the understanding of pathophysiology in pediatric cardiology; the use of big data, remote sensing, and other emerging technologies in pediatric cardiology; and fellow education. He currently serves on the AAP's Section of Cardiology and Cardiac Surgery Early Career Working Group.

# **Honors / Awards**

# **Gerald Greil**

Pogue Family Distinguished Chair in Pediatric Cardiology

# **Animesh Tandon**

Honorable Mention-Poster Competition, 2015 Pediatric Research Conference, Atlanta, GA

### Best Pediatric Specialists in Dallas, D Magazine

- Michael Day
- Matthew Lemler

# Texas Super Doctors, Texas Monthly Magazine

- Aliessa Barnes
- Sara Blumenschein
- Michael Day
- Vivian Dimas
- Adrian Dyer
- Matthew Lemler
- Lynn Mahony
- Claudio Ramaciotti
- William Scott
- Poonam Thankavel
- Surendranath Veeram Reddy
- Thomas Zellers

# **Invited Lectures**

#### **Vivian Dimas**

- Dallas Cardiovascular Innovations, Cityplace Events Center, January 2015
  - "Hemodynamic Support for Emergent Cases"

# **Gerald Greil**

- Annual Scientific Meeting (ASM) of the Cardiac Society of Australia and New Zealand, Melbourne, August 2015
  - "Complex Heart Disease 1"
  - o "The Aorta and Coronaries"
  - o "Complex Heart Disease 2"
  - o "Stress and Strain"
  - o "Management of Complex Transposition of the Great Arteries"
  - o "Optimal Management of the Functional Single Ventricle"

# **Animesh Tandon**

- 21<sup>st</sup> Annual Pediatric Echocardiography Conference, Atlanta, GA, April 2015
  - o "The Segmental Approach: Or, How Not to Miss Anything"

# **Selected Chairs**

### **Gerald Greil**

- Chairperson Session: Working Group Symposium: Imaging, 49<sup>th</sup> Annual Association for European Paediatric and Congenital Cardiology (AEPC), Prague, May 2015
  - o "Virtual Cardiac Imaging"

# **Education and Training**

The Division is dedicated to the training of medical students, residents, and fellows.

#### **Medical Students**

- Third-Year Pediatric Rotations:
  - Cardiology inpatient rotations with three medical students throughout the year
  - o Pediatric Cardiology Clinic Days
- Fourth-Year Electives in Pediatric Cardiology:
  - o Cardiac Outpatient Clinic Rotation
  - o Cardiac Intensive Care Unit Rotation
  - Cardiac Imaging Rotation (MRI, CT, echocardiography)

#### Residents

The Division of Pediatric Cardiology plays a major role in the training of pediatric residents. Training occurs at many levels.

- Inpatient Training:
  - Three interns and one senior resident typically participate on the cardiology inpatient service, caring for patients on a 22-bed cardiology floor with the supervision of the attending cardiologist
  - An elective is available for residents to rotate in the Cardiac Intensive Care Unit
- Outpatient Training:
  - One or two second- or third-year residents are typically training in the Cardiology Outpatient Clinic under the supervision of the attending cardiologists

### **Fellows**

The Pediatric Cardiology fellowship currently accepts two trainees per year in the categorical program, and advanced training is available in cardiac critical care, catheterization/intervention, advanced imaging, and cardiac transplantation. The program provides fellows the training, tools, and philosophy necessary for advancing the field of pediatric cardiology within their areas of choice.

Fellows rotate through all subspecialty areas of cardiology. They also spend one year participating in prospective clinical, translational, or basic science research.

Two new fellows are recruited each year in the three-year Pediatric Cardiology Fellowship Program. Many fellows choose to complete a fourth year to pursue a specialized clinical interest. All pediatric cardiology faculty members are actively involved in the fellows' training.

In addition to the standard three-year fellowship program, qualified fellows are offered an additional fourth-year training programs in cardiac critical care, interventional cardiology, advanced cardiac imaging, electrophysiology, heart transplantation, preventive cardiology, prospective clinical research, and basic research. The structure of these experiences depends on the interests and skills of the individual fellow.

"We strive to create a training environment that will foster not only quality clinical training, but also rigorous inquiry and mentoring that will lead to development of the next generation of leaders in pediatric cardiology."

Lynn Mahony, M.D. Fellowship Director

# **Research Activities**

Members of the Division of Pediatric Cardiology are engaged in multiple research projects to advance the care of children with heart disease.

