Division Summary

RESEARCH AND TRAINING DETAILS

Number of Faculty 49
Number of Joint Appointment Faculty 23
Number of Research Fellows 1
Number of Research Students 13
Number of Support Personnel 58
Direct Annual Grant Support $3,051,779
Direct Annual Industry Support $8,730
Peer Reviewed Publications 137

CLINICAL ACTIVITIES AND TRAINING

Number of Clinical Staff 236
Number of Staff Physicians 10
Number of Clinical Fellows 12
Number of Other Students 63
Inpatient Encounters 51,752
Outpatient Encounters 149,478

Significant Accomplishments

Leadership in Patient Safety
The Department of Radiology continues to lead efforts in quality improvement and operational excellence. Our “Right Patient, Right Exam” initiative prevented more than 490 patient care errors in 2014, achieving 5-sigma process reliability.

In radiography and fluoroscopy, doses have been reduced as much as 75 percent from standard practices. Our interventional radiology team, physicists, and industry partners have created techniques that reduce radiation exposure up to 95 percent during complex and lengthy interventional radiology cases, while obtaining high-quality images.

Patients with scoliosis often need repeat whole spine radiographs. We have recently installed a specialized digital slot scanning system that allows image acquisition with up to a 90 percent reduction in radiation exposure for these patients.

Expanding Capabilities in Imaging Technology
This year, with the Imaging Research Center (IRC), we invested in infrastructure and capabilities to ensure that researchers throughout the medical center have access to the latest technologies.

We installed a 1.5 Tesla MR system used by the interventional laboratory for research into multi-modality interventions. The system’s Sonalleve™ high-intensity focused ultrasound (HIFU) system is the only one in a
preclinical research facility in the country. Our 7 Tesla MR imaging system was upgraded to enable faster scanning with new imaging capabilities.

On the clinical side, we added a new 3T system in Radiology and a new 1.5T system for cardiac imaging in the Heart Institute. Both systems allow state-of-the-art clinical research and advances in imaging evaluation for our patients.

**Expanding our Imaging Research Center (IRC)**

We expanded the breadth and depth of research by installing a 1.5T Philips MRI and hyperpolarizers for $^3$He and $^{129}$Xe MR imaging, and upgrading our 7T system. The IRC won a “Taking on Tomorrow Award” from Boston Children’s Hospital for our NICU MRI, to continue our work in making this modality accessible to our most fragile patients.

Our NICU MRI capabilities, our hyperpolarized gas capabilities, and the collaborative relationships between Radiology, Pulmonology, the Perinatal Institute, and Developmental Biology resulted in an abstract entitled “Pulmonary MRI in Neonatal Medicine.” The project was recognized as one of the most significant abstracts at an international radiology meeting this year.

Zackary Cleveland, PhD, joined the faculty in Radiology and Pulmonary Medicine as an assistant professor; his knowledge of hyperpolarized gas imaging adds significant expertise to our growing pulmonary MR imaging program.

**Pediatric Neuroimaging Research Consortium (PNRC)**

C-MIND (Cincinnati MR Imaging of NeuroDevelopment) is an NICHD-sponsored project, led by the PNRC, to provide a database of brain structural, functional, and perfusion MRI. The database includes structural and functional neuroimaging data and neurocognitive assessments for nearly 200 healthy, normally developing children from infancy to 18 years. The database was recently released for public use, and is available for download at [https://research.cchmc.org/c-mind/](https://research.cchmc.org/c-mind/).

**Research Highlights**

**Patient Safety – Primum Non Nocere**

The Department of Radiology continues to be a leader in quality improvement and operational excellence. Our “Right Patient, Right Exam” initiative is designed to decrease inappropriate imaging from order entry errors, and prevented more than 490 errors from reaching patients in fiscal 2014, achieving a 5-sigma process reliability.

Our leadership in minimizing pediatric imaging radiation exposure continues with radiography and fluoroscopy, where doses have been reduced up to 75% from standard practices. Work with our interventional radiology team, department physicists, and industry partners have created new techniques that allow up to 95% reduction in radiation exposure during complex and lengthy interventional radiology cases, while still obtaining high quality images.

Patients with scoliosis (curvature of the spine) often need repeated whole spine radiographs as part of their treatment monitoring. The Department has recently installed a specialized digital slot scanning system that allows image acquisition with up to a 90% reduction in radiation exposure for these patients.

**Imaging Technology – Expanding Capabilities**

New discovery in imaging requires high quality state of the art equipment in a field that is always advancing.
This year the Department of Radiology and Imaging Research Center (IRC) made significant investments in infrastructure and capabilities to ensure that departmental researchers, and researchers from the entire Cincinnati Children’s enterprise, have access to the equipment and technologies that they need.

Among many improvements was the installation of a wide-bore 1.5 Tesla MR system for preclinical and clinical research in the IRC. The system was installed adjacent to the research interventional lab and is being used for research into multi-modality interventions. This system also contains the Sonalleve™ high-intensity focused ultrasound (HIFU) system, the only one in a preclinical research facility in the country. Our seven Tesla MR imaging system received a major upgrade to its electronic components. This upgrade included new pulse sequencing hardware and three additional receive channels, enabling faster scanning with new imaging capabilities.

On the clinical side, we added a new 3T system in the main department and a new 1.5T system for cardiac imaging located in the Heart Institute on A6. Both systems allow state of the art clinical research and give us the ability to bring the most current advances in imaging evaluation to our patients.

Imaging Research Center (IRC) (https://irc.cchmc.org)
Significant expansion in the breadth and depth of research capabilities has occurred with the installation of a new 1.5T Philips MRI, the installation of hyperpolarizers for $^3$He and $^{129}$Xe MR imaging, and the upgrade of our 7T system. In recognition of our NICU MRI program, the IRC won a “Taking on Tomorrow Award” from Boston Children’s Hospital to continue our work in making this important modality accessible to our most fragile patients.

The combination of our NICU MRI capabilities, our hyperpolarized gas capabilities, and the excellent collaborative relationships between Radiology, Pulmonology, the Perinatal Institute, and Developmental Biology resulted in an abstract entitled “Pulmonary MRI in Neonatal Medicine.” Presented at the ISMRM in Milan, this project was recognized as one of the most interesting and significant abstracts at this worldwide meeting. Further strengthening this program, Zackary Cleveland, PhD, joined the faculty in Radiology and Pulmonary Medicine as an assistant professor from Duke University; his knowledge of hyperpolarized gas imaging adds significant expertise to our growing pulmonary MR imaging program.

Pediatric Neuroimaging Research Consortium (PNRC) (https://pnrc.cchmc.org)
The C-MIND project (Cincinnati MR Imaging of NeuroDevelopment), an NICHD-sponsored contract to provide a normative database of brain structural, functional, and perfusion MRI. Lead by the PNRC, with the partnership of the University of Cincinnati, The Brain Mapping Center at UCLA, The Laboratory of Neuroimaging (LONI) at USC>, Children's Hospital of Pittsburgh, and The Functional MRI Laboratory University of Michigan, the database now includes structural and functional neuroimaging data and neurocognitive assessments in nearly 200 healthy, normally developing children from infancy to 18 years. This data base was recently released for public use, and data is available for download at https://research.cchmc.org/c-mind/ along with user manuals, variable dictionaries, documentation of methods and quality assurance, and standard processing pipelines. Extensive neuropsychological assessment data is also available on each participant, through the database. Additionally, three year longitudinal subsamples of children (ages 0-3 years and 7-9 years) are available for developmental studies.

Faculty Honors and Awards:
Scott Holland, PhD: Excellence in Doctoral Mentoring Award from the University of Cincinnati

Carl Merrow, MD: Elected to membership in the International Society for the Study of Vascular Anomalies
Interventional Radiology Section (Todd Abruzzo, MD, Neil Johnson, MD, Kamlesh Kukreja, MD, Manish Patel, DO, John Racadio, MD): Cincinnati Children's Hospital Medical Center Faculty Team Award

Tal Laor, MD: Jack Haller Award for Excellence in Education from the Society for Pediatric Radiology

Alex Towbin, MD: Harold B. Spitz, MD Resident Teaching Award from the Department of Radiology, University of Cincinnati College of Medicine; Election as Fellow of the International Cancer Imaging Society

Brian Coley, MD: Election as Fellow of the American College of Radiology

**Significant Publications**


While children with unexpected subdural collections should still cause concern for abusive head trauma, 3.6% of children with macrocrania may have such collections in the absence of such injury.


This paper provides the first empirical evidence that shows repeated MRI exposure during development does not have deleterious effects on IQ or BMI.


The concept of diagnostic reference ranges addresses the balance between the patient’s risk (radiation dose) and benefit (diagnostic image quality). Calculation of reference doses provides a tool to help develop site-specific CT protocols that help manage pediatric patient radiation doses.


Ultrashort TE (UTE) is a relatively new MRI technique that allows for the visualization of tissue structures with short T2 components that show little or no signal on conventional MR imaging sequences. Not used previously in children, this technique will allow more detailed imaging of structures in many pediatric conditions.


Patients with chronically elevated right heart pressures develop hepatic dysfunction from chronic congestion and fibrosis, now quantifiable and trackable non-invasively with this technique.

