

Division Details

Division Data Summary

Research and Training Details

Number of Faculty	49
Number of Joint Appointment Faculty	2
Number of Research Fellows	1
Number of Research Students	13
Number of Support Personnel	67
Direct Annual Grant Support	\$2,856,089
Direct Annual Industry Support	\$49,700
Peer Reviewed Publications	395

Clinical Activities and Training

Number of Clinical Staff	242
Number of Clinical Fellows	10
Number of Other Students	93
Inpatient Encounters	52,072
Outpatient Encounters	16,010

Division Photo



Row 1: A Oestreich, H Kim, S O'Hara, M Calvo-Garcia, M Care, J Tkach
 Row 2: A Merrow, B Kline-Fath, S Kraus, K Cecil, M Patel, M Goske, S Holland, Y Li
 Row 3: C Anton, S Sharp, D Wallihan, G Lee, K Kukreja, A Zbojniewicz, B Coley, M Komlos Kukreja, M DiFrancesco, D Larson, M Gelfand, W Yuan, C Dumoulin, P Winter

Significant Accomplishments

Patient Safety

Led by one of our faculty, The Alliance for Radiation Safety in Pediatric Imaging was formed in 2007 to promote education and practice change to minimize the medical radiation exposure of children. The Alliance now involves more than 72 organizations, representing over 800,000 radiologists, radiological technologists, medical physicists, and others. Cincinnati Children's radiology faculty is involved in expanding this initiative into all areas of diagnostic imaging. Continued research and development has led to a program that allows the optimization of CT dose and image quality for each child prior to the scan being performed. This program is being commercialized and promises to further improve pediatric radiation dose reduction across the country.

Ensuring that each patient undergoes the right imaging procedure is essential to safe and appropriate care. The "Right Patient, Right Exam" initiative sought to decrease inappropriate imaging from requisition errors. Through the efforts of our technologists and radiologists, more than 800 potential errors were caught and corrected.

Liver Imaging – Improving Diagnoses

Diseases of the liver are common in children, but accurate diagnoses sometimes require invasive procedures such as liver biopsy. Inflammatory processes and other liver diseases commonly result in irreversible fibrosis, which if detected early can be treated. Originally developed by researchers at the Mayo Clinic, MR Elastography is a non-invasive method that allows the quantification of hepatic fibrosis and inflammation. Cincinnati Children's

is the first dedicated pediatric institution to perform MR Elastography, allowing non-invasive assessment of liver disease and monitoring of treatment without the need for biopsy.

In addition to MR elastography, Cincinnati Children's Department of Radiology is the leader in the advanced imaging of focal liver lesions in children using a new liver-specific MR contrast agent, Eovist. The use of this new contrast agent has resulted in increased accuracy and confidence in the identification and characterization of liver lesions in children, resulting in improved cancer treatment and monitoring. Members of the Department of Radiology have published the two authoritative papers in the medical literature on the use of Eovist in pediatric liver tumor imaging.

Interventional Radiology – Improving Outcomes

Minimally invasive treatments using imaging to guide needles, catheters, and other instruments has become an essential part of pediatric medical care. Interventional radiology techniques help to minimize pain and morbidity, while delivering effective diagnostic and therapeutic care. Newer techniques can offer treatment options, where no effective therapies are available. One such area is in the treatment of refractory retinoblastoma, an aggressive tumor of the eye. If traditional treatment options fail, the only recourse is removal of the eye. In conjunction with members of the Cancer and Blood Diseases Institute, our Interventional Radiology team is performing highly selective ophthalmic artery infusion to deliver high doses of chemotherapy directly to the tumor, at levels that would be toxic to patients if given by traditional routes. Initial results show that this innovative therapy is effective and well-tolerated, and shows promise in effectively curing these children while preserving their vision.

Division Highlights

Imaging Research Center

Primary investigators in imaging received \$1.8 million in new direct and indirect grant funding this year bringing the total of active imaging grants to \$25 million. These funds support diverse research efforts including developing novel non-invasive tumor therapies, neuroimaging of behavioral disorders, and the imaging of familial cardiac disease. Additionally, we have proposed projects totaling \$10.5 million in grant funding being reviewed for the coming fiscal year, indicating our expected growth and continued recognition of the value of our research activities to pediatric health.