#### **Basic Science**

An exciting new area of investigation is the development of biodegradable stents for use in the cardiovascular system. Current research is directed at an evaluation of the tissue response to these materials in animals. Cardiopulmonary bypass is known to have adverse effects on neurologic development, but a clear understanding of the mechanisms is lacking. Using a mouse model of bypass, investigation is underway to evaluate biomarkers of injury.

Another new area of investigation is to optimizer cardiovascular support therapy for pediatric patients with end stage heart failure. Currently the only ventricular assist devices available require surgical placement. Researchers are investigating in an animal model the feasibility of a catheter delivered devise. One additional animal research area is the optimization of technologies for fetal intervention.

In close cooperation with the Department of Radiology faculty have access to the Advanced Imaging Research Center at UT Southwestern. This gives staff members access to novel cardiovascular research technology to contribute to existing research as well as opportunity to design their individual research projects.

#### **Clinical Sciences**

The Pediatric Cardiology Division participates in multiple multicenter trials. In interventional catheterization, current trials are assessing various devices, including the Amplatzer and Helex occluders, and management of coarctation, including the placement of stents. It is anticipated that a recently completed multicenter trial of athletic screening processes will be used for a broader national evaluation.

The Division is contributing to a quality initiative to assess the care of patients with hypoplastic left heart syndrome. A multicenter effort is also underway to evaluate the use of ventricular assist devices in the pediatric population.

Collaborative studies within the Department of Pediatrics include protocols to evaluate stroke, migraine, and complications of sickle cell disease and childhood cancer.

Ongoing areas of research interest include epidemiologic studies of congenital heart disease, particularly within the state of Texas, natural history studies of patent ductus arteriosus in pre term neonates, MRI evaluation of pulmonary hypertension and for post-operative tetralogy of Fallot, evaluation of renal function with heart catheterization, markers for cardiac transplant rejection, and innovations in non-invasive cardiac monitoring.

# **Clinical Activities**

The Pediatric Cardiology division offers a comprehensive program of specialized care at the Heart Center at Children's Health<sup>sM</sup> for children with congenital and acquired heart diseases. The Heart Center's team of professionals includes cardiologists, cardiac surgeons, cardiac intensivists, neonatologists, and cardiac anesthesiologists. In addition to providing the highest quality clinical and surgical care, faculty are committed to improving the health of children everywhere by sharing innovations and research.

The Division of Pediatric Cardiology at UT Southwestern has one of the most active heart transplantation programs in the country.

### **Inpatient Services**

Inpatient service is divided between the cardiac intensive care unit and the cardiology inpatient floor, on which all beds have telemetry capability with central monitoring. The inpatient floor functions as a "step-down" unit with the capacity to manage higher acuity patients, including those with temporary pacemakers and vasoactive infusions. There are usually 40 patients in the cardiac intensive care unit and 40 patients on the cardiology floor. New consultations average three to five per day.

### **Outpatient Services**

Approximately 12,000 cardiology outpatients are seen each year at the Heart Center and regional outreach clinics. Subspecialty cardiology clinics, including heart transplantation, heart failure, arrhythmia, pacemaker, preventive cardiology, and young adult congenital heart disease, are held on a weekly or monthly basis.

# **Preventive Cardiology Clinic**

A preventive cardiology clinic serves children with hyperlipidemia and hypercholesterolemia and children with metabolic syndrome (i.e. obesity, insulin resistance, increased triglycerides, decreased high density lipoprotein, and hypertension). A team of physicians, dietitians, and nurses provides comprehensive physical assessments and dietary evaluations for patients and their families, with the development of individualized programs, including:

- Diet
- Life style modification
- Treatments, including natural as well as prescription medications

### **2015 Patient Statistics**

# **Children's Medical Center Dallas**

New outpatient visits	7,743
Inpatient admissions	973
CATH procedures	1,198
ECHO volume	10,802

# Cardiology at Children's Legacy

New outpatient visits	2,959
ECHO volume	1,394

# Cardiology at Children's Southlake

New outpatient visits	436
ECHO volume	191

# **Cardiology at Outreach**

 <u> </u>		
New outpatient visits	845	
ECHO volume	1,279	

# **Telemedicine**

ЕСНО	1,038	
ECG	764	
Holter	89	

# **Current Grant Support**

# Gerald Greil, M.D., PhD

**Grantor: NIHR** 

Title of Project: MRI-augmented guidance for X-ray fluoroscopic pediatric cardiovascular interventions.

