

The [Division of Pediatric Cardiology](#) provides comprehensive care for children with heart disease, conducts seminal research, promotes innovation, facilitates quality science initiatives, and oversees an internationally recognized training program.

Under the direction of Nicolas Madsen, M.D., M.P.H, the Division provides services at Children’s Medical Center Dallas, Children’s Medical Center Plano, and across Texas in:

- Outpatient clinics (around 12,000 visits per year)
- A 22-bed dedicated Acute Care Cardiology Unit
- A 32-bed dedicated Cardiac Intensive Care Unit
- Three comprehensive Dallas-based, and one Plano-based, catheterization laboratories for diagnostic and interventional procedures
- A 1.5T dedicated cardiac magnetic resonance imaging (MRI) scanner in immediate proximity to the cardiac catheterization laboratory allows for combined MRI – cardiac catheterization procedures (XMRI)
- All imaging facilities are in close proximity to the operating room, allowing intra- and periprocedural collaboration
- An echocardiography suite, including specified areas for fetal echocardiography, as well as a complete non-invasive monitoring laboratory



Nicolas Madsen, M.D., M.P.H
Associate Professor, Division Chief

Division Faculty

The Division has 34 pediatric cardiologists, each with unique expertise, including critical care medicine, interventional catheterization, electrophysiology, advanced imaging, including echocardiography and fetal echocardiography, cardiac MRI and computed tomography (CT), cardiac transplantation, heart failure, prevention, and adult congenital heart disease. Six faculty joined the Division in 2022.

Megan Griffiths, M.D.
Assistant Professor



M.D.

University of Colorado School of Medicine, Denver, CO, 2013

Postdoctoral Training

Residency, Pediatrics

Connecticut Children’s Medical Center/University of Connecticut, Farmington, CT, 2013 – 2016

Chief Resident

Connecticut Children’s Medical Center/University of Connecticut, Farmington, CT, 2016 – 2017

Fellowship, Pediatric Cardiology

Bloomberg Children’s Center/Johns Hopkins University, Baltimore, MD, 2017-2021

Advanced Fellowship, Pulmonary Hypertension

Columbia University, New York, New York, 2021-2022

Interests: Dr. Griffiths has unique clinical and academic expertise in pulmonary hypertension, which enables her to care for some of the most vulnerable patients in the Heart Center. Dr. Griffiths is the Medical Director of the Pulmonary Hypertension service line.

Mehreen Iqbal, M.D.
Assistant Professor



M.D.

Medical College of Georgia at Georgia Regents University, Augusta, GA, 2014

Postdoctoral Training

Residency, Pediatrics

Stanford Health Care/Stanford University, Stanford, CA, 2014 – 2017

Fellowship, Pediatric Cardiology

Stanford Hospital & Clinics, Palo Alto, CA, 2017-2020

Advanced Fellowship, Pediatric Heart Failure/Transplant

Stanford Hospital & Clinics, Palo Alto, CA 2020-2033

Interests: Dr. Iqbal has a unique clinical and academic expertise in Advanced Heart Failure management including cardiac transplantation and ventricular assist device. She is particularly invested in how outcomes are impacted by health disparities.

Javier Lasa, M.D.
Associate Professor



M.D.

Johns Hopkins University School of Medicine, Baltimore, MD, 2005

Postdoctoral Training

Residency, Pediatrics

Children's Hospital of Philadelphia, Philadelphia, PA, 2006 – 2008

Residency, Pediatrics Cardiology

Children's Hospital of Philadelphia, Philadelphia, PA, 2008 – 2011

Fellowship, Pediatric Cardiology

Children's Hospital of Philadelphia, Philadelphia, PA, 2008 – 2011

Fellowship, Pediatric Critical Care

Children's Hospital of Philadelphia, Philadelphia, PA, 2012 – 2014

Interests: Dr. Lasa has unique clinical and academic expertise in cardiac critical care. He is also one of the leading experts in resuscitative sciences in the critical care environment. In addition, Dr. Lasa is the Director of Informatics and Data Science for the Heart Center.