Pediatric Neuroimaging Research Consortium

In 2011, Tzipi Horowitz-Kraus, Ph.D. joined the PNRC as a post-doctoral fellow supported by a Fulbright Scholarship. She completed her PhD at University of Haifa in Israel where she specialized in electrophysiological imaging with EEG as applied to children with developmental reading disorders. With her arrival in the PNRC, we have launched into a new area of research aimed at mapping deficits in the reading circuitry of the developing brain as well as testing interventions for reading disabilities and the influence of these interventions on the reading circuitry. This area of research interacts closely with the Communication Sciences Research Center at CCHMC as well as several clinical divisions at CCHMC and the University of Cincinnati.

Interventional Radiology Animal Research Lab

In May of 2011 we opened a new state-of-the art Interventional Radiology (IR) animal research lab, broadening the imaging capabilities of the Imaging Research Center (IRC). It is the first IR animal research facility of its kind in the world in a pediatric institution, and is intended to be an institution wide, multi-disciplinary resource to

develop and improve image guided treatment. Collaborative projects with surgery, cardiology, and nephrology have already been conducted, with more scheduled for the coming year. Additionally, the available resources have attracted interest from commercial research and development teams, bringing the latest innovations to CCHMC patients.

The Imaging Research Center has acquired a pre-clinical High-Intensity Focused Ultrasound (HIFU) unit. This system uses focused sound waves to precisely ablate tissue inside the body, without the need for a scalpel cut or needle puncture. Magnetic Resonance Imaging is used during HIFU ablation to monitor temperature changes and to verify tissue targets.

NICU MRI

A team of scientists and engineers in the Imaging Research Center created a new type of MR scanner that is small enough to be placed directly in the NICU. This 1.5 Tesla MR scanner employs the same strong magnetic field used in most Radiology departments, but has a footprint of only a few square feet. The Cincinnati team created the new scanner by converting a small-bore magnet designed for imaging adult orthopedics into one suitable for whole-body imaging of premature babies. They made extensive system changes and created new patient handling systems and RF coils that address the special needs of premature babies. The scanner is the only infant-sized MR scanner in the world housed within a NICU, and the only one specifically designed for infants. A successful pilot study was completed in the spring of 2012 and the scanner is now being used for clinical exams.

Honors and Awards

Gold Medal, The Society for Pediatric Radiology: Marilyn Goske

Service and Advocacy Award, CCHMC: Alex Towbin

Educational Achievement Award, CCHMC: Carl Mellow

Best Trainee Presentation Award, Australian and New Zealand SPR: Wang LL, Kim HK, Mellow AC, Wong B, Horn P, Laor T. Compounding factors affecting fat and water content of skeletal muscles in healthy children: objective measures using T2 relaxation time mapping (T2 MAP).

Magna Cum Laude, Excellence in Design Award, RSNA: Mellow AC, Zbojniewicz AM, Laor T. Are you pulling my leg? Acute avulsion fractures of the pediatric knee.

Certificate of Merit, RSNA: Kim HK, Serai S, Zbojniewicz AM, Mellow AC, Laor T, Wang LL, Wong B. Advanced MR imaging techniques of skeletal musculature in children.

Certificate of Merit, RSNA: Wang LL, Kim HK, Mellow AC, Wong B, Horn P, Laor T. Compounding factors affecting fat and water content of skeletal muscles in healthy children: objective measures using T2 relaxation time mapping (T2 MAP).

Leveraging / Collaboration Award, FDA Center for Devices and Radiological Health: Coreen Bell

Outstanding Clinical Research Professional, CCHMC: Penny New

Significant Publications

Wang, Y., **Holland, S.K.**, and **Vannest, J.**, **Concordance of MEG and fMRI patterns in adolescents during verb**

generation.*Brain Res.* 1447: p. 79-90. 2012.

This paper describes a new method to bring the results of fMRI and MEG sources localization into alignment for a brain doing the same language task. It is the first quantitative description of the concordance between these neuroimaging modalities from a dynamic language task and sets the stage for building comprehensive computational models of connectivity in brain language networks using integrated fMRI and MEG data to provide optimal spatial and temporal resolution.

Sun, M., **Yuan, W.**, Hertzler, D.A., Cancelliere, A., Altaye, M., and Mangano, F.T., **Diffusion tensor imaging findings in young children with benign external hydrocephalus differ from the normal population.***Childs Nerv Syst.* 28(2): p. 199-208. 2012.

This paper pinpoints white matter regions in the brain that are most vulnerable to injury from congenital hydrocephalus. Quantitative methods are used with Diffusion Tensor Imaging to highlight regions in the corpus callosum, longitudinal fasciculus and other areas that show lasting changes in tissue integrity, even after shunt surgery. DTI may ultimately provide a biomarker to guide neurosurgeons decision making about when to implant a shut or when to revise one.