**Division Publications**


50. Kim HK, Serai S, Merrow AC, Wang L, Horn PS, Laor T. *Objective measurement of minimal fat in normal skeletal muscles of healthy children using T2 relaxation time mapping (T2 maps) and MR


124. Wang Y, Holland SK. Comparison of functional network connectivity for passive-listening and active-

Faculty, Staff, and Trainees

Faculty Members

Brian D. Coley, MD, Professor
Leadership Director and Radiologist-in-Chief; Endowed Chair, The Frederic N. Silverman Chair for Pediatric Radiology

Research Interests Ultrasound, imaging care delivery

Bernadette L. Koch, M.D., Professor
Leadership Associate Chief, Academic Affairs
Research Interests Imaging the pediatric head and neck

Blaise V. Jones, MD, Professor
Leadership Associate Chief, Clinical Operations; Division Chief, Neuroradiology; Division Co-Chief, MRI
Research Interests Pediatric neuroradiology, neuro-oncology and cerebrovascular diseases

Todd A. Abruzzo, MD, Associate Professor
Leadership Chief, Pediatric Interventional Neuroradiology
Research Interests Cerebrovascular disease, childhood stroke, aneurysms, intra-arterial chemotherapies, vascular malformations, neurovascular interventions

Christopher G. Anton, MD, Assistant Professor
Leadership Associate Director, Radiology Residency Program; Chief Division of Radiography
Research Interests Musculoskeletal diseases

Diane S. Babcock, MD, Professor Emerita

William S Ball, MD, Professor
Research Interests Pediatric Neuroradiology

Alan S. Brody, MD, Professor
Leadership Associate Director, Clinical Radiology Research; Chief, Division of Thoracic Imaging
Research Interests Imaging of the chest in cystic fibrosis and in childhood diffuse lung disease. He directs the Center for Diagnostic Imaging of the Therapeutic Development Network

Maria A. Calvo-Garcia, MD, Assistant Professor
Research Interests Fetal development and malformations including cloaca and other ano-rectal malformations, obstructive uropathy, skeletal dysplasias, vascular birthmarks, etc.

Marquerite M. Care, MD, Assistant Professor
Research Interests Traumatic brain injury, child abuse, CT neuroimaging

Kim M. Cecil, PhD, Professor
Research Interests Application of MR spectroscopy and imaging in several populations by characterizing the features of inborn errors in metabolism, attention-deficit hyperactivity disorder (ADHD), traumatic brain injury, and evaluating the effects of environmental neurotoxicants.

Eric J. Crotty, MD, Assistant Professor
Leadership Director, Pediatric Radiology Fellowship Program
Research Interests Cardiothoracic radiology, specifically childhood interstitial lung disease and also resident education

Mark DiFrancesco, PhD, Assistant Professor
Leadership Assistant Director, Pediatric Neuroimaging Research Consortium
Research Interests Imaging structure and function of brain networks impacted by behavioral and disease-related challenges

Charles L. Dumoulin, PhD, Professor
Leadership Scientific Director, Imaging Research Center
Research Interests Physics and engineering of Magnetic Resonance, MRI of neonates, MR-guided vascular interventions, and MR-guided Focused Ultrasound Therapy
Kathleen H. Emery, MD, Professor  
**Leadership** Division Co-Chief. Musculoskeletal Imaging  
**Research Interests** Musculoskeletal imaging and sports medicine

Robert J. Fleck, MD, Assistant Professor  
**Leadership** Division Chief, Cardiac MRI  
**Research Interests** CT and MR of the cardiopulmonary system.

Michael J. Gelfand, MD, Professor  
**Leadership** Division Chief, Nuclear Medicine  
**Research Interests** New applications of hybrid imaging (PET/CT, SPECT/CT, PET/MRI) in pediatrics, and radiation dose reduction in nuclear medicine and hybrid imaging

Randy O. Giaquinto, Instructor  
**Research Interests** MR coil engineering

Marilyn J. Goske, MD, Professor  
**Leadership** Chair, Educational Council  
**Research Interests** Radiation protection for children, communication, education for radiologists, technologists and fellows.

Kathy J. Helton-Skally, MD, Assistant Professor

Scott Holland, PhD, Professor  
**Leadership** Director, Pediatric Neuroimaging Research Consortium; Director, Communication Sciences Research Center  
**Research Interests** Advanced neuroimaging applications of MRI in pediatrics with a concentration on functional MRI of language, hearing and computational models of neural connectivity

Tzipi Horowitz-Kraus, Professor  
**Leadership** Program Director, Reading and Literacy Discovery Center  
**Research Interests** Neuroimaging: written language; oral language development

Neil D. Johnson, MD, Professor  
**Leadership** Endowed Chair, The Neil D. Johnson Chair for Radiology Informatics; Medical Director, Vascular Access  
**Research Interests** Interventional percutaneous image guided treatment of benign bone tumors such as Aneurysmal Bone Cyst and Osteoid Osteoma

Hee Kyung Kim, MD, Assistant Professor  
**Research Interests** Advanced MR techniques in pediatric MR studies, neuromuscular disease, and cartilage image

Beth M. Kline-Fath, MD, Associate Professor  
**Leadership** Division Chief, Fetal Imaging  
**Research Interests** Fetal MRI, fetal ultrasound and neuroimaging

Steven J. Kraus, MD, Associate Professor  
**Leadership** Division Chief, Fluoroscopy  
**Research Interests** Gastrointestinal malformations
Tal Laor, MD, Professor
  Leadership Division Co-Chief Musculoskeletal Imaging; Endowed Chair, The William S. Ball Chair for Radiology Research
  Research Interests Skeletal injuries to the child, congenital abnormalities, and normal and abnormal bone growth and development

James L. Leach, MD, Associate Professor
  Research Interests Epilepsy, functional MRI, neoplasms, cerebrovascular disease, brain perfusion imaging, diffusion imaging and image fusion

Greg Lee, PhD, Assistant Professor
  Research Interests High-speed MR imaging

Diana Lindquist, PhD, Associate Professor
  Research Interests Metabolic effects of drugs used to treat psychiatric illness

Yu Li, PhD, Assistant Professor
  Research Interests Technological development and clinical applications of high speed MR imaging and spectroscopy including RF coil array technology for clinical MRI

Carl (Arnold) Merrow, Jr, M.D., Assistant Professor
  Research Interests Pediatric musculoskeletal and fetal imaging including musculoskeletal neoplasms and vascular lesions, and rheumatologic imaging

Michael P. Nasser, MD, Assistant Professor

Alan E. Oestreich, MD, Professor Emeritus
  Research Interests Musculoskeletal plain imaging; bone dysplasias; metabolic bone disease; umbilical vein catheterization; postgastric magnetopathy; sequential perception

Sara M. O'Hara, MD, Professor
  Leadership Division Chief, Ultrasound
  Research Interests Cutting edge ultrasound techniques and equipment, genitourinary imaging, and newborn imaging

Manish N. Patel, MD, Associate Professor
  Research Interests Diagnosis and treatment of vascular malformation, pediatric PICC placement, and pre-operative evaluation of patient with anorectal malformation

Daniel J. Podberesky, MD, Assistant Professor
  Leadership Division Chief, Thoraco-Abdominal Imaging
  Research Interests Optimization of CT radiation dose and image quality, advanced CT and MR gastrointestinal tract

John M. Racadio, MD, Professor
  Leadership Division Chief, Interventional Radiology; Director IR Research Lab
  Research Interests Viral oncolytic therapy, 3D image fusion and intervention and radiation safety

Mantosh Rattan, MD, Assistant Professor
  Research Interests Thoracic imaging, neonatal abdominal MRI

Vincernt J. Schmithorst, PhD, Assistant Professor
  Research Interests Specialties: Cortical Reorganization in children with unilateral sensorineural hearing loss
using functional magnetic resonance imaging (fMRI); the development of language function in children using fMRI; white matter maturation in children

**Susan E. Sharp, MD**, Assistant Professor
*Research Interests* Pediatric nuclear medicine, focusing on SPECT/CT and PET/CT.

**Suraj Serai, PhD**, Assistant Professor
*Research Interests* MR physics; t2 mapping; spectroscopy; diffusion; fMRI; optimization of MR imaging protocols for enhanced image quality and better diagnosis

**Keith Strauss**, Assistant Professor
*Leadership* Clinical Imaging Physicist
*Research Interests* Radiation dose reduction, image optimization

**Jean Tkach, PhD**, Associate Professor
*Research Interests* Development, implementation and optimization of neonatal MRI acquisition techniques

**Alexander J. Towbin, MD**, Associate Professor
*Leadership* Director, Radiology Informatics
*Research Interests* Radiology informatics; cancer imaging and abdominal imaging

**Andrew Trout, MD**, Assistant Professor
*Research Interests* Nuclear medicine; advanced body CT and MR imaging

**Daniel B. Wallihan, MD**, Assistant Professor
*Research Interests* Cardiovascular imaging and education

**Janaka Wansapura, PhD**, Associate Professor
*Research Interests* MR imaging of familial cardiomyopathy in human and in transgenic animal models; vascular compliance, MR guided thermo-therapy and fat/water decomposition

**Patrick Winter, PhD**, Assistant Professor
*Research Interests* Molecular imaging of cancer and cardiovascular disease, multi-nuclear imaging and spectroscopy, tracking USPIO labeled cell migration, and activatable MRI contrast agents

**Jason C Woods, PhD**, Professor
*Leadership* Director, Center for Pulmonary Imaging Research
*Research Interests* Hyperpolarized gas; pulmonary MRI; translational studies; image-guided pulmonary interventions

**Weihong Yuan, PhD**, Assistant Professor
*Research Interests* Diffusion tensor imaging in clinical and experimental hydrocephalus and application of various imaging techniques in children with traumatic brain injury, epilepsy and other neurological disorders

**Andrew M. Zbojniewicz, MD**, Assistant Professor
*Research Interests* Musculoskeletal imaging, US-guided therapy

**Trainees**
- **Reem Awwad, MD**, PL6, University of Cincinnati College of Medicine
- **Alisa Kanfi, MD**, PL7, Yale New Haven Hospital
- **George Koberlein, MD**, PL6, Oakwood Hospital & Medical Center
- **Luke Linscott, MD**, PL7, Mallinckrodt Institute of Radiology
Division Collaboration

Evaluate the radiology findings in children with hemophagocytic lymphohistioc (Rupa Radhakrishnan, MD; Alex Towbin, MD)

**Bone Marrow Transplant and Immune Deficiency** » Alexandra Filipovich, MD

Prenatal diagnosis of variants of the extrophy-epispadias complex (covered cloacal extrophy variants) (Maria Calvo-Garcia, MD; Beth Kline-Fath, MD)

**General and Thoracic Surgery** » Andrea Bischoff, MD

**Urology** » Pramod Reddy, MD

fMRI in Pediatric Epilepsy Surgery (James Leach, MD; Craig Hansen)