Sonali Patel, M.D., Ph.D.
Associate Professor



M.D.

University of Iowa, Iowa City, IA, 2003

Ph.D.

University of Iowa, Iowa City, IA, 2010

Postdoctoral Training

Residency, Pediatrics

University of Iowa, Iowa City, IA, 2003 – 2006

Fellowship, Pediatric Cardiology

University of Iowa, Iowa City, IA, 2006 – 2009

Research Fellowship, Pediatric Cardiology

University of Iowa, Iowa City, IA, 2009 – 2010

Interests Dr. Patel has unique clinical and academic expertise in the care of children hospitalized with cardiac disease. She maintains several national acute care cardiology leadership positions. In addition, Dr. Patel is the Director of Education for the Heart Center.

Sonia Voleti, M.D.
Assistant Professor



M.D.

Drexel University College of Medicine, Philadelphia, PA, 2014

Postdoctoral Training

Residency, Pediatrics

New York-Presbyterian/Weill Cornell Medical Center, New York, NY, 2014 – 2017

Fellowship, Pediatric Cardiology

Children's National Medical Center, Washington, DC, 2017-2020

Interests: Dr. Voleti has unique clinical and academic expertise in outpatient cardiology and cardiac echocardiography.

Qin Zou, Ph.D.
Assistant Professor



Ph.D.

University of Iowa, Iowa City, IA, 2021

Postdoctoral Training

Cardiac MRI

University of Iowa, Iowa City, IA, 2021 – 2022

Interests: Dr. Zou has unique academic expertise in artificial intelligence and cardiac MRI. He utilizes his sub-specialty training to discover and innovate new approaches to advanced cardiac imaging.

Honors / Awards

Best Pediatric Specialists in Dallas, *D Magazine*

- Ryan Butts
- Catherine Ikemba
- Matthew Lemler
- Claudio Ramaciotti
- William Scott
- Thomas Zellers

Texas Super Doctors, *Texas Monthly*

- Catherine Ikemba
- Colin Kane
- Javier Lasa
- Matthew Lemler
- Claudio Ramaciotti
- William Scott
- Surendranath Veeram Reddy
- Thomas Zeller

Javier Lasa

- Clinical Informatics: Certified 1/1/23; American Board of Preventive Medicine

Nicolas Madsen

- William Gallen Lecturer Award – Herma Heart Institute, Children's Wisconsin
- D CEO Magazine Innovation Award, Innovation in Hospital Practice
- Tob Abstract (CVDY) – American Heart Association, Scientific Sessions, 2022

Thomas Zellers

- Castle Connolly's Top Doctors
- Best Doctors in America

Invited Lectures/Conference Presentations

Ryan Butts

- 7th International Congress of the Mexican Academy for Cerebral Palsy and Neurodevelopmental Disorders, Virtual, March 2022
 - *"The role of the cardiology in the care of pediatric neuromuscular disorder"*
- American Academy of Pediatrics National Conference and Exhibition, Anaheim, CA, October 2022
 - *"What Every Pediatrician Should Know About Myocarditis"*

Radomir Chabiniok

- World Congress of Biomechanics, Taipei, Taiwan, July 2022
 - *"Heart biomechanics to predict the effect of intervention in valvular heart diseases"*
- Ecole Polytechnique, Biomedical Engineering Seminar, Palaiseau, France, April 2022
 - *"Modeling Biomaterials in Clinical Problems of Cardiology"*
- Laboratoire Imagerie Biomedicale (LIB), Sorbonne Université, Paris, France, April 2022
 - *"Medical Image data and biomedical modeling in translational cardiovascular research"*

Mansi Gaitonde

- Society for Cardiovascular Magnetic Resonance Scientific Sessions, Virtual, February 2022
 - *"Imaging after Coarctation Repair"*

Catherine Ikemba

- Grand Rounds, University of Washington/Seattle Children's Hospital, Seattle, WA, January 2022
 - *"Difficult Discussions and Matters of the Heart"*

