What is CIRC?

The Cardiovascular Imaging Research Core (CIRC) opened in January 2011 at Children's Healthcare of Atlanta, Egleston Campus. The CIRC core lab provides high quality, non-invasive cardiac imaging support for investigators involved in clinical research involving infants, children and adolescents in a dedicated research setting. Dedicated staff have experience transcending innovation by developing and utilizing imaging modalities and techniques not typically seen in the clinical arena. CIRC’s dedicated laboratory space is located in the Children's Healthcare of Atlanta, Egleston and Scottish Rite campuses.

How to Access the CIRC Lab

CIRC is located at
Children’s Healthcare of Atlanta at Egleston in
Outpatient Cardiac Services,
Tower 1, 2nd floor

Phone: (404) 785-CIRC (2472)
CIRC@choa.org

http://www.pedsresearch.org/cores/detail/cardiovascular-imaging-research-core-circ
**What we do**

**Our Services Include:**

- **Echocardiograms**
  - Transthoracic Echocardiography
    - 2-dimensional (2-D) echocardiography
    - Color and spectral Doppler echocardiography
    - M-Mode echocardiography
    - Tissue Doppler Velocity Imaging
    - Real-time 3-D Imaging
    - Strain and Strain rate imaging
  - Transesophageal Echocardiography
  - Fetal Echocardiography
  - Stress Echocardiography

- **Exercise Stress Testing**
- **Electrocardiograms**
- **Vascular Function Assessments**
  - Carotid Intimal Medial Thickness (cIMT)
  - Brachial Flow Mediated dilation (FMD)
  - Applanation tonometry

- **Cardiac Magnetic Resonance Imaging (cMRI)**
  - Cardiac function quantification
  - Phase-contrast velocity mapping
  - Coronary imaging
  - Scar imaging and quantification
  - Cycle Ergometer exercise MRI
  - Strain analysis (feature tracking)

- **Data Core Site Capabilities**
  - Data Storage
  - Data Management
  - Data Analysis

- **Cardiac Magnetic Resonance Imaging (cMRI)**

---

**How it works**

**Multicenter Core Lab**

CIRC is a multicenter core lab, but how exactly does it work? As a multicenter research project involving analysis of cardiac imaging is developing, a core lab for those analyses is selected. After project initiation, participating sites identify images and burn CDs. Those images are then uploaded to PICOM, an enterprise picture archiving and communication system (PACS). Once images are uploaded to PICOM, our core site can access those images for analysis. The images are downloaded from PICOM and pushed into a vendor-neutral software analysis package, TomTec. CIRC staff are responsible for measuring images and gathering data based on parameters outlined in the study protocol. These results are entered into a REDCap® database, an electronic data capture system used for research. To ensure the most precise results, data is analyzed for outliers and possible anomalies are reassessed. Once data cleaning is complete, the entire data set is sent back to the main study site to be statistically analyzed. CIRC then maintains the images in an image repository.
Our Partners

CIRC Services Beyond Cardiology at CHOA

• CT Surgery
• Nephrology
• Hematology/Oncology
• Infectious disease
• Neurology
• Marcus Center
• Genetics
• Gastroenterology

Primary CIRC Users 2019-2020

CIRC Participation in National Collaboratives & Registries

• Pediatric Heart Network (PHN)
  – Echo Z-score
  – SVR Trial
  – DO IT Trial
  – FUEL and FUEL OLE Trials
• Fetal Heart Society
• Cardiac Genetics Registry
• FORCE (Fontan collaborative)
• American College of Cardiology (ACC) QNET
• Society of Pediatric Echocardiography (SOPE)
Vascular Function Tests

Current Studies Using Vascular Program

- Cardiology
  PHN DO IT Trial (NIH)
- Nephrology
  PRIDE (NIH)
  T-Cell Signaling in CKD (NIH)
- Oncology
  PREDICT (Aflac)
  LETKI (Aflac)
- Surgery
  Adolescent obesity
Recent Presentations/Publications

Our team is committed to research and has had the opportunity to contribute to medical science through abstract presentations and publications. Below is a list of selected abstracts presented within the last year at various national and regional meetings through research supported by CIRC.

2020-present


Longitudinal Follow-up of Echocardiographic Abnormalities Including Strain in Multisystem Inflammatory Syndrome in Children (MIS-C). Gaitonde M, Kellemman M, Cox D, Border W, Sachdeva R.

Implementation of Appropriate Use Criteria for Transthoracic Echocardiography in Follow up Care of Pediatric Patients with Congenital Heart Disease. Trisha Patel, MD, Michael Kelleman, MSPH, Sarah Pickard, MD, MPH, Jamison Miller, MD, Divya Suthar, MD, Ritu Sachdeva, MBBS


Finding An Agent That's Right For You

Meet The Team

Ritu Sachdeva, MD, FACC, FASE
Medical Director

Deanna Hill, CCRP
Research Coordinator

Sassan Hashemi, MD
Imaging Scientist

Brian Schlosser, BS, RDCS, RDMS, FASE
Clinical Educator

Amanda Harding, RDCS
Senior Cardiac Sonographer

Jaimee Housey, RDCS
Cardiac Sonographer

Joan Lipinski, MHS, RDCS, FASE
Manager of Echocardiography & CIRC

Guadalupe Izaguirre, BS
Research Coordinator

David Cox, RDCS
Cardiac Sonographer Supervisor

Gemma Morrow, RDCS
Senior Cardiac Sonographer

Anna Kate Shaw, RDCS
Cardiac Sonographer

Children's Healthcare of Atlanta