**General and Thoracic Surgery** » Andrea Bischoff

**Urology** » Pramod Reddy, MD

CT Imaging of Pulmonary Parenchymal Nodules in Patients with Solid Organ Tumors: (Daniel Podberesky MD; Judy Squires MC; Alex Towbin MD; Andrew Trout MD)

**General and Thoracic Surgery** » Anusua Dasgupta, MD, Nathalie Kremer, and Daniel von Allmen, MD

**Oncology** » James Geller, MD and Lars Wagner, MD

Timing of the Development of Syringomyelia in Infants born with Myelomeningoceles (Beth Kline-Fath, MD)

**Neurosurgery** » Karin Bierbrauer, MD

**Urology** » Danesh Bansal

PAP and UTE MRI with CT (Alan Brody, MD; Suraj Serai, PhD)

**Pulmonary Medicine** » David Roach, MD, Bruce Tarpnell, MD, and Jason Woods, MD

**Biostatistics & Epidemiology** » James Decker and Rhonda Szczesniak

Elbow coil development (Christopher Anton, MD; Elizabeth Bippus; Shery Dearth; Kathleen Emery, MD; Darin England; Carl Merrow, MD; Suraj Serai, PhD; Julie Young; Brynne Williams; Andrew Zbojiewicz, MD)

**Radiology Imaging Research Center** » Charles Dumoulin, PhD, Randy Giaguinto, John Lanier, Lacey Sickinger, Kansie Somers, Jean Tkach, PhD, Lisa Tully, and Wolfgang Loew

Developmental Venous Anomalies: Incidence in children with CNS tumors (Blaise Jones MD; James Leach, MD; Luke Linscott, MD)

**Division of Oncology** » Trent Hummel, MD
To learn as much as possible about Smith-Lemli-Opitz Syndrome (SLOS) by following a large group of individuals with SLOS over a period of time (Blaise Jones, MD)

**Gastroenterology** » James Heubi, MD
**Radiology Imaging Research Center** » William Ball, MD and Kim Cecil, PhD
**Clinical Translational Research Center** » Donna Buckley and Suzanne Summer
**DDBP - Psychology** » Nicole Bing
**Clinical Translational Research Center** » Jennifer Hunt
**Speech-Language Pathology** » Claire Miller

Retrospective review of abdominal MRI scans on patients with Gaucher disease (Daniel Podberersky, MD; Suraj Serai, PhD; Alexander Towbin, MD)

**Human Genetics** » Laurie Bailey, Thomas Burrow, MD, Rohit Kohli, and Carlos Prada
**Gastroenterology, Hepatology & Nutrition** » Rohit Kohli, MD and Stavra Xanthakos, MD

Fetal MRI findings in malformations of the brain (Maria Calvo-Garcia, MD; Beth Kline-Fath, MD)

**Cancer and Blood Diseases Institute** » Stephanie Dixon, MD

Arachnoid cysts diagnosed in prenatal and young children: Is there an increased need for surgical intervention? (Maria Calvo-Garcia, MD; Beth Kline-Fath, MD)

**Cancer and Blood Diseases Institute** » Stephanie Dixon, MD
**Neurosurgery** » Karin Bierbrauer, MD

CT Enterography in Pediatric and Adolescent Crohn Disease Patients (Daniel Podberesky, MD; Alexander Towbin, MD; Daniel Wallihan, MD)

**Gastroenterology, Hepatology & Nutrition** » Lee Denson, MD and Dana Dykes, MD

Liver Magnetic Resonance Elastography –Clinical Study in Children (Daniel Podberesky, MD; Suraj Serai, PhD)

**Gastroenterology, Hepatology & Nutrition** » Rohit Kohli, MD and Stavra Xanthakos, MD

Automated Segmentation and Derivation of Normal Values for Dynamic Modeling of the Trachea in Health and Disease (Robert Fleck, MD; Sarah Halula; Daniel Podberesky, MD; Robert Thomen)

**Radiology Imaging Research Center** » Robert Thomen
**Otolaryngology** » Robin Cotton, MD and Ravindhra Elluru
**Pulmonary Medicine - Clinical** » Robert Wood, MD and Jason Woods, MD

Imaging findings in phalangeal microgeodic syndrome (Kathleen Emery, MD; Arnold Merrow, MD; Rupa Radhakrishnan, MD)

**Rheumatology** » Rina Mina, MD

MR predictors of infection, inflammation, and structural lung damage in CF (Alan Brody, MD; Robert Fleck, MD; Suraj Serai, PhD)

**Pulmonary Medicine - Clinical** » Raouf Amin, MD, Megan Bushman, RN, John Clancy, MD, Lorrie Duan; Delana Terrill, and Kelly Thomson; Jason Woods, MD
**Biostatistics & Epidemiology** » Mathew Fenchel and Rhonda Szczesniak
**Radiology Imaging Research Center** » Erin Brockman
Biomedical Informatics  » Long Lu, MD

Pilot study of Cardiac MRI to assess pulmonary perfusion and pulmonary hemodynamics in patients with CF (Alan Brody, MD; Robert Fleck, MD; Suraj Serai, PhD)

Pulmonary Medicine - Clinical  » Raouf Amin, MD, Megan Bushman, RN, John Clancy, MD, Lorrie Duan, Jennifer Jeffries, RN, and Jason Woods, MD

Radiology Imaging Research Center  » Erin Brockman and Janaka Wansapura, PhD

The Image Kids Study (Daniel Podberesky, MD)

Gastroenterology, Hepatology & Nutrition  » Ramona Bezold, RN, Lee Denson, MD, Dana Dykes, MD, Kathleen Lakes, and Shehzad Saeed, MD

MRI muscle in Duchenne Muscular Dystrophy (Hee Kyung, MD; Tal Laor, MD; Suraj Serai, PhD)

Neurology  » James Collines, MD, Paul Horn, MD, and Brenda Wong, MD

Radiology Imaging Research Center  » Diana Lindquist, PhD and Kansie Somers

Spectrum of Imaging Findings of Complete Tracheal Rings (Congenital Tracheal Stenosis) (Robert Fleck, MD; Rupa Radhakrishnan, MD)

Otolaryngology  » Michael Rutter, MD

Dose Reduction in Follow-Up PET/CT Imaging of Lymphoma: When Does Localization CT Actually Provide Additional Diagnostic Information? (Michael Gelfand, MD; Susan Sharp, MD)

Oncology  » Michael Absalon, MD

NANT 2001-02 (Michael Gelfand, MD; Susan Sharp, MD)

Cancer and Blood Diseases Institute  » Donna Jackson, Sonata Jodele, and Brian Weiss, MD

Oncology  » Michael Absalon, MD, Denise Adams, MD, Lori Backus, Michelle Bierman, RN, Courtney Blank, Karen Burns, MD, Lionel Chow, MD, Stacey Crane, RN, Mariko Dewire, MD, Renee Doughman, Laura Fossett, MD, Maryam Fouladi, MD, James Geller, MD, Laurie Jane Grimme, Trent Hummel, MD, Jenavieve Kirkendall, Jenifer Mangino, MD, Julie McDonald, Erin Mcguire, Dinah Meister, RN, Rajaram Nagarajan, MD, Maureen O'Brien, MD, Christine Phillips, MD, Julie Plummer, Lane Satterthwaite, Siri Steiner, Beth Ann Stockman, RN, Jenny Thomas-Quinn, Marianne Torontali, Brian Turpin, MD, Cara Wilburn, and Jordan Wright

Bone Marrow Transplantation & Immune Deficiency  » Sharat Chandra, MD, Stella Davies, MD, Michael Grimley, MD, and Parinda Mehta, MD

A5C Inpatient Unit - Heme/Onc  » Renee Fischesser, RN

Cancer and Blood Diseases Institute  » Donna Jackson and Sonata Jodele, MD

NDP MIBG IND -Gain more information about acute and late toxicity of 131I-MIBG therapy for patients with refractory neuroblastoma, pheochromocytoma, or paraganglioma (Michael Gelfand MD; Susan Sharp, MD)

Cancer and Blood Institute  » Brian Weiss, MD

Oncology  » Michael Absalon, MD, Denise Adams, MD, Lori Backus, Michaelle Bierman, RN, Courtney Blank, Karen Burns, MD, Lionel Chow, MD, Stacey Crane, RN, Mariko Dewire, MD, Renee Doughman, Jonathan Fisk, Laura Fossett, MD, Maryam Fouladi, MD, James Geller, MD, Laurie Jean Grimme, Adrienne Hammill, Trent Hummel, MD, Donna Jackson, Jeanavieve Kirkendall, Jennifer Mangino, MD, Julie McDonald, Erin Mcguire, Lori Miller, Benjamin Mizukawa, MD, Rajaram Nagarajan, MD, Maureen O'Brien, MD, Christine
NANT 2007-03– This phase I study therefore combines 131I-MIBG with vorinostat to attempt to improve upon the efficacy of 131I-MIBG monotherapy. (Michael Gelfand MD; Susan Sharp, MD)

**Cancer and Blood Diseases Institute**  »  Brian Weiss, MD

**Oncology**  »  Michael Absalon, MD, Denise Adams, MD, Lori Backus, Michael Bierman, RN, Courtney Blank, Karen Burns, MD, Lionel Chow, MD, Stacey Crane, RN, Mariko Dewire, MD, Renee Doughman, Jonathan Fisk, Laura Fossett, MD, Maryam Fouladi, MD, James Geller, MD, Laurie Jean Grimme, Adrienne Hammill, MD, Trent Hummel, MD, Donna Jackson, Jenavieve Kirkendall, Jennifer Mangino, MD, Julie McDonald, Erin McGuire, Dinah Meister, Lori Miller, Benjamin Mizukawa, MD, Rajaram Nagarajan, MD, Maureen O’Brien, MD, Christine Phillips, MD, Julie Plummer, Lane Satterthwaite, Siri Steiner, Beth Ann Stockman, RN, Mary Suhre, Jenny Thomas-Quinn, Marianne Torontali, Brian Turpin, MD, Cara Wilburn, Norma Woolum, and Jordan Wright