Jenna Keelan

- Fetal Cardiology Lectures for Categorical Fellows, UT Southwestern/Children's Health, Dallas, TX 2022
 - *"Fetal Counseling of Congenital Heart Disease, Fetal Circulation and Fetal Presentation, Fetal Diagnosis – a Patient's Perspective, Standard Views and Biometry, Hemodynamic Parameters in Fetal Echo"*
- Fetal Cardiology Research Meeting, UT Southwestern Medical Center, Dallas, TX 2022
 - *"Single Ventricle Outcomes"*
- The American Society of Echocardiography 2022 Scientific Sessions, April 2022
 - *"The Role of Fetal Echocardiography in Predicting Postnatal Pulmonary Venous Obstruction in Neonates with Total Anomalous Pulmonary Venous Return: A Single Center Experience."*

Nicolas Madsen

- Cardiac Networks United (CNU) Quality Improvement Series, Ann Arbor, MI, January 2022
 - *"Introduction to Learning Networks"*
- Cardiac Networks United (CNU) Quality Improvement Series, Ann Arbor, MI, February 2022
 - *"Intro to QI Sustainability"*

- American College of Cardiology Annual Meeting, Washington, DC, April 2022
 - “Characterizing acute care cardiology central venous catheter use and associated complications.”
- Cardiac Networks United (CNU), New York, NY, May 2022
 - “Collaborative Research in Pediatric Cardiology”
- Grand Rounds, UT Southwestern Department of Cardiology, Dallas, TX, May 2022
 - “Long-term Outcomes of Congenital Heart Disease”
- Multi-disciplinary Conference, UT Southwestern/Children’s Health, Dallas, TX May 2022
 - “Heterotaxy and Outcomes”
- William Gallen Lecture, Children’s Wisconsin Herma Heart Institute, Milwaukee, WI, July 2022
 - “Performance Rounds and Congenital Heart Disease Outcomes”
- Grand Rounds, Children’s Wisconsin Department of Pediatrics, Milwaukee, WI, July 2022
 - “Are Learning Networks the Future of Pediatric Research”
- Pediatric & Congenital Cardiovascular Disease Conference, Huntington Beach, CA, August 2022
 - “Optimizing Chest Tube Management Variation and Association to Hospital Length of Stay”
- Pediatric & Congenital Cardiovascular Disease Conference, Huntington Beach, CA, September 2022
 - “Optimizing Discharge Efficiency form the Acute Care Cardiology Unity”
 - “Out of the CICU and On Track to Go Home: The Cardiac Care Unit”
- Cardiac Neurodevelopmental Outcomes Collaborative, Montreal, Canada, October 2022
 - Moderator, “Congenital Heart Disease Outcomes and Health Disparities”
- Cardiac Neurodevelopmental Outcomes Collaborative (CNOOC), Montreal, Canada, October 2022
 - “Pediatric Acute Care Cardiology Collaborative and CNOOC Opportunities,”
- Pediatric Cardiac Intensive Care Society, Miami, FL, December 2022
 - Moderator, “Risk and Benefits of Social Media Use in Critical Care”
- Aarhus University Doctoral Thesis Committee, Aarhus, Denmark, 2022
 - Invited Panelist, “Morbidity and Mortality in Adults with Atrial Septal Defects”

Sonali Patel

- Pediatric Acute Care Cardiology Collaborative (PAC³) Annual Fall Meeting, Virtual, November 2022
 - “PAC³ Scientific Review Committee Update”
- PC4/ PAC³ Annual Spring Meeting, Atlanta, Georgia, May 2022
 - “Risk Adjustment in the PAC³ Registry”
 - “Biggest Challenge in Acute Care Cardiology – Maximizing Value: Care Plans That Optimize the Balance Between Education, Family Experience and Medical Care”

Kavita Sharma

- Grand Rounds, UT Southwestern Department of Pediatrics/Children’s Health, Dallas, TX, February 2022
 - “The Evolution of Kawasaki Disease Treatment”