**Role:** Principle Investigator **Dates:** 01/2015 – 12/2016

**Grantor: Medical Research Foundation** 

Title of Project: Accelerated 3D Cardiac Functional Assessment using Cardiac Self-gating and Under sampled

Respiratory Motion Compensation Techniques.

**Role:** Co-Investigator **Dates:** 05/2015 – 08/2016

**Grantor:** Technology Strategy Board (EPSRC)

Title of Project: Atherosclerosis stratification using advanced imaging and computer-based models

Role: Co-Investigator

Dates: 01/2014 – 12/2016

**Grantor: NIHR** 

Title of Project: Healthcare Technology Co-operative: Cardiovascular Technologies

Role: Co-Investigator

Dates: 01/2013 – 12/2016

# **Alan Nugent**

**Grantor: NIH** 

Title of Project: Development of Large Diameter Biodegradable Stents for Congenital Heart Disease

**Role:** Principle Investigator **Dates:** 07/2015 – 06/2017

# Surendranath Veeram Reddy, M.D.

Grantor: American Heart Association SWA Beginning Grant-in-Aid. Lawrence J. and Florence A. De George Award

Title of Project: Evaluation of a Novel Design Biodegradable Stent in Porcine Model of Aortic Coarctation

**Role:** Principle Investigator **Dates:** 01/2015- 12/2016

Grantor: NIH

Title of Project: Novel Design Biodegradable Stent for Treatment of Porcine Pulmonary Artery Stenosis

Role: Co-Investigator; Principle Investigator

**Dates:** 01/2015 – 12/2016

# Ilana Zeltser

Grantor: NIH / Children's Hospital of Philadelphia

Title of Project: Hypertrophic Cardiomyopathy in Children: Age Specific Risk Stratification for Sudden Death

**Role:** Co-Investigator **Dates:** 06/2014 – 06/2019

# **Peer-Reviewed Publications**

# **Journal Articles**

- 1. Abbas A, Cecelja M, **Hussain T**, **Greil**, **G**, et al. <u>Thoracic but not abdominal phase contrast magnetic resonance-derived aortic pulse wave velocity is elevated in patients with abdominal aortic aneurysm</u>. *Journal of Hypertension* 2015;33:1032-8.
- 2. Atz AM, Zak V, <u>Mahony L</u>, et al. <u>Survival data and predictors of functional outcome an average of 15 years after the</u> Fontan procedure: the pediatric heart network Fontan cohort. *Congenital Heart Disease* 2015;10:E30-42.
- 3. <u>Bano M</u>, Kanaan UB, Ehrlich AC, et al. <u>Improvement in tricuspid annular plane systolic excursion with pulmonary hypertension therapy in pediatric patients. *Echocardiography* 2015;32:1228-32.</u>
- 4. Bharucha T, Lee KJ, Daubeney PE, <u>Nugent, AW</u>, et al. <u>Sudden death in childhood cardiomyopathy: results from a long-term national population-based study</u>. *Journal of the American College of Cardiology* 2015;65:2302-10.
- 5. Bidhult S, Xanthis CG, Liljekvist LL, **Greil G**, et al. <u>Validation of a new t2\* algorithm and its uncertainty value for cardiac and liver iron load determination from MRI magnitude images</u>. *Magnetic Resonance in Medicine: Official Journal of the Society of Magnetic Resonance in Medicine 2015*.
- 6. Bratis K, Chiribiri A, **Hussain T**, Krasemann T, Henningsson M, Phinikaridou A, Mavrogeni S, Botnar R, Nagel E, Razavi R, **Greil G**. <u>Abnormal myocardial perfusion in Kawasaki disease convalescence</u>. *JACC Cardiovascular Imaging* 2015;8:106-8.
- 7. Costello JM, Mussatto K, Cassedy A, Wray J, <u>Mahony L</u>, et al. <u>Prediction by clinicians of quality of life for children and adolescents with cardiac disease</u>. *The Journal of Pediatrics* 2015;166:679-83 e2.
- 8. Czosek RJ, Cassedy AE, Wray J, Wernovsky G, Newburger JW, Mussatto KA, <u>Mahony L</u>, et al. <u>Quality of life in pediatric patients affected by electrophysiologic disease</u>. *Heart Rhythm: The Official Journal of the Heart Rhythm Society* 2015;12:899-908.
- 9. **Das BB**. A neonate with acute heart failure: Chromosomally integrated human herpesvirus 6-associated dilated cardiomyopathy. *The Journal of Pediatrics* 2015;167:188-92 e1.
- 10. <u>Das BB</u>. <u>Perioperative care of children with Eisenmenger syndrome undergoing non-cardiac surgery</u>. *Pediatric Cardiology* 2015;36:1120-8.
- 11. **Das BB, Koch J, Dimas V**, Guleserian K, **Nugent A**. <u>Use of nesiritide in critically ill children with biventricular</u> dysfunction suffering from oliguria despite standard heart-failure management. *Cardiology in the Young* 2015:1-5.
- 12. Francisco A, **Greil G**, Miller O, Austin C, Mathur S. <u>Juxtaposed right atrial appendage in complex Transposition of the Great Arteries</u>. *Portuguese Journal of Cardiology: An Official Journal of the Portuguese Society of Cardiology* 2015;34:79-80.
- 13. Freud LR, Escobar-Diaz MC, Kalish BT, Komarlu R, Puchalski MD, Jaeggi ET, Szwast AL, Freire G, Levasseur SM, Kavanaugh-McHugh A, Michelfelder EC, Moon-Grady AJ, Donofrio MT, Howley LW, Tierney ES, Cuneo BF, Morris SA, Pruetz JD, van der Velde ME, Kovalchin JP, <u>Ikemba CM</u>, et al. <u>Outcomes and predictors of perinatal mortality in fetuses with ebstein anomaly or tricuspid valve dysplasia in the current era: A multicenter study. *Circulation* 2015;132:481-9.</u>
- 14. Goodfriend AC, Welch TR, Barker G, Ginther R Jr, Riegel MS, <u>Reddy SV</u>, Wang J, <u>Nugent A</u>, Forbess J. <u>Novel bioresorbable stent coating for drug release in congenital heart disease applications</u>. *Journal of Biomedical Materials Research Part A* 2015;103:1761-70.