Malatesta-Muncher, R.,**Wansapura, J.**, Taylor, M., **Lindquist, D.**, Hor, K., and Mitsnefes, M., **Early cardiac dysfunction in pediatric patients on maintenance dialysis and post kidney transplant.** *Pediatr Nephrol.* 27(7): p. 1157-64. 2012.

This paper describes how cardiac magnetic resonance (CMR) and phosphorus-31 MR spectroscopy (31P MRS) can be used to assess markers of cardiac dysfunction in young Chronic Kidney Disease (CKD) patients. The authors found that young patients with advanced CKD and normal Ejection Fraction have early cardiac changes. Association of these abnormalities with increased left ventricular mass (LVM) index suggests development of maladaptive hypertrophy.

Maugans, T.A., Farley, C., Altaye, M., **Leach, J.**, and **Cecil, K.M.**,**Pediatric sports-related concussion produces cerebral blood flow alterations.** *Pediatrics.* 129(1): p. 28-37. 2012.

This study found changes in cerebral blood following symptomatic sports related concussion, in the absence of demonstrable structural or metabolic alterations. Blood flow normalization followed a similar time course as symptom recovery, indicating that sports related concussive injury is primarily a physiologic injury.

Meyers, A.B.,**Towbin, A.J.**, **Serai, S.**, Geller, J.I., and **Podberesky, D.J.**,**Characterization of pediatric liver lesions with gadoxetate disodium.** *Pediatr Radiol.* 41(9): p. 1183-97. 2011.

Diagnostic imaging allows highly sensitive detection of a wide variety of pathologic conditions. Newer imaging techniques and contrast agents are now allowing greater diagnostic specificity as well. This paper discusses the imaging capabilities of a new hepatobiliary MRI contrast agent that allows more confident diagnoses of benign and malignant liver tumors, and has already become a reference standard for pediatric radiologists

Division Publications

1. Abruzzo T, Moran C, Blackham KA, Eskey CJ, Lev R, Meyers P, Narayanan S, Prestigiacomo CJ. **Invasive interventional management of post-hemorrhagic cerebral vasospasm in patients with aneurysmal subarachnoid hemorrhage.** *J Neurointerv Surg.* 2012; 4:169-77.
2. Adaletli I, Laor T, Yin H, Podberesky D. **Extraskelatal chondroma: another diagnostic possibility for a soft tissue axillary mass in an adolescent.** *Case Reports in Orthopedics.* 2011; 2011:4.
3. Aeron G, Abruzzo TA, Jones BV. **Clinical and imaging features of intracranial arterial aneurysms in the pediatric population.** *Radiographics.* 2012; 32:667-81.
4. Allendorfer JB, Kissela BM, Holland SK, Szaflarski JP. **Different patterns of language activation in post-**

stroke aphasia are detected by overt and covert versions of the verb generation fMRI task. *Med Sci Monit.* 2012; 18:CR135-7.

5. Anton CG. **Achondroplasia.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:162.
6. Anton CG. **Approach to the Pediatric Musculoskeletal System.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:2.
7. Anton CG. **Bowel Injury.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:166.
8. Anton CG. **Caroli Disease.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:124.
9. Anton CG. **Dermatomyositis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:180.
10. Anton CG. **Discoid Meniscus.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:212.
11. Anton CG. **Duodenal Trauma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:178.
12. Anton CG. **Ewing Sarcoma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:108.
13. Anton CG. **Fibromatosis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:94.
14. Anton CG. **Hepatic Trauma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:170.
15. Anton CG. **Juvenile Idiopathic Arthritits.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:176.
16. Anton CG. **Juvenile Tillaux Fracture.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:48.
17. Anton CG. **Langerhans Cell Histiocytosis, General.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:120.
18. Anton CG. **Lateral Condylar Fracture.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:40.
19. Anton CG. **Leukemia.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:116.
20. Anton CG. **Medial Epicondyle Avulsion.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:30.
21. Anton CG. **Mesenchymal Hamartoma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:108.
22. Anton CG. **Mesenteric Adenitis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:154.
23. Anton CG. **Mesenteric Lymphatic Malformations.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:158.
24. Anton CG. **Neutropenic Colitis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:194.
25. Anton CG. **Osteochondritis Dissecans.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:54.
26. Anton CG. **Osteosarcoma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:112.
27. Anton CG. **Pancreatic Trauma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:182.
28. Anton CG. **Proximal Focal Femoral Deficiency.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:150.
29. Anton CG. **Pseudomembranous Colitis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:190.
30. Anton CG. **Renal Injury.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:144.
31. Anton CG. **Rhabdomyosarcoma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:98.
32. Anton CG. **Scoliosis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:204.
33. Anton CG. **Small bowel Intussusception.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:224.
34. Anton CG. **Splenic Trauma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:174.
35. Anton CG. **Spondylolysis and Spondylolisthesis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:36.