**A5C Inpatient Unit - Heme/Onc**  »  Renee Fischesser, RN

**HSV 1716 – A PHASE I DOSE ESCALATION STUDY OF INTRATUMORAL OR INTRAVENOUS HERPES SIMPLEX VIRUS-1 MUTANT HSV1716 IN PATIENTS WITH REFRACTORY NON-CENTRAL NERVOUS SYSTEM (NON-CNS) SOLID TUMORS** (Neil Johnson, MD; Manish Patel, MD; John Racadio, MD; Alexander Towbin, MD)

**Cancer and Blood Disease Institute**  »  James Geller, MD

**Oncology**  »  Michael Absalon, MD, Dennis Adams, MD, Lori Backus, Courtney Blank, Karen Burns, MD, Stacey Crane, RN, Mariko Dewire, MD, Renee Doughman, RN, Jonathan Fisk, Maryam Fouladi, MD, Laura Fossett, MD, Trent Hummel, MD, Jenavieve Kirkendall, Jennifer Mangino, MD, Julie McDonald, Erin Mcguire, Rajaram Nagarajan, MD, Lane Satterthwaite, Beth Ann Stockman, RN, Mary Suhre, Marianne Torontali, Brian Weiss, MD, and Jordan Wright

**Radiology Imaging Research Center**  »  Kim Cecil, PhD

**Infectious Diseases**  »  David Bemstein, MD

**A5C Inpatient Unit - Heme/Onc**  »  Renee Fischesser, RN

**Group Investigational Pharmacy**  »  Denise Lagory

NANT 1999-01 (Michael Gelfand, MD; Susan Sharp, MD)

**Cancer and Blood Diseases**  »  Donna Jackson and Brian Weiss, MD

**Oncology**  »  Michael Absalon, MD, Denise Adams, MD, Lori Backus, Courtney Blank, Karen Burns, MD, Lionel Chow, MD, Stacey Crane, RN, Mariko Dewire, MD, Renee Doughman, RN, Laura Fossett, MD, Maryam Fouladi, MD, James Geller, MD, Laurie Jean Grimme, Adrienne Hammill, MD, Trent Hummel, MD, Jenavieve Kirkendall, Jennifer Mangino, MD, Julie McDonald, Erin Mcguire, Dinah Meister, RN, Benjamin Mizukawa, MD, Rogeram Nagarajan, MD, Maureen O’Brien, MD, Christine Philips, MD, Julie Plummer, Lane Satterthwaite, Siri Steiner, Beth Ann Stockman, RN, Mary Suhre, RN, Jenny Thomas-Quinn, Marianne Torontali, Brian Turpin, MD, Cara Wilburn, Norma Woolum, and Jordan Wright

**Bone Marrow Transplantation & Immune Deficiency**  »  Sharat Chandra, MD, Stella Davies, Michael Grimley, MD, Sonata Jodele, Md, and Parinda Mehta, MD
HGG-01 -- To determine the toxicities and feasibility of the proposed treatment regimen in patients with high-grade glioma and diffuse intrinsic brainstem glioma (Blaise Jones, MD; James Leach, MD)

**Oncology** » Michael Absalon, MD, Denise Adams, MD, Lori Backus, Michelle Bierman, RN, Courtney Blank, Mariko Dewire, MD, Renee Doughman, RN, Rachid Drissi, MD, Jonathan Fisk, Laura Fossett, MD, Maryam Fouladi, MD, James Geller, MD, Laurie Jean Grimme, Adrienne Hammill, MD, Trent Hummel, MD, Donna Jackson, Jenaviewe Kirkendall, Jennifer Mangino, MD, Julie McDonald, Erin Mcguire, Lori Miller, Benjamin Mizukawa, MD, Rajaram Nagarajaq, MD, Maureen O’Brien, MD, Christine Phillips, MD, Julie Plummer, Lane Satterthwaite, Siri Steiner, Beth Ann Stockman, RN, Laura Stoutenborough, Mary Suhre, Jenny Thomas-Quinn, Marianne Torentali, Brian Turpin, MD, Brian Weiss, MD, Megan Westendorf, Cara Wilburn, Norma Woolum, and Jordan Wright

**Biomedical Informatics** » Bruce Aronow, MD

**A5C CBDI Outpatient Clinic** » Kristine Feld, RN, Dawn Jack, RN, and Heather Ward, RN

**A5C Inpatient Unit - Heme/Onc** » Renee Fischesser, RN

**Cancer and Blood Diseases Institute** » Adam Lane

**Physical Medicine and Rehabilitation** » David Pruitt, MD

**Occupational Therapy and Physical Therapy** » Mariann Strenk, PT, DPT, MHS

**Neurology** » Mary Sutton, MD

Expanded Access MIBG - I-MIBG therapy has significant anti-tumor activity against refractory neuroblastoma as well as pheochromocytoma and paraganglioma. This protocol provides a mechanism to deliver this therapy and collect data that can be provided to the FDA. (Michael Gelfand, MD; Susan Sharp, MD)

**Cancer and Blood Disease Institute** » Courtney Blank, Karen Burns, MD, Laurie Jean Grimme, Maureen O’Brien, MD, Christine Phillips, MD, Lars Wagner, MD, Brian Weiss, MD, and Megan Westendorf

Imaging Findings in Radiation Treated Pediatric Ewing Sarcoma — review to catalogue FDG-PET/CT and MRI findings in patients with unresected skeletal Ewing Sarcoma with the aim of defining end of therapy imaging findings that portend a low risk of negative outcome (recurrence, progression, etc.) (Andrew Trout, MD; Andrew Zbojniewicz, MD)

**Oncology** » Brian Turpin, MD

**Radiation Oncology** » Luke Pater

Retrospective Clinical Review of Children with Rare Diffuse Lung Diseases (Alan Brody, MD; Eric Crotty, MD)

**Pulmonary Medicine** » Lorrie Duan, RN and Katharine Sebastian

To determine if an educational intervention improves health literacy in parents’/guardians’ whose child will be undergoing a fluoroscopic study. (Marilyn Goske, MD; Diane Hater; Steven Kraus, MD; Catherine Leopard)

**Emergency Department** » Lisa Vaughn, MD

There are limited data regarding the biology of diffuse intrinsic pontine gliomas (DIPG). This project provides the infrastructure for acquisition of biological specimens, imaging and correlative clinical data to facilitate biology studies in this group (Blaise Jones, MD; James Leach, MD)

**Oncology** » Maryam Fouladi, MD and Siri Steiner

**Pathology** » Lili Miles, MD

**Neurology** » Mary Sutton, MD
Evaluation of normal ovarian and uterine sizes (Andrew Trout, MD; Alexander Towbin, MD)

Gynecology » Lesley Breech, MD

High-Resolution Computed Tomography and Growth in Preschoolers with Cystic Fibrosis Receiving Behavioral and Nutrition Treatment: A Sub-Study to a Randomized Clinical Trial (Alan Brody, MD)

Behavioral Med-Clin Psychology » Leigh Ann Chamberlin, RD, MEd, Scott Powers, PhD, ABPP, Joseph Rausch, PhD, and Stephanie Sullivan

Pulmonary Medicine - Clinical » Gary McPhail, MD

Determination of Liver Stiffness in Chronic Liver Disease Patients by Acoustic Radiation Force Imaging (ARFI US) (Brian Coley, MD; Sara O’Hara, MD; Dan Podberesky, MD; Andrew Trout, MD)

Imaging Research Center » Erin Brockman and Lisa Tully

Gastroenterology, Hepatology & Nutrition » Rohi Kohli, MD, Garrett Sprague, and Stavra Xanthakos, MD

Quantitative Evaluation of the cartilage cap of osteochondromas: T2 relaxation time mapping and pathologic correlation (Hee Kim, MD; Tal Laor, MD)

Pathology » Kevin Bove, MD

Sequence Development and Optimization on Clinical MR Scanners (Alan Brody, MD; Robert Fleck, MD; Hee Kim, MD; Daniel Podberesky, MD; Suraj Serai, PhD; Alex Towbin, MD)

Imaging Research Center » Kim Cecil, PhD and Charles Dumoulin, PhD

Cardiology Clinic » Joshua Sticka, MD and Michael Taylor, MD

FDG PET in Langerhans Cell Histiocytosis (Michael Gelfand, MD; Susan Sharp, MD)

Hematology » Joseph Palumbo, MD

Imaging Biomarkers of Arteriopathy in Pediatric Stroke (Todd Abruzzo, MD; Gabriel De Vela, MD; James Leach, MD)

Neurology » John Michael Taylor, MD

Neurosurgery » Sudhakar Vadivelu, MD

Phenotypes among Children with Intracranial Arterial Aneurysms. (Todd Abruzzo, MD; Blaise Jones, MD; James Leach, MD)

Neurosurgery » Francesco Mangano, MD

Comparison of the Toshiba Aplio Scanner to the Siemens Acuson Sequoia Scanner for Transcranial Doppler Ultrasonographic Detection of Cerebral Blood Flow Velocities. (Janet Adams; David Dow, MD; Sara O’Hara, MD)

Hematology » Charles Quinn, MD

Imaging of Fractures in Children with Hepatoblastoma (Daniel Podberesky, MD; Alexander Towbin, MD)

Oncology » James Geller, MD

Pathology » Anita Gupta, MD and Amy Sheil, MD

Orthopaedics » Joel Sorger, MD

General and Thoracic Surgery » Gregory Tiao, MD
Use of gadoxetate disodium in the diagnosis of pediatric hepatic lesions (Daniel Podberesky, MD; Alexander Towbin, MD)

Oncology » James Geller, MD

FDG PET in Translocation Renal Cell Carcinoma (Andrew Trout, MD)

Oncology » James Geller, MD

Computed Tomography induced DNA double-standard breaks formation and subsequent repair as a marker of radiation sensitivity (Alan Brody, MD)

Bone Marrow Transplantation & Immune Deficiency » Stella Davies, MD, Stephanie Edwards, Alexandra Filipovich, MD, Richard Harris, MD, and Kasiani Myers, MD

Exp. Hem. & Cancer Bio. - Stem Cell Biology » Hartmut Geiger, PhD

Cardiology Clinic » Russel Hirsch, MD

Advanced Practice Nurses » Robin Mueller, RN, ANP

Oncology » Christine Phillips, MD

Multimodal Neuroimaging of Language Networks in Childhood (James Leach, MD)