- 15. Henningsson M, Hussain T, Vieira MS, <u>Greil, GF</u>, et al. <u>Whole-heart coronary MR angiography using image-based navigation for the detection of coronary anomalies in adult patients with congenital heart disease</u>. *Journal of Magnetic Resonance Imaging: JMRI* 2015.
- 16. Herbert C, Patel M, <u>Nugent A</u>, <u>Divas VV</u>, Guleserian KJ, <u>Quigley R</u>, <u>Modem V</u>. <u>Serum cystatin C as an early marker of neutrophil gelatinase-associated lipocalin-positive acute kidney injury resulting from cardiopulmonary bypass in infants with congenital heart disease. *Congenital Heart Disease* 2015;10:E180-8.</u>
- 17. <u>Hussain T</u>, Henningsson M, Butzbach B, Lossnitzer D, <u>Greil GF</u>, et al. <u>Combined coronary lumen and vessel wall magnetic resonance imaging with i-T2prep: influence of nitroglycerin</u>. *The International Journal of Cardiovascular Imaging* 2015;31:77-82.
- 18. <u>Hussain T</u>, Mathur S, Peel SA, Valverde I, Bilska K, Henningsson M, Botnar RM, Simpson J, <u>Greil GF</u>. <u>Coronary artery size and origin imaging in children: a comparative study of MRI and trans-thoracic echocardiography.</u> *BMC Medical Imaging* 2015;15:48.
- 19. Kapur NK, <u>Dimas V</u>, Sorajja P, et al. <u>The Interventional Heart Failure Initiative: A mission statement for the next generation of invasive cardiologists.</u> Catheterization and Cardiovascular Interventions: Official Journal of the Society for Cardiac Angiography & Interventions 2015;86:353-5.
- 20. Lacro RV, Dietz HC, <u>Mahony L</u>. <u>Atenolol versus Losartan in Marfan's syndrome</u>. *The New England Journal of Medicine* 2015;372:980-1.
- 21. Leger K, Slone T, <u>Lemler M</u>, Leonard D, Cochran C, Bowman WP, Bashore L, <u>Winick N</u>. <u>Subclinical cardiotoxicity in childhood cancer survivors exposed to very low dose anthracycline therapy</u>. *Pediatric Blood & Cancer* 2015;62:123-7.
- 22. Makowski MR, Wiethoff AJ, Ebersberger HU, Botnar RM, Razavi R, Schaeffer T, <u>Greil GF.</u> <u>2D phase contrast blood flow velocity measurements of the thoracic vasculature: comparison of the effect of gadofosveset trisodium and gadopentetate dimeglumine. *The International Journal of Cardiovascular Imaging* 2015;31:409-16.</u>
- 23. Meadows J, Minahan M, McElhinney DB, McEnaney K, Ringel R, COAST Investigators\* (**Zellers TM**). <u>Intermediate</u> Outcomes in the Prospective, Multicenter Coarctation of the Aorta Stent Trial (COAST). *Circulation* 2015;131:1656-64.
- 24. Mir A, Frank S, **Journeycake J**, **Wolovits J**, Guleserian K, <u>Heistein L</u>, <u>Lemler M</u>. <u>Aspirin resistance in single-ventricle physiology: aspirin prophylaxis is not adequate to inhibit platelets in the immediate postoperative period</u>. *The Annals of Thoracic Surgery* 2015;99:2158-64.
- 25. Moore L, Sengupta A, **Das B**. <u>Mycophenolate Mofetil-Induced Colitis in a Pediatric Heart Transplant Recipient</u>. *International Journal of Clinical Cardiology* 2015;2:7.
- 26. Motta C, <u>Scott W</u>, <u>Mahony L</u>, <u>Koch J</u>, <u>Wyckoff M</u>, Reisch J, Burchfield PJ, <u>Brion LP</u>. <u>The association of congenital heart disease with necrotizing enterocolitis in preterm infants: a birth cohort study</u>. *Journal of Perinatology: Official Journal of the California Perinatal Association* 2015;35:949-53.
- 27. Moye DM, <u>Dyer AK</u>, <u>Thankavel PP</u>. <u>Myocardial contusion in an 8-year-old boy: a kick to the heart</u>. *Circulation Cardiovascular Imaging* 2015;8:e002857.
- 28. Nassar MS, Bertaud S, Goreczny S, **Greil G**, Austin CB, Salih C, Anderson D, **Hussain T**. <u>Technical and anatomical factors affecting the size of the branch pulmonary arteries following first-stage Norwood palliation for hypoplastic left heart <u>syndrome</u>. *Interactive Cardiovascular and Thoracic Surgery* 2015;20:631-5.</u>
- 29. Pitcher A, Emberson J, Lacro RV, Sleeper LA, Stylianou M, Mahony L, et al. Design and rationale of a prospective, collaborative meta-analysis of all randomized controlled trials of angiotensin receptor antagonists in Marfan syndrome, based on individual patient data: A report from the Marfan Treatment Trialists' Collaboration. American Heart Journal 2015;169:605-12.