36. Anton CG. **Supracondylar Fracture**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:26.
37. Anton CG. **Tarsal Coalition**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:208.
38. Anton CG. **Triplane Fracture**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:46.
39. Bennett BL, Chua MS, Care M, Kachelmeyer A, Mahabee-Gittens M. **Retrospective review to determine the utility of follow-up skeletal surveys in child abuse evaluations when the initial skeletal survey is normal**. *BMC Res Notes*. 2011; 4:354.
40. Bevan AK, Duque S, Foust KD, Morales PR, Braun L, Schmelzer L, Chan CM, McCrate M, Chicoine LG, Coley BD, Porensky PN, Kolb SJ, Mendell JR, Burghes AH, Kaspar BK. **Systemic gene delivery in large species for targeting spinal cord, brain, and peripheral tissues for pediatric disorders**. *Mol Ther*. 2011; 19:1971-80.
41. Bhutta AT, Schmitz ML, Swearingen C, James LP, Wardbegnoche WL, Lindquist DM, Glasier CM, Tuzcu V, Prophan P, Dyamenahalli U, Imamura M, Jaquiss RD, Anand KJ. **Ketamine as a neuroprotective and anti-inflammatory agent in children undergoing surgery on cardiopulmonary bypass: a pilot randomized, double-blind, placebo-controlled trial**. *Pediatr Crit Care Med*. 2012; 13:328-37.
42. Birkemeier KL, Podberesky DJ, Salisbury S, Serai S. **Breathe in... breathe out... stop breathing: does phase of respiration affect the Haller index in patients with pectus excavatum?** *AJR Am J Roentgenol*. 2011; 197:W934-9.
43. Blackham KA, Meyers PM, Abruzzo TA, Alberquerque FC, Fiorella D, Fraser J, Frei D, Gandhi CD, Heck DV, Hirsch JA, Hsu DP, Jayaraman M, Narayanan S, Prestigiacomo C, Sunshine JL. **Endovascular therapy of acute ischemic stroke: report of the Standards of Practice Committee of the Society of NeuroInterventional Surgery**. *J Neurointerv Surg*. 2012; 4:87-93.
44. Brink JA, Goske MJ, Patti JA. **Informed decision making trumps informed consent for medical imaging with ionizing radiation**. *Radiology*. 2012; 262:11-4.
45. Buckley RT, Yuan W, Mangano FT, Phillips JM, Powell S, McKinstry RC, Rajagopal A, Jones BV, Holland S, Limbrick DD, Jr.. **Longitudinal comparison of diffusion tensor imaging parameters and neuropsychological measures following endoscopic third ventriculostomy for hydrocephalus**. *J Neurosurg Pediatr*. 2012; 9:630-5.
46. Cai K, Kiefer GE, Caruthers SD, Wickline SA, Lanza GM, Winter PM. **Quantification of water exchange kinetics for targeted PARACEST perfluorocarbon nanoparticles**. *NMR Biomed*. 2012; 25:279-85.
47. Calvo-Garcia MA, Kline-Fath BM, Levitt MA, Lim FY, Linam LE, Patel MN, Kraus S, Crombleholme TM, Pena A. **Fetal MRI clues to diagnose cloacal malformations**. *Pediatr Radiol*. 2011; 41:1117-28.
48. Cecil KM, Lindquist DM. **Neurological Aspects of Dietary Lead Exposure**. *The Handbook of Behavior, Food and Nutrition*. London: Springer; 2012:2755-774.
49. Chauvin NA, Jaimes C, Laor T, Jaramillo D. **Magnetic resonance imaging of the pediatric shoulder**. *Magn Reson Imaging Clin N Am*. 2012; 20:327-47, xi.
50. Chiu CY, Tlustos SJ, Walz NC, Holland SK, Eliassen JC, Bernard L, Wade SL. **Neural correlates of risky decision making in adolescents with and without traumatic brain injury using the balloon analog risk task**. *Dev Neuropsychol*. 2012; 37:176-83.
51. Coley BD. **VCUG and the question of sedation**. *Pediatr Radiol*. 2012; 42:284.
52. Coley BD. **Chest sonography in children: current indications, techniques, and imaging findings**. *Radiol Clin North Am*. 2011; 49:825-46.
53. Dimitropoulos A, Tkach J, Ho A, Kennedy J. **Greater corticolimbic activation to high-calorie food cues after eating in obese vs. normal-weight adults**. *Appetite*. 2011; 58:303-312.
54. Diniz LO, Putnum PE, Towbin AJ. **Fluoroscopic findings in pediatric eosinophilic esophagitis**. *Pediatr*