Surendranath Veeram Reddy

- Society for Cardiovascular Magnetic Resonance Scientific Sessions, Virtual, February 2022
 - Moderator, “Interventional CMR”
- International Society for Magnetic Resonance in Medicine (ISMRM) Annual Meeting, London, England, May 2022
 - “Enhancement of the Lymphatic System Following Intravenous Administration of Ferumoxytol”
- Pediatric Grand Rounds, UT Health San Antonio, Joe R and Teresa Lozano Long School of Medicine, San Antonio, TX, September 2022
 - “Lymphatic Imaging and Interventions in Single Ventricle Patients”
- Pediatric and Adult Interventional Cardiac Symposium (PICS-ACIS, Chicago, IL, September 2022
 - “Lymphatic Session Debate Thoracic Duct Embolization vs. Selective Lymphatic Duct Embolization”
 - Moderator, “Champagne Glass Sign” – The Door to Retrograde Transvenous Thoracic Duct Cannulation Technique for Lymphatic Evaluation and Interventions

- 33rd Annual Conference of the Saudi Heart Association, Riyadh, Saudi Arabia, October 2022
 - *“Contemporary Lymphatic Circulation Intervention in Patients with Congenital Heart Disease”*

American Heart Association Scientific Sessions, Chicago, IL, November 2022

Madsen N, Patel S

Presentation, *“Impact of race and ethnicity on hospital morbidity and resource utilization in acute care pediatric cardiology patients.”*

American Society of Echocardiography Annual Conference, Seattle, WA, June 2022

Fares M, Gaitonde M, Kane C

Abstract Presentation, *“Sinus of Valsalva Aneurysm Occupying The Right Ventricular Outflow Tract: A Swift Imposition.”*

The International Society for Heart and Lung Transplantation (ISHLT), Boston MA, April 2022

Baez Hernandez N, Bano M

Oral Presentation, *“Pre-Operative Planning to Mitigate Risk in Complex Single Ventricular Assist Devices”*

Bano M

Poster Presentation, *“Worsening Mental Health in Adolescent Heart Failure and Transplant Patients During the COVID-19 Pandemic.”*

Butts R

Poster Presentation, *“Worsening Mental Health in Adolescent Heart Failure and Transplant Patients During the COVID-19 Pandemic”*

Western Thoracic Surgical Association Annual Meeting, Koloa, HI, June 2022

Zellers T, Divekar A, Reddy Veeram S, Arar Y

Oral Presentation, *“Clinical Algorithm for Establishing Ductal-Dependent Pulmonary Blood Flow in Congenital Heart Disease: PDA Stenting vs Traditional PTFE Shunt vs Dilatable exGraft™ Shunt.”*

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

Cardiology Fellows: The Pediatric Cardiology fellowship program currently accepts four trainees per year in the categorical program. Many fellows choose to complete a fourth year to pursue a specialized clinical interest. All pediatric cardiology faculty are actively involved in the fellows’ training. In addition to the standard three-year fellowship program, we offer up

to seven additional fourth-year training programs, including cardiac critical care, interventional cardiology, advanced cardiac imaging, fetal cardiology, electrophysiology, heart transplantation, preventive cardiology, and prospective clinical and basic research. Categorical fellows rotate through cardiac outpatient, acute care, critical care, preventive cardiology, adult congenital heart disease, cardiac catheterization, electrophysiology, echocardiography, MRI, and cardiac transplantation. They also spend up to one year participating in clinical, translational, or basic science research. The program provides fellows with the training, tools, and philosophy necessary to advance the field of pediatric cardiology within their areas of choice.

1st Year

- Sara Alhousseiny, M.D.
- Mohammed Mehdi, M.B.B.S.
- Sarah Zoretic, D.O.

2nd Year

- Pezad Doctor, M.B.B.S.
- Heidi Kim, M.D.

3rd Year

- Manal Alqahtani, M.B.B.S.
- Vidhi Makanji, M.D., M.P.H.
- Dristhi Tolani, M.B.B.S.