Neurology » Hisako Fujiwara, Darren Kadis, MD, Douglas Rose, MD, and Jennifer Vannest, Ph.D

Neuroimaging Research Consortium » Scott Holland, PhD

Brain Imaging Analysis in Pediatric Epilepsy: Detection of Abnormal Cortex in Surgically Treated Patients (James Leach, MD)

Neurology » Hansel Greiner, MD, Douglas Rose, MD, and Leonid Rozhkov

Neurosurgery » Francesco Mangano, MD

Neuroimaging Research Consortium » Scott Holland, PhD

Imaging - pathology correlations in pediatric epilepsy (Michael Gelfand, MD; Marcia Komlos, MD; James Leach, MD)

Neurology » Hansel Greiner, MD and Leonid Rozhkov

Pediatric Neurosurgery » Francesco Mangano, MD

Pathology » Lili Miles, MD

Anatomical Variants of the Duodenum and their Clinical Implications (Steve Kraus, MD; Sara Ortiz-Romero, MD; Alexander Towbin, MD)

Gastroenterology, Hepatology & Nutrition » Ethan Mezoff, MD and Shehzad Saeed, MD

Pediatric General and Thoracic Surgery » Teresa Pestian

Prenatal Diagnosis of Vascular Birthmarks: Soft Tissue Vascular Tumors and Malformations. (Constance Bitters; Maria Calvo-Garcia, MD; Beth Kline-Fath, MD; Tal Laor, MD)

Oncology » Denise Adams, MD

Pathology » Anita Gupta, MD

Pediatric General and Thoracic Surgery » Foong-Yen Lim, MD

Prenatal evaluation of fetal lower urinary tract obstruction: imaging findings to define underlying etiology. (Constance Bitters; Maria Calvo-Garcia, MD; Beth Kline-Fath, MD)
General and Thoracic Surgery » Foong-Yen-Lim, MD

Percutaneous treatment of Deep Venous Thrombosis (DVT) in children (Jay Gollamudi, MD; Kamlesh Kukreja, MD; Matthew Lungren, MD; Manish Patel, MD)

Hematology » Ralph Gruppo, MD and Cristina Tarango, Md

Palliative Care » Junzi Shi

Retrospective Comparison of T2* and Ferriscan Analysis Methods for Estimating Liver Iron Content (Robert Fleck, MD; Daniel Podberesky, MD; Suraj Serai, PhD; Rhonda Strunk)

Hematology » Charles Quinn, MD

Biostatistics & Epidemiology » Mathew Fenchel, MS and Bin Zhang, PhD

Feasibility Assessment of the Use of MRI in the Evaluation of Acute Appendicitis (Daniel Podberesky, MD; Alexander Towbin, MD; Andrew Trout, MD; Daniel Wallihan, MD)

Emergency Department » Holly Brodzinski, MD, Alison Damon, Jenna Gilb, Andrea Kachelmeyer, Cassie Lampe, Nicole McClanahan, Carolin Reilly, Venita Robinson, Lara Stone, Daniel Von allmen, and John Witry

Pediatric General and Thoracic Surgery » Daniel Von allmen, MD

Diagnostic tools for detecting pneumonia in children (Diane Babcock, MD; Alan Brody, MD; Brian Coley, MD; Sara O'Hara, MD; Mantosh Ratan, MD)

Hospital Medicine » Lillian Ambroggio, PhD, Caitlin Clohessy, Samir Shah, MD, and Daniel Weiser

Global Child Health Center » Mark Steinhoff, MD

Biostatistics & Epidemiology » Maurizio Macaluso, MD

Detection of Malignant Peripheral Nerve Sheath Tumor (MPNST) by 2-fluoro-2-deoxyglucose (FDG) PET in Patients with Neurofibromatosis Type 1 (NF1) (Christopher Anton, MD; Michael Gelfand, MD; Susan Sharp, MD)

Oncology » Brian Weiss, MD

Marrow stimulatory effects of granulocyte colony stimulating factors and their effect on PET scans (Michael Gelfand, MD; Susan Sharp, MD; Andrew Trout, MD)

Oncology » Brian Turpin, MD

Pediatric CT enterography with dose reduction techniques (Daniel Podberesky, MD; Alex Towbin, MD; Daniel Wallihan, MD)

Biostatistics & Epidemiology » Lee Denson, MD and Bin Zhang, PhD

Combining clinical and imaging findings of acute appendicitis (Alexander Towbin, MD; Andrew Trout, MD)

Biostatistics & Epidemiology » Bin Zhang, PhD

To describe the prevalence of polymicrogyria in a well-defined population of individuals with 22q11.2 deletion syndrome

Cardiology » Robert Hinton, MD, Ashley Parrott, and Amy Shikany

Developmental and Behavioral Pediatrics » Julia Anixt, MD

Neurology » Mark Schapiro, MD

Radiology » Lily Wang, MD
Clinical Protocol for Female Lower Quadrant Abdominal Pain (Sara O'Hara, MD)

Emergency Medicine » Alison Damon, Jonathan Gagai, Andrea Kachelmeyer, Nicole McClanhan, Jarrod Peebles, Jennifer Reed, MD, Richard Thomas Strait, MD, and Regina Taylor

Nephrology » Michael Bennett, PhD

Biostatistics and Epidemiology » Chen Chen, PhD and Bin Huang, PhD

Surgery » Sundee Keswani, MD and Alice King, MD

Adolescent Gynecology » Beth Schwartz, MD

TCD with Transfusions Changing to Hydroxyurea (TWITCH): A Phase III Randomized Clinical Trail to Compare Standard Therapy (erythrocyte Transfusions) with Alternative Therapy (Hydroxyurea) for the Maintenance of Lowered TCD velocities in Pediatric Subjects with Sickle Cell Anemia and Abnormal Pre-Treatment TCD Velocities (Janet Adams; Robert Fleck, MD; Sara O’Hara, MD; Suraj Serai, PhD)

Cancer and Blood Diseases Institute » Theodosia Kalfa, MD

Hematology » Lynn Amend, Adriane Hausfeld, RN, Karen Kalinyak, MD, Ludmila Kisielewksa, Eric Mullins, MD, Tamara Nordheim, RN, Charles Quinn, MD, Amy Shova, Cristina Tarango, MD, and Kelly Thueneman, RN

Advance Practice Nurses » Peggy Kaiser, APN, Darice Morgan, APN, and Kathy Schibler, APN

Normograms for common bile duct diameter in the pediatric population (Albert Feng; Sara O’Hara, MD)

Gastroenterology » Tom Lin, MD

3-dimensional Assessment of Glenohumeral Dysplasia Following Neonatal Plexus Palsy: a Magnetic Resonance Imaging Study (Tal Laor, MD)

Orthopedics » Roger Cornwall, MD and Emily Eismann

Glenohumeral Abduction Deformity Study (Tal Laor, MD)

Orthopedics » Roger Cornwall, MD, Emily Eismann, and Kevin Little, MD

MRI of Epiphyseal and Non-epiphyseal ends of long bones of the hands and feet in children (Tal Laor, MD; Kathleen Emery, MD)

Orthopedics » Kevin Little, MD

Buckle Fracture Misdiagnosis (Tal Laor MD)

Orthopedics » Kevin Little, MD, Emily Eismann, Roger Comwall, MD, and Bernardus Terre-Blanche

Retro vs Trans-articular Drilling RCT for OCD (Tal Laor, MD; Andy Zbojniewicz, MD)

Orthopedics » Eric Wall, MD, Emily Eismann, Cara Meder, and J. Miller

Sports Medicine » Greg Myer, PhD

Occupational and Physical Therapy » Mark Paterno, PhD

Osteochondritis Dissecans Classification (Tal Loar, MD; Andy Zbojniewicz, MD)

Orthopedics » Eric Wall, MD, Emily Eismann, Cara Meeder, and Julie Miller

Sports Medicine » Greg Myer, PhD and Stacie Thomas

Occupational and Physical Therapy » Mark Paterno, PhD
Capitellum Ossification (Tal Loar, MD)
- **Orthopedics** » Kevin Little, MD, Roger Cornwall, MD, and Emily Eismann
- **General Pediatrics** » Lauren Fader

Sentinel Lymph Node Biopsy (Michael Gelfand, MD; Tal Loar, MD; Susan Sharp, MD)
- **Oncology/CBDI** » R. Doughman, RN, L Fossett, J. Fisk, E. McGuire, D. Jackson, B. Poole, R. Nagarajan, MD, L. Satterthwaite, B. Turpin, MD, C. Wilburn, and N. Woolum
- **Surgery** » A. Dasgupta, MD, G. Tiao, MD, D. von Allmen, MD, and N. Kremer, MD
- **Orthopedics** » J. Sorger, MD

Multi-Center Knee OCD Registry (T. Laor, MD; A. Zbojniewicz, MD)
- **Orthopedics** » E. Wall, MD, A. Pohlman, and J. Miller
- **Sports Medicine** » G. Myer, PhD
- **Occupational and Physical Therapy** » M. Patemo, PhD

All epiphyseal ACL MRI Evaluation (T. Laor, MD; A. Zbojniewicz, MD)
- **Orthopedics** » E. Wall, MD, E. Eismann, and S. Yang, MD

Temporal Evolution and Outcomes of Cystic Ovarian Masses in Pediatric Patients (A. Trout, MD; A. Towbin, MD)
- **Gynecology** » L. Breech, MD and B. Schwartz, MD
- **Oncology** » J. Geller, MD and B. Dasgupta, MD

Neuroblastoma Volume Response (A. Trout, MD; A. Towbin, MD)
- **Division of Pediatric General and Thoracic Surgery** » D. von Allmen, MD
- **Division of Oncology** » B. Weiss, MD

HU Prevent (James Leach, MD)
- **Cancer and Blood Diseases Institute** » Charles Quinn, MD
- **Hematology** » Adriane Hausfeld, RN, Theodosia Kalfa, MD, PhD, Courtney Little, RN, Kelly Thueheman, RN, and Karen Kalinyak, MD
- **Neurology** » Marielle Kabbouche, MD
- **Anesthesia** » Mohamed Mahmoud, MD
- **EHCB Hem Gene Therapy Program** » Punam Malik, MD
- **Behavioral Med-Clin Psychology** » Monica Johnson Mitchell, PhD