30. Prieto C, Doneva M, Usman M, Henningsson M, **Greil G**, et al. <u>Highly efficient respiratory motion compensated free-breathing coronary MRA using golden-step Cartesian acquisition</u>. *Journal of Magnetic Resonance Imaging: JMRI* 2015;41:738-46.

- 31. Pushparajah K, Tzifa A, Bell A, Wong JK, **Hussain T**, Valverde I, Bellsham-Revell HR, **Greil G**, et al. <u>Cardiovascular magnetic resonance catheterization derived pulmonary vascular resistance and medium-term outcomes in congenital heart disease</u>. *Journal of Cardiovascular Magnetic Resonance: Official Journal of the Society for Cardiovascular Magnetic Resonance* 2015;17:28.
- 32. Pushparajah K, Wong JK, Bellsham-Revell HR, **Hussain T**, Valverde I, Bell A, Tzifa A, **Greil G**, et al. <u>Magnetic</u> resonance imaging catheter stress haemodynamics post-Fontan in hypoplastic left heart syndrome</u>. *European Heart Journal Cardiovascular Imaging* 2015.
- 33. Richmond ME, Law YM, <u>Das BB</u>, et al. <u>Elevated pre-transplant pulmonary vascular resistance is not associated with mortality in children without congenital heart disease: a multicenter study</u>. *The Journal of Heart and Lung Transplantation: The Official Publication of the International Society for Heart Transplantation* 2015;34:448-56.
- 34-36. Rihal CS, Naidu SS, Givertz MM, Szeto WY, Burke JA, Kapur NK, Kern M, Garratt KN, Goldstein JA, <u>Dimas V</u>, et al. <u>2015 SCAI/ACC/HFSA/STS Clinical Expert Consensus Statement on the use of percutaneous mechanical circulatory support devices in cardiovascular care (endorsed by the American Heart Association, the Cardiological Society of India, and Sociedad <u>Latino Americana de Cardiologia Intervencion; affirmation of value by the Canadian Association of Interventional</u> <u>Cardiology-Association Canadienne de Cardiologie d'intervention)</u>.</u>
  - Journal of Cardiac Failure 2015;21:499-518.
  - Catheterization and Cardiovascular Interventions: Official Journal of the Society for Cardiac Angiography & Interventions 2015;85:1112-4.
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# **Book Sections**

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