4th Year

- Stephen Spurgin, M.D.
- Austin Mercadante, M.D.
- Laura Radel, M.D.
- Sanja Dzelebdzic, M.D.
- Maher Abadeer, M.D.
- Maria Ossa Galvis, M.D.

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 acute care 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 and the transplant/heart failure service.
- Outpatient Training:
 - One or two second- or third-year residents are able to do an elective in the Cardiology Outpatient Clinic under the supervision of the attending cardiologists.

Medical Students

- Third-Year Pediatric Rotations:
 - Cardiology Inpatient Rotations
 - Pediatric Cardiology Clinic
- Fourth-Year Electives in Pediatric Cardiology:
 - Cardiac Outpatient Clinic
 - Cardiac Intensive Care Unit
 - Cardiac Imaging Rotation (MRI, CT, echocardiography)

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 study of pulmonary arteriovenous malformations. This line of research could result in personalized care to support those patients impacted by these malformations, as well as develop tools to prevent their formation in others. Using mouse models, an investigation is underway to evaluate proteins responsible for injury.

Another new area of investigation is to optimize cardiovascular support therapy for pediatric patients with end stage heart failure. Currently, the effect of ventricular assist devices on muscle cellular function is unknown. Work is underway to understand muscle regeneration and remodeling in the setting of ventricular assist devices.

One additional pre-clinical research area is the optimization of technologies for imaging for cardiovascular and lymphatic 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 drive discovery.

Clinical Sciences

The Pediatric Cardiology Division participates in many multicenter trials. These trials include those in partnership with the National Institute of Health and the Pediatric Heart Network examining the use of patent ductus arteriosus (PDA) stenting technology in single ventricle anatomy, the use of growth promoting medical management in interstage patients, and the investigation of the long-term outcomes of multisystem inflammatory syndrome in children MIS-C due to COVID-19. In addition, other ongoing trials include those that are assessing various devices, including the use of novel pulmonary valves and devices for closure of the patent ductus arteriosus in small infants.

The Division is both leading and contributing to many multicenter initiatives, including the Pediatric Acute Care Cardiology Collaborative (PAC³), the Pediatric Cardiac Critical Care Consortium (PC⁴), the Cardiac Neurodevelopmental Outcome Collaborative (CNOOC), the National Pediatric Cardiology Quality Improvement Collaborative, the Fontan Outcomes Network, and the Congenital Heart Research Collaborative. In particular, the Division is the primary sponsor of PAC³, a collaborative of over 40 international children's hospitals. Our focus on these collaboratives allows for the rapid translation of best practices to the bedside to optimize outcomes on behalf of our patients.

Multicenter efforts are also underway by our surgical and anesthesia teams to evaluate the use of ventricular assist devices in the pediatric population and the use of cold-stored platelets for improved performance in the operating room.

Collaborative studies within the Department of Pediatrics include protocols to evaluate stroke, feeding optimization 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; non-invasive imaging markers for cardiac transplant rejection; the development of new techniques for pediatric cardiovascular MRI; 3D printing and modeling of congenital heart disease; and using innovative artificial intelligence, machine learning, and computational modeling techniques to improve monitoring of children with heart disease.

Clinical Activities

The Pediatric Cardiology Division offers a comprehensive program of specialized care at the Heart Center at Children's HealthSM for children and adults with congenital and acquired heart diseases. The Heart Center's team of professionals includes cardiologists, cardiac surgeons, cardiac intensivists, neonatologists, cardiac anesthesiologists, and psychologists. In addition to providing the highest quality clinical and surgical care, our faculty members are committed to improving the health of children everywhere by inspiring innovation and research.