Pediatric Nonconvulsive Status Epilepticus (James Leach, MD)
- **Neurology** » Hansel Greiner, MD, Andrew Hershey, MD, PhD, and Douglas Rose, MD

DIPG Registry and Repository (Blaise Jones, MD; James Leach, MD)
- **Cancer and Blood Diseases Institute** » Maryam Fouladi, MD
- **Oncology** » Michael Absalon, MD, Karen Burns, MD, Denise Adams, MD, Lionel Chow, MD, PhD, Mariko Dewire, MD, Stacey Crane, RN, James Geller, MD, Adrienne Hammill, MD, PhD, Trent Hummel, MD, Benjamin Mizukawa, Rajaram Nagarajan, MD, Maureen O’Brien, MD, John Perentesis, MD, Beth Ann Stockman, RN, Mary Suhre, RN, Brian Weiss, MD, and Jordan Wright, MD
- **A1CBDI and A5DH** » Kristine Feld, RN
Pathology » Lili Miles, MD
Neurology » Mary Sutton, MD

HGG-01 (Blaise Jones, MD; James Leach, MD)
Cancer and Blood Diseases Institute » Maryam Fouladi, MD and Adam Lane
Oncology » Michael Absalon, MD, Denise Adams, MD, Christina Bean, RN, Michelle Bierman, RN, Karen Burns, MD, Lionel Chow, MD, Stacey Crane, RN, Mariko DeWire, MD, Rachid Drissi, James Geller, MD, Adrienne Hammill, MD, Trent Hummel, MD, Jennifer Mangino, MD, Benjamin Mizukawa, MD, Rajaram Nagarajan, MD, Maureen O’Brien, MD, John Perentesis, MD, Christine Phillips, MD, Brian Weiss, MD, Brian Turpin, MD, and Jordan Wright, MD
Biomedical Informatics » Bruce Aronow
A1CBDI and A5DH » Kristine Feld, RN and Heather Ward, RN
Physical Medicine and Rehab » David Pruitt, MD
Occupational and Physical Therapy » Mariann Strenk
Neurology » Mary Sutton, MD

Pediatric Functional Neuroimaging Research Network (James Leach, MD)
Neurology » Jennifer Vannest, PhD, Anna Weber Byars, PhD, Darren Kadis, Katrina Peariso, Mark Schapiro, MD, and Jeffrey Tenney, MD
Biostatistics and epidemiology » Mekibib Altaye
Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD, Scott Holland, PhD, Gregory Lee, PhD, Akila Rajagopal, and Wiehong Yuan, PhD
Communication Sciences Research Center » Andrew Dimitrijevic, Rola Farah, and Tzipi Horowitz-Kraus
Biomedical Informatics » Nicholas Felicelli, Andrew Rupert, and Michael Wagner
Imaging Research Center » Elveda Gozdas
Anesthesia » Yifei Jiang
Neonatology and Pulmonary biology » Stephanie Merhar, MD
Pain Management professional » Vanessa Olbrecht, MD
CPE Research and Evidence Base Prac » Nautiah Robinson

Seizures Database (James Leach, MD)
Neurology » Katherine Holland Bouley, MD, MD, PhD, Todd Arthur, MD, Ravindra Arya, MD, Anna Weber Byars, PhD, Hisako Fujiwara, Tracy Glauser, MD, Barbara Hallinan, MD, PhD, Hansel Greiner, MD, Paul Hom, Diego Morita, MD, Douglas Rose, MD, Leonid Rozhkov, Jeffrey Tenney, MD, PhD, and Shannon Standridge, DO, MPH
Biomedical Informatics » Brian Connolly and Robert Faist
Ambulatory Services Neurology » Nicole Inman, RN, Michele Rodgers, RN, and Elizabeth Skulas, RN
Neurosurgery » Francesco Mangano, MD
Pathology » Lili Miles, MD
Advanced Practice Nurses » Sally Monahan, CPN, Michele Turner, CNP, Cindy Wesolowski, CNP, and Naomi Van Hom, CPN
Human Genetics » Krista Qualmann and Christine Spaeth

IARB1 (Blaise Jones, MD; James Leach, MD)
Cancer and Blood Diseases Institute » James Geller, MD, Caruye Cost, and Kathleen Dorris
Oncology  »  Michael Absalon, MD, Denise Adams, MD, Michelle Bierman, RN, Karen Burns, MD, Lionel Chow, MD, PhD, Mariko DeWire, MD, Maryam Fouladi, MD, Adrienne Hammill, MD, PhD, Trent Hummel, MD, Jennifer Mangio, MD, Benjamin Mizukawa, MD, Rajaram Nagarajan, MD, John Perentesis, MD, Maureen O’Brien, MD, Christine Phillips, MD, Beth Ann Stockman, RN, Mary Suhre, RN, Brian Turpin, MD, and Brian Weiss, MD

Advance Practice Nurses  »  Angel Faulhaber, CPN, Maureen Gallagher, CPN, and Elizabeth Gilger, CPN

Ophthalmology  »  Constance West, MD

Proton Beam Radiotherapy Chart Review (Blaise Jones, MD; James Leach, MD)

Cancer and Blood Disease Institute  »  Mariko DeWire, MD

COM Radiation Oncology  »  John Breneman, MD

Oncology  »  Maryam Fouladi, MD, David Gass, and Trent Hummel, MD

Pathology  »  Lili Miles, MD

Neurology  »  Mary Sutton, MD

HGG-DIPG Bevacizumba chart review (James Leach, MD)

Cancer and Blood Diseases Institute  »  Mariko DeWire, MD and Ralph Salloum

Oncology  »  Maryam Fouladi, MD and David Gass

Retrosig Bone Removal

COM Otolaryngology Head and Neck Surgery  »  Justin Golub and Ravi Samy, MD

Radiology  »  James Leach, MD

fMRI Study of Language Development (James Leach, MD)

Pediatric Neuroimaging Research Consortium  »  Scott Holland, PhD and Akila Rajagopal

Neurology  »  Anna Weber Byars, PhD, Darren Kadis, Mark Schapiro, MD, Jennifer Vannest, PhD, and Yingying Wang, PhD

COM Radiology Pediatrics  »  Vincent Schmithorst, PhD

PBTR (Blaise Jones, MD; James Leach, MD)

Cancer and Blood Diseases Institute  »  Mariko DeWire, MD

Oncology  »  Lionel Chow, MD, PhD, Maryam Fouladi, MD, and James Geller, MD

Imaging Research Center  »  Charles Dumoulin, PhD

EH and Can Bio - Exp Hem  »  Qing Lu

Pathology  »  Lili Miles, MD

NCSE in AHT (Marguerite Care, MD; James Leach, MD)

Safe and Healthy Children  »  Mary Greiner, MD

Neurology  »  Hansel Greiner, MD

CD in Intractable Epilepsy (James Leach, MD)

Pathology  »  Lili Miles, MD and Hua Tang Tang

Neurology  »  Anna Weber Byars, PhD, Katherine Holland Bouley, MD, Jing Xiang, Jeffre hely Tenney, MD, PhD, Michael Miles, and Paul Horn

Neurosurgery  »  Francesco Mangano, MD
Radiation Necrosis Chart Review (James Leach, MD)
- Cancer and Blood Diseases Institute » Trent Hummel, MD
- Oncology » Maryam Fouladi, MD
- Pathology » Lili Miles, MD
- Neurology » Mary Sutton, MD

AIM Imaging Study (James Leach, MD)
- Physical Medicine and Rehabilitation » Shari Wade, PhD
- Pediatric Neuroimaging Research Consortium » Thomas Maloney, MD and Weihong Yuan, PhD
- Behavioral Med Clin Psychology » Megan Narad
- Physical Medicine and Rehab » Julia Smith, Nicolay Chertkoff Walz, PhD, and Leanne Tamm, PhD

HPV in FCD (James Leach, MD)
- Neurology » Katherine Holland Bouley, MD, Ravindra Arya, MD, Hansel Greiner, MD, Paul Horn, Douglas Rose, MD, and Jeffrey Tenney, MD
- Neurosurgery » Francesco Mangano, MD
- Pathology » Lili Miles, MD

DTI Study in Tuberous Sclerosis (James Leach, MD)
- Pediatric Neuroimaging Research Consortium » Weihong Yuan, PhD and Tiffany Nash
- Neurology » David Franz, MD and Katherine Holland Bouley, MD
- Neurosurgery » Francesco Mangano, MD

fMRI and outcomes in brain injury (Beth Kline-Fath, MD; James Leach, MD)
- Neonatology and Pulmonary Biology » Stephanie Merhar, MD
- Imaging Research Center » Jean Tkach, PhD
- Pediatric Neuroimaging Research Consortium » Weihong Yuan, PhD

IAC Imaging Study
- Physical Medicine and Rehab » Shari Wade, PhD and Julia Smith
- Pediatric Neuroimaging Research Consortium » Scott Holland, PhD
- A & S Psychology » Chistine Karver
- Infectious Disease » Mary Staat, MD
- Behavioral Med Clin Psychology » Nicolay Walz, PhD

Multimodal Neuroimaging of Language Networks in Childhood
- Neurology » Darren Kadis, Hisako Fujiwara, Douglas Rose, MD, Yingying Wang, PhD, and Jennifer Vannest, PhD
- Pediatric Neuroimaging Research Consortium » Scott Holland, PhD
- Radiology » James Leach, MD

Concussion Device
- Sports Medicine » Gregory Myer, MD
- COM Psychiatry Central Clinic » James Eliassen
- Radiology » James Leach, MD, Dan Podberesky, MD, and Suraj Serai, PhD
FIRST study: Functional Imaging of Rolandic Spikes and Treatment (James Leach, MD)

**Neurology** » Jennifer Vannest, PhD, Anna Weber Byars, MD, Tracy Glauser, MD, Peggy Clark, RN, Katherine Holland Bouley, Morita Diego, Darren Kadis, and Jeffrey Tenney, MD