Inpatient Services

The inpatient service is divided between the Cardiac Intensive Care Unit, Acute Care Cardiology, and Cardiac Consultation services. The Acute Care Cardiology and Cardiac Intensive Care Units are highly specialized areas that provide advanced care for post-surgical, post-transplant, and post-cardiac catheterization patients. In addition, the units provide progressive care for medical patients with cardiovascular issues. We are expanding our inpatient programs at the Children's Health Plano campus to include cardiac catheterizations, telemetry, and the ability to care for cardiac patients with medical needs. The typical combined daily census for both inpatient units is 45+ patients, while the consultation service follows approximately 20+ patients across several centers.

Outpatient Services

More than 12,000 cardiology outpatients are seen each year across the Heart Center clinics. Subspecialty cardiology clinics, including those for heart transplantation, heart failure, muscular dystrophy, arrhythmia, pacemaker, preventive cardiology, Safe-at-Home (for post-op single ventricle and infants), aortopathy, cardiac genetics, Fontan, and adult congenital heart disease, provide unique venues for subspecialty referrals from throughout the region, state, and nationally. Fetal echocardiography clinics continue to expand their services and clinic locations to provide best-in-class services.

Preventive Cardiology

The 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) and sees an average of 1,500 patients per year. 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, lifestyle modification, treatments (including natural as well as prescription medications).

Pediatric Echocardiography Laboratory

The pediatric echocardiography laboratory at Children's Health is Intersocietal Accreditation Commission (IAC) accredited for pediatric transthoracic, transesophageal, and fetal echocardiography. Dedicated sub-specialty-trained physicians staff the laboratory and provide coverage 24/7. The team consists of highly trained pediatric sonographers who perform more than

12,500 studies a year and provides direct services for three primary hospitals and several outpatient sites. In addition, we provide support services for tele-echocardiography at many additional sites.

The laboratory offers the latest technology, including fetal echocardiography, stress imaging, three-dimensional and strain imaging, and provides imaging support for the cardiac operating rooms, extracorporeal membrane oxygenation cannulation, and catheterization laboratory.

Fetal Heart Program

Our fetal echocardiography program is IAC-certified and performed more than 400 fetal echocardiograms and consultations in 2022. In concert with Pediatric Heart Specialists, the Heart Center’s outreach, and community focused cardiologists, the Division continues to expand accessibility. The fetal heart program expertly coordinates prenatal cardiac evaluation and counseling, as well as pre- and post-natal cardiac care to ensure critical congenital heart conditions receive the care they need at precisely the right time. Comprehensive multidisciplinary consultations may include an imaging cardiologist, cardiac nurse, cardiothoracic surgeon, social work, intensive care cardiologist, electrophysiology nurse, neurodevelopmental psychologist, and introduction to our Ssafe-at-Home program for interstage single ventricle monitoring program.

Parental education and family support are our priorities. We support the Fetal Heart Society, whose mission is to advance the field of fetal cardiovascular care and science through collaborative research, education, and mentorship, as well as participating in the National Pediatric Cardiology Quality Improvement Collaborative, whose mission is to decrease mortality and improve quality of life for all infants with single ventricle congenital heart disease. By supporting and engaging in multi-institutional research and quality improvement projects, we continually strive to improve the quality of our counseling and outcomes.

Patient Statistics

The following statistics include patient visits for Children’s Medical Center Dallas and Children’s Medical Center Plano, as well as our many outreach clinics, as well as our Telemedicine program.

Cardiology Patient Procedures by Specialization and by Type by Year.

Surgical Procedures

	2017	2018	2019	2020	2021	2022
Cardiac Operations (Total)	519	730	845	618	519	542
ACHD Operations	30	46	48	31	26	39
Heart Transplant	18	26	20	24	19	17

Diagnostic Testing and Cardiac Imaging

	2017	2018	2019	2020	2021	2022
Electrocardiograms	16,684	12,584	18,511	19,957	22,421	22,329
Telemedicine EKGs				665	2,908	
Echocardiograms (CMC, CUH, Parkland)	11,741	11,997	13,179	11,159	12,305	12,975
Telemedicine ECHOS				880	250	166
Fetal ECHO (total)	514	466	472	308	393	504
Fetal Echo – Dallas					215	250
Fetal Echo – Plano					178	232
Holters	867	866	935	825	1,011	1,236
Telemedicine Holters				11	44	

Cardiac MRIs	497	757	897	841	1,056	1,256
Cardiac CT					398	524
Stress Tests	168	201	173	160	236	292

Cardiac Catheterization Procedures

	2017	2018	2019	2020	2021	2022
Interventional Cardiac Caths	499	471	430	413	436	453
Biopsy Cardiac Caths	133	94	68	97	94	81
Diagnostic Cases	124	138	136	151	117	120
Cath/MRI Hybrid Cases	5	26	25	15	30	pending
EP Studies & Ablation Procedures	80	75	89	65	67	67
Pacemaker, Event Recorder & Defibrillators	26	25	29	24	23	19

Outpatient Clinic Patient Encounters

	2017	2018	2019	2020	2021	2022
Dallas	9,108	9,260	9,376	8,268	9,154	10,465
Plano	2,462	2,806	3,090	2,379	2,830	2,671
Presbyterian-Dallas	106	173	186	129	152	pending

Current Grant Support

Maria Bano

Grantor: University of Michigan/Enduring Hearts Inc.

Title of Project: The impact of Fontan circulatory failure, frailty, and resilience on heart failure and transplant outcomes

Role: Principal Investigator

Dates: 01/2021 – 12/2022

Nicolas Madsen

Grantor: NIH Grant No. U24HL135691 (7/2022-6/2024)

Title of Project: Impact of Race and Ethnicity on Hospital Morbidity, Mortality and Resource Utilization in Acute Care Pediatric Cardiology Patients

Role: Senior Investigator

Dates: 07/2022 – 06/2024

Ryan Butts

Grantor: Boston Children's Hospital

Title of Project: Multicenter Randomized Trial of Everolimus in Pediatric Heart Transplantation

Role: Principal Investigator

Dates: 09/2017 – 09/2023

Grantor: Duke University/NIH-National Center For Advcng Trnslnl

Title of Project: Butts_STeroids to REduce Systemic inflammation after neonatal heart Surgery (STRESS trial) Study

Role: Principal Investigator

Dates: 07/2017 – 06/2022

Grantor: Hospital For Sick Children

Title of Project: Butts - SickKids - Development of a Risk Calculator to Predict Sudden Cardiac Death in Children with Hypertrophic Cardiomyopathy

Role: Principal Investigator

Dates: 04/2017 – 03/2025

Grantor: Stanford University/Enduring Hearts Inc.
Title of Project: Evaluation of contribution of HLA type and HLA antibodies in Survival after Pediatric Heart Transplantation
Role: Principal Investigator
Dates: 01/2021 – 12/2022

Grantor: American Heart Assoc Inc.
Title of Project: Effect of Carvedilol on Exercise Performance in Fontan Patients
Role: Principal Investigator
Dates: 07/2016 – 03/2022

Radomir Chabiniok

Grantor: The Czech Science Foundation
Title of Project: Development of reliable computational tools adequate for the study of fluid-structure interactions, with special relevance to cardiovascular problems
Role: Collaborator
Dates: 2023-2025

Grantor: Czech Ministry of Health
Title of Project: Analysis of flow character and prediction of evolution in endovascular treated arteries by magnetic resonance imaging coupled with mathematical modeling
Role: Collaborator/mentor
Dates: 2018-2023

Jenna Keelan

Grantor: New England Research Institutes/NIH-National Heart, Lung and Blood Institute
Title of Project: Oxandrolone to Promote Growth in Single Ventricle Interstage Patients
Role: Site Principle Investigator
Dates: 10/2022 – 07/2025

Tarique Hussain

Grantor: Communities Foundation of Texas
Title of Project: Computational Modeling for Tetralogy of Fallot
Role: Principal Investigator (Co-Investigators: **G. Greil, A. Tandon, S. Reddy**, R. Jaquiss)
Dates: 09/2020 – 09/2023