**Biostatistics and Epidemiology** » Mekibib Altaye, PhD

**Pediatric Neuroimaging Research Consortium** » Scott Holland, PhD and Thomas Maloney, PhD

**Advance Practice Nurses** » Sally Monahan, CPN, Michele Turner, CPN, and Cindy Wesolowski, CPN

**Ambulatory Services Neurology** » Michelle Rodgers, RN

**COM Neurology** » Jerzy Szafierski, PhD

Hippocampal Malrotation in Pediatric Epilepsy (James Leach, MD; Reem Awwad, MD)

**Neurology** » Hansel Greiner, MD and Jennifer Vannest, PhD

fMRI Genes & Outcomes of Cochlear Implants in Infants

**Pediatric Neuroimaging Research Consortium** » Scott Holland, PhD and Akila Rajagopal

**Biostatistics & Epidemiology** » Mekibib Altaye, PhD

**Otolaryngology** » Dan Choo, MD and John Grienwald, MD

**Neurology** » Anna Byars, PhD

**Radiology** » Marguerite Care, MD

Using DTI with tractography to measure the treatment effect of everolimus in Tuberous Sclerosis Complex (TSC) patients with epilepsy: An EXIST-3 Sub-study analysis. (Novartis Pharmaceuticals research grant, PI: Krueger)

**Pediatric Neuroimaging Research Consortium** » Weihong Yuan, PhD

**Neurology** » Darcy Krueger, MD

Aerobic Training for Management of Post-Concussion Syndrome in Adolescents

**imaging Research Center** » Kim Cecil, PhD

**Pediatrics/Physical Medicine and Rehabilitation** » Brad G. Kurowski, MD, PhD and Shari L. Wade, PhD

Anomalous Motor Physiology in ADHD

**Imaging Research Center** » Kim M. Cecil, PhD

**Pediatrics/Neurology** » Donald L. Gilbert, MD

Blood Pressure Control & the Brain

**Pediatric Neuroimaging Research Consortium** » Mark DiFrancesco, PhD

**Pulmonary Medicine** » Raouf Amin, MD, Keith McConnell, and Abu Shamsuzzaman, PhD

**Biostatistics and Epidemiology** » Rhonda Szczesniak, PhD

Brain Function and connectivity following a neuroprotective intervention for preterms

**Center for Pulmonary Imaging Research** » Rita Pickler, PhD

**Imaging Research Center** » Jean Tkach, PhD

**Neonatology and Pulmonary Biology** » Stephanie Merhar, MD

**Radiology** » Beth Kline-Fath, MD

CCHMC Proctor Scholarship - Seizure Generator Location and Neurocognitive Defects in CAE

**Pediatric Neuroimaging Research Consortium** » Scott K. Holland, PhD
Neurology » Tracy Glauser, MD, Jennifer Vannest, PhD, Jeff Tenney, MD, PhD, and Doug Rose, MD

CCHMC/ TRI, Enhancing Treatment of Obsessive Compulsive Disorder with Repetitive Transcranial Magnetic Stimulation

Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD
Neurology » Donald Gilbert, MD and Steven Wu, MD
Psychiatry » Elana Harris, MD, PhD

CCTST Redesign Grant, Effect of Teen Sleep Restriction on Diet

Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD
Behavioral Medicine & Clinical Psychology » Dean Beebe, PhD., Joseph Rausch, PhD, and Julie Field

CCTST Research Innovation/Pilot Funding Program, Calibration of Resting-state fMRI to Predict Language Laterality in Children (James Leach, MD)

Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD and Scott Holland, PhD
Anesthesiology » Mohamed Mahmoud, MD and John McAuliffe, MD
Imaging Research Center » Ken Eaton, PhD
Biostatistics & Epidemiology » Mekibib Altaye, PhD

Clinical Research Network in Non-Alcoholic Steatohepatitis (NASH-CRN)

Imaging Research Center » Kim M. Cecil, PhD
Pediatrics/Gastroenterology, Hepatology & Nutrition » Stavra Xanthakos, MD

Effect of Adolescent Sleep Restriction on Neural & Neurobehavioral Functioning

Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD
Behavioral Medicine & Clinical Psychology » Dean Beebe, PhD and Jeffery Epstein, PhD
Neurology » Douglas Rose, MD

Everolimus (RAD 001) Therapy of Giant Cell Astrocytomas in Patients with Tuberous Sclerosis Complex

Imaging Research Center » Kim M. Cecil, PhD
Neurology » David N. Franz, MD and Darcy Krueger, MD

fMRI of Normal Language Development on Children

Pediatric Neuroimaging Research Consortium » Scott Holland, PhD
Neurology » Mark Schapiro, MD, Jennifer Vannest, PhD, and Anna Byars, PhD
Biostatistics & Epidemiology » Mekibib Altaye, PhD
Radiology » James Leach, MD

Gerber Foundation - Intestinal Motility and Gastroschisis

Imaging Research Center » Jean Tkach, PhD and Kenneth Eaton, PhD
Neonatology and Pulmonary Biology » Andrew South, MD and Paul Kingma, MD
Radiology » Mantosh Rattan, MD

Imaging and modeling lung allograft rejection

Center for Pulmonary Imaging Research » Jason Woods, PhD and Laura Walkup, PhD
Pulmonary Medicine » Marc Schecter, MD and Christopher Towe, MD
Neonatology & Pulm Biology » Anne Karina Perl, PhD

Imaging and quantifying efficacy of whole-lung lavage for PAP (Robert Fleck, MD; Alan Brody, MD)
Center for Pulmonary Imaging Research » Jason Woods, PhD and David Roach, PhD
Pulmonary Medicine » Robert Wood, MD
Neonatology & Pulm Biology » Bruce Trapnell, MD

Imaging Lung disease in cystic fibrosis (Robert Fleck, MD; Alan Brody, MD)
Center for Pulmonary Imaging Research » Jason Woods, PhD and David Roach, PhD
Biostatistics » Rhonda Szezniak, PhD
Pulmonary Medicine » JP Clancy, MD

Imaging the Effect of Centrotemporal Spikes and Seizures on Language in Children
Pediatric Neuroimaging Research Consortium » Scott Holland, PhD
Neurology » Anna Byars, PhD, Jennifer Vannest, PhD, Mark Schapiro, MD, Diego Morita, and Tracy Glauser, MD
Biostatistics & Epidemiology » Mekibib Altaye, PhD
Radiology » James Leach, MD

Imaging various neonatal lung abnormalities
Center for Pulmonary Imaging Research » Jason Woods, PhD, Zackary Cleveland, PhD, and Laura Walkup, PhD
Neonatology » Stephanie Merhar, MD, Alan Jobe, MD, Jeffrey Whitsett, MD, and Paul Kingma, MD, PhD
Pulmonary Medicine » Raouf Amin, MD
Imaging Research Center » Jean Tkach, PhD and Charles Dumoulin, PhD
Radiology » Robert Fleck, MD

Improved Diagnostics & Advanced Magnetic Resonance Imaging for Pediatric NPSLE
Pediatric Neuroimaging Research Consortium » Mark DiFrancesco, PhD
Rheumatology » Hermine Brunner, MD, Shannen Nelson, Jamie Meyers-Eaton, and Daniel Lovell, MD
Behavioral Medicine & Clinical Psychology » Dean Beebe, PhD

Longitudinal Assessment of Manic Symptoms
Pediatric Neuroimaging Research Consortium » Scott Holland, PhD
Psychiatry » Elana Harris, MD, PhD, Jennifer Combs, Jennifer Combs, Robert Kowatch, MD, and Judy Depew

Longitudinal DTI Study in Children Treated for Congenital Hydrocephalus (Blaise Jones, MD)
Pediatric Neuroimaging Research Consortium » Weihong Yuan, PhD and Scott Holland, PhD;
DDBP » Holly Barnard, PhD
Neurosurgery » Francesco Mangano, DO
Biostatistics & Epidemiology » Mekibib Altaye, PhD

Lupus Foundation of America, Imaging the Blood-Brain Barrier in Childhood-onset Neuropsychiatric Lupus
Magnetic Resonance Elastography in Infants (Daniel Podberesky, MD; Suraj Serai, PhD; Mantosh Rattan, MD)

**Neuroimaging Research Center** » Charles Dumoulin, PhD and Jean Tkach, PhD

**Neonatology and Pulmonary Biology** » Stephanie Merhar, MD and Koryse Woodrooffe, MD

MRI for Quantitative Measurement of Pulmonary and Cardiac Structure and Function in CDH infants (Robert Fleck, MD)

**Pulmonary Medicine** » Jason Woods, PhD, Alan Jobe, MD, and Raouf Amin, MD

**Imaging Research Center** » Jean Tkach, PhD

**Imaging Research Center** » Jean Tkach, PhD

**Cardiology** » Michael Taylor, MD

**Neonatology and Pulmonary Biology** » Paul Kingma, MD and Stephanie Merhar, MD

MRI for Quantitative Measurement of Pulmonary Growth and Development in Term and Extremely Pre-Term Babies (Robert Fleck, MD)

**Pulmonary Medicine** » Jason Woods, PhD, Raouf Amin, MD, and Alan Jobe, MD

**Imaging Research Center** » Jean Tkach, PhD

**Cardiology** » Michael Taylor, MD

**Neonatology and Pulmonary Biology** » Paul Kingma, MD and Stephanie Merhar, MD

MRI for Quantitative Measurement of Pulmonary Growth and Development in Term and Extremely Pre-Term Babies

**Pulmonary Medicine** » Jason Woods, PhD, Raouf Amin, MD, William Hardie, MD, Karen McDowell, MD, and Alan Jobe, MD

**Imaging Research Center** » Jean Tkach, PhD

**Neonatology and Pulmonary Biology** » Stephanie Merhar, MD

**Radiology** » Robert Fleck, MD

Non-Invasive Examination of the Effects of Anesthesia in the Developing Human Brain