Grantor: National Science Foundation
Title of Project: Virtual Reality System to Plan Cardiovascular Interventions
Role: Principal Investigator (Co-Investigators: **A. Tandon**, B. Lang)
Dates: 09/2018 – 02/2022

Grantor: W. B. & Ellen Gordon Stuart Trust
Title of Project: Improving Treatment and Outcomes for Childhood Survivors of Tetralogy of Fallot: Computational Modeling in Preventive Cardiology
Role: Principal Investigator (Co-Investigators: **G. Greil, A. Tandon, S. Reddy**, R. Jaquiss)
Dates: 09/2020 – 09/2023

Grantor: Emory University School Of Medicine\ NIH-National Heart, Lung And Blood Inst
Title of Project: Long-term Outcomes after interventions for CHD Pulse Yr3 Amend2_8.1.21-7.31.22
Role: Principal Investigator
Dates: 08/2021 – 07/2022

Lynn Mahony

Grantor: New England Research Institutes/ NIH-National Institutes of Health

Title of Project: Pediatric Heart Disease Research Network

Role: Principle Investigator; Steering Committee Chair

Dates: 01/2022 – 12/2022

Kavita Sharma

Grantor: New England Research Institutes/NIH-National Heart, Lung and Blood Institute

Title of Project: The NIH Longitudinal Study for Multisystem Inflammatory Syndrome (MUSIC)

Role: Site Principle Investigator

Dates: 10/2020 – 07/2025

Surendranath Veeram Reddy

Grantor: NIH-National Institute of Ddk Diseases

Title of Project: Consequences of Elevated Fibroblast Growth Factor 23 in the Presence and Absence of Kidney Disease

Role: Co-Investigator

Dates: 07/2018 – 06/2023

Grantor: Pediatric Scientist Development Program (K12)

Title of Project: Genesis of Pulmonary Arteriovenous Malformations After Diversion of Hepatic Venous Flow: "Identifying the Role of Hepatic BMPs"

Role: Faculty Sponsor/Mentor (PI-Steve Spurgin, MD)

Dates: 07/2021 – 06/2023

Peer-Reviewed Publications

1. Akam-Venkata J, **Ikemba CM**, Martinez J, Pruszynski J, Heistein L, Pirolli TJ, Forbess JM. [Single-Stage Surgical Management of Atrioventricular Septal Defects with Coarctation of the Aorta](#). *Pediatr Cardiol*. 2022 Oct;43(7):1645-1652. PMID:35637360
2. Alten J, Cooper DS, Klugman D, Raymond TT, Wooton S, Garza J, Clarke-Myers K, Anderson J, Pasquali SK, Absi M, Affolter JT, Bailly DK, Bertrandt RA, Borasino S, Dewan M, Domnina Y, Lane J, McCammond AN, Mueller DM, Olive MK, Ortmann L, Prophan P, Sasaki J, Scahill C, Schroeder LW, Werho DK, Zaccagni H, Zhang W, Banerjee M, Gaies M, PC4 CAP Collaborators. [Preventing Cardiac Arrest in the Pediatric Cardiac Intensive Care Unit Through Multicenter Collaboration](#). *JAMA Pediatr*. 2022 Oct 1;176(10):1027-1036. PMID:35788631
3. Arar Y, Divekar A, Clark S, **Hussain T**, Sebastian R, Hoda M, King J, Zellers TM, Reddy SRV. [Role of Cross-Sectional Imaging in Pediatric Interventional Cardiac Catheterization](#). *Children (Basel)*. 2022 Feb 22;9(3):. PMID:35327672
4. Bailly DK, Alten JA, Gist KM, Mah KE, Kwiatkowski DM, Valentine KM, Diddle JW, Tadphale S, Clarke S, Selewski DT, Banerjee M, Reichle G, Lin P, Gaies M, Blinder JJ, NEPHRON Investigators. [Fluid Accumulation After Neonatal Congenital Cardiac Operation: Clinical Implications and Outcomes](#). *Ann Thorac Surg*. 2022 Dec;114(6):2288-2294. PMID:35245511

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