**Imaging Research** » Kim Cecil PhD

**Anesthesia** » Andreas Loepke, MD, PhD

**Neonatology and Pulmonary Biology** » Stephanie L. Merhar, MD, MS

Pediatric Functional Neuroimaging Research Network

**Pediatric Neuroimaging Research Consortium** » Scott Holland, PhD, Greg Lee, PhD, Mark DiFrancesco, PhD, Claire Sroka, Akila Rajagopal, and Weihong Yuan, PhD

**Biostatistics & Epidemiology** » Mekibib Altaye, PhD, Andrew Rupert, Michael Wagner, PhD, and Nicholas Felicelli

**Neurology** » Anna Byars, PhD and Jennifer Vannest, PhD

**Pediatrics** » Tzipi Horowitz-Kraus, PhD
Perinatal Institute - Functional MRI and sensorimotor outcomes in neonates (Beth Kline-Fath, MD)

**Imaging Research Center** » Jean Tkach, PhD

**Neonatology and Pulmonary Biology** » Stephanie Merhar, MD

Perinatal Institute - Pulmonary MRI in the NICU: The Future Now (Robert Fleck, MD)

**Pulmonary Medicine** » Jason Woods, PhD

**Imaging Research Center** » Jean Tkach, PhD

**Neonatology and Pulmonary Biology** » Paul Kingma, MD

Research Innovation and Pilot Fund - cMRI assessment of RV and pulmonary structure and function in CDH using a dedicated neonatal MRI scanner (Mantosh Rattan, MD; Robert Fleck, MD)

**Imaging Research Center** » Jean Tkach, PhD

**Cardiology** » Michael Taylor, MD

**Neonatology and Pulmonary Biology** » Paul Kingma, MD

The Effects of Cognitive Training on Attention and Neural Processing following Pediatric TBI (Ohio Department of Public Safety Emergency Medical Services Grant, PI: Wade/Yuan) (Jim Leach, MD)

**Pediatric Neuroimaging Research Consortium** » Weihong Yuan, PhD

**Behavior Medicine** » Leanne Tamm

**Rehabilitation** » Shari Wade, PhD

Thrasher Foundation - Functional MRI to predict visual, auditory, and motor outcomes in infants with brain injury

**Pediatric Neuroimaging Research Consortium** » Scott K. Holland, PhD

**Imaging Research Center** » Jean Tkach, PhD

**Neonatology** » Stephanie Merhar, MD

Validation of diffusion tensor imaging as a biomarker for infantile hydrocephalus (CCTST JIT, PI: Yuan)

**Pediatric Neuroimaging Research Consortium** » Weihong Yuan, PhD

**Imaging Research Center** » Diana Lindquist, PhD

**Neurosurgery** » Francesco Mangano, DO and June Goto, PhD

**Neurology** » Charles Vorhees, PhD and Michael Williams, PhD

Grants, Contracts, and Industry Agreements

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<th>Grant and Contract Awards</th>
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<tr>
<td><strong>AMIN/FLECK/GUTMARK/SHOTT (MPI)</strong></td>
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<td>Dynamic Computational Modeling of Obstructive Sleep Apnea in Down Syndrome</td>
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<td>National Institutes of Health</td>
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<td>R01 HL 105206</td>
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<td>Therapeutic Development Center Imaging Core</td>
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<td>Cystic Fibrosis Foundation Therapeutics, Inc</td>
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<td>Investigator</td>
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<td>DIFRANCESCO, M</td>
<td>Imaging the Blood-Brain Barrier in Childhood-Onset Neuropsychiatric Lupus</td>
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<td>DUMOULIN, C</td>
<td>Endorectal Prostate MRI w/Tetrahedron Tracking: Better Cancer Delineation</td>
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<td>MR-Image Guided Focused Ultrasound for Treatment of Liver and Renal Cancer</td>
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<td>Ohio Third Frontier Medical Imaging Program</td>
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<td>HOLLAND, S</td>
<td>Pediatric Functional Neuroimaging Research Network</td>
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<td>Longitudinal Assessment of Manic Symptoms</td>
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<td>KIM, H</td>
<td>MR Quantification of Muscular Fat in Duchenne Muscular Dystrophy: Integrating T2 Relaxation Time Mapping and MR Spectroscopy</td>
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<tr>
<td>LEACH, J</td>
<td>Diagnostic Imaging Review: NIH COG Chair Grant</td>
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<td>LEE, G</td>
<td>Comprehensive Quantitative Ultrafast 3D Liver MRI</td>
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<tr>
<td>LI, YU</td>
<td>Novel RF Coils and k-t Space Imaging for Neonatal Chest MRI within NICUs</td>
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LINDQUIST, D

The Effect of Lithium on Intracellular Sodium in Brain in vivo
National Institutes of Health (University of Cincinnati)

WALLIHAN, D

Liver Elastography as a Marker for Progressive Hepatic Disease and Failing Fontan Physiology
Society of Pediatric Radiology

WANSAPURA, J

Cardiac Structure and Function in Early Familial Cardiomyopathy
National Institutes of Health

FLECK, R

Bayer HealthCare Pharmaceuticals, Inc $4,280

PODBERESKY, D

Siemens Medical Solutions USA, Inc $4,450

CARE, M

Early biomarkers of Autism Spectrum Disorders in infants
National Institutes of Health

CECIL, K

2/2-Anomalous Motor Physiology in ADHD
National Institutes of Health
Neurobehavioral and Neuroimaging Effects of Traffic Exposure in Children (CCAAPS)
National Institutes of Health
Ryan, P 7/1/2012-3/31/2017 20%

Early Lead Exposure, ADHD & Persistent Criminality: Role of Genes and Environment
National Institutes of Health
Dietrich, K 4/1/2007-3/31/2014 10%

DIFRANCESCO, M

Effect of Adolescent Sleep Restriction on Neural & Neurobehavorial Functioning
National Institutes of Health
Beebe, D 9/1/2009-7/31/2014 20%

DUMOULIN, C

Dynamic Computational Modeling of Obstructive Sleep Apnea in Down Syndrome
National Institutes of Health
Amin, R 9/17/2010-8/31/2015 3%

Novel RF Coils and k-t Space Imaging for Neonatal Chest MRI within NICUs
National Institutes of Health
Li, Yu 8/1/2013-7/31/2015 5%

Neonatal Intensive Care Unit Magnetic Resonance Imaging (NICU MRI)
CCHMC Innovation Fund
Dumoulin, C 7/1/2013-6/30/2015 3%

Taking the IRC MR Engineering core from "good" to "best" - CORE
CCTST
Dumoulin, C 7/1/2012-6/30/2014 3%

Engineering a faster and quieter NICU MR scanner
CCTST
Dumoulin, C 7/1/2013-6/30/2014 3%

FLECK, R

MR predictors of infection, inflammation, and structural lung damage in CF
National Institutes of Health
Clancy, JP 9/26/2012-6/30/2016 10%

GOSKE, M

CT Radiation Safety in Children: A Model for a National Web-based Continuous Quality Improvement Program
Society of Pediatric Radiology
Goske, M 8/1/2008-12/31/2014 1%

Developing a "Best Practice" National Registry for CT Scans in Children
RSNA
Goske, M 7/1/2009-6/30/2014 1%

Quality Improvement Registry in CT Scans in Children: Retreat
CCHMC
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<td><strong>Imaging the effect of centrotemporal spikes and seizures</strong></td>
<td>National Institutes of Health</td>
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<td><strong>Longitudinal DTI study in Children Treated for Congenital Hydrocephalus</strong></td>
<td>National Institutes of Health</td>
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<td>KLINE-FATH, B</td>
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<td><strong>Novel RF Coils and k-t Space Imaging for Neonatal Chest MRI within NICUs</strong></td>
<td>National Institutes of Health</td>
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<td>LEACH, J</td>
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<td><strong>Pediatric Functional Neuroimaging Research Network</strong></td>
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<td>Li, Yu</td>
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<td><strong>Imaging the Blood-Brain Barrier in Childhood-onset Neuropsychiatric Lupus</strong></td>
<td>Lupus Foundation of America</td>
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<td>DiFrancesco, M</td>
<td>10/1/2013-9/30/2014</td>
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<td><strong>Structural MRI Images for Speech Sound Disorder Therapy</strong></td>
<td>The University of Cincinnati</td>
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<td>Boyce, S</td>
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<td><strong>Noninvasive, MR-Guided HIFU Therapy of TSC-Associated Renal Angiomyolipomas</strong></td>
<td>DOD</td>
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<td>Li, Yu</td>
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<td><strong>MR-guided HIFU for cancer therapy</strong></td>
<td>St. Baldrick's Foundation</td>
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<td>PODBERESKY, D</td>
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<td><strong>Liver Elastography as a marker for progressive hepatic disease and failing Fontan physiology</strong></td>
<td>Society of Pediatric Radiology</td>
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<td>Wallihan, D</td>
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CRN in Non-Alcoholic Steatohepatitis (NASH CRN)  
National Institutes of Health  
Xanthakos, S  
8/30/2009-4/30/2015  
1%

SERAI, S

Early biomarkers of Autism Spectrum Disorders in infants  
National Institutes of Health  
Krueger, D  
9/1/2012-8/31/2017  
5%

Liver Elastography as a marker for progressive hepatic disease and failing Fontan physiology  
Society of Pediatric Radiology  
Wallihan, D  
9/1/2013-8/31/2014  
3%

TKACH, J

Novel RF Coils and k-t Space Imaging for Neonatal Chest MRI within NICUs  
National Institutes of Health  
Li, Yu  
8/1/2013-7/31/2015  
5%

Intestinal Motility and Gastroschisis  
The Gerber Foundation  
South, A  
7/1/2013-6/30/2016  
25%

YUAN, W

Using Diffusion Tensor Imaging (DTI) with Tractography to Measure the Treatment Effect of Everolimus in Tuberous Sclerosis Complex (TSC) Patients with Epilepsy: An EXIST-3 Sub-study Analysis  
Novartis Pharmaceuticals  
Franz, D  
11/8/2012-12/1/2017  
27%

Effects of Cognitive Training on Attentive and Neural  
Ohio Department of Public Safety  
Wade, S  
7/1/2011-6/30/2014  
5%

Total $3,060,509