- Radiol.* 2012; 42:721-7.
55. Diniz LO, Towbin AJ. **Causes of esophageal food bolus impaction in the pediatric population.** *Dig Dis Sci.* 2012; 57:690-3.
 56. Dunoski B, Zbojniewicz AM, Laor T. **MRI of displaced meniscal fragments.** *Pediatr Radiol.* 2012; 42:104-12.
 57. Fadell MF, Jones BV. **Reply to Sinzig regarding postnatal follow-up of RICH involving the skull.** *Pediatr Radiol.* 2011; 42:384.
 58. Fadell MF, 2nd, Jones BV, Adams DM. **Prenatal diagnosis and postnatal follow-up of rapidly involuting congenital hemangioma (RICH).** *Pediatr Radiol.* 2011; 41:1057-60.
 59. Fleck RJ. **Double Aortic Arch.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:36.
 60. Fleck RJ. **Duchenne Muscular-Dystrophy-related Cardiomyopathy.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:96.
 61. Fleck RJ. **Hypoplastic Left Heart Syndrome.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:50.
 62. Fleck RJ. **Innominate Artery Compression Syndrome.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:46.
 63. Fleck RJ. **Kawasaki Disease.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:108.
 64. Fleck RJ. **Left Coronary Artery Anomalous Origin.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:54.
 65. Fleck RJ. **Left Ventricular Noncompaction.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:92.
 66. Fleck RJ. **Myocarditis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:90.
 67. Fleck RJ. **Pulmonary Sling.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:40.
 68. Fleck RJ. **Rheumatic Heart Disease.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:112.
 69. Fleck RJ. **Right Arch with Aberrant left SCA.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:50.
 70. Fleck RJ. **Tetralogy of Fallot.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:22.
 71. Forman HP, Beauchamp NJ, Jr., Kaye A, Larson DB, Norbash A. **What is the role of the radiologist in holding down health care cost growth?** *AJR Am J Roentgenol.* 2011; 197:919-22.
 72. Forman HP, Larson DB, Kaye AD, Kazerooni EA, Norbash A, Crowe JK, Javitt MC, Beauchamp NJ, Jr.. **Masters of radiology panel discussion: women in radiology-- how can we encourage more women to join the field and become leaders?** *AJR Am J Roentgenol.* 2012; 198:145-9.
 73. Forman HP, Larson DB, Kazerooni EA, Norbash A, Crowe JK, Javitt MC, Beauchamp NJ, Jr., Mendelson EB. **Masters of radiology panel discussion: maintaining maintenance of certification in the field of radiology.** *AJR Am J Roentgenol.* 2012; 198:854-7.
 74. Forman HP, Larson DB, Norbash A, Javitt MC, Beauchamp NJ, Jr., Monsees B, Messinger N. **Masters of radiology panel discussion: encouraging and fostering mentorship--how we can ensure that no faculty member is left behind and that leaders do not fail.** *AJR Am J Roentgenol.* 2011; 197:149-53.
 75. Frawley KJ, Anton CG, Zbojniewicz AM, Cornwall R. **CT evaluation of extensor tendon entrapment as a complication of a distal radial fracture in a child.** *Pediatr Radiol.* 2011; 41:1472-5.
 76. Frawley KJ, Calvo-Garcia MA, Krueger DA, McMasters RL. **'Benign' ovarian teratoma and N-methyl-D-aspartate receptor (NMDAR) encephalitis in a child.** *Pediatr Radiol.* 2012; 42:120-3.
 77. Furststein J, Patel M, Sadhasivam S, Mahmoud M. **Use of Dexmedetomidine for Monitored Anesthesia Care for Diskography in Adolescents.** *AANA Journal.* 2011; 79:421-425.
 78. Goske MJ. **Getting it right: are regulation and registries for CT radiation dose in children the answer?** *Pediatr Radiol.* 2011; 41 Suppl 2:567-70.

79. Goske MJ, Applegate KE, Bulas D, Butler PF, Callahan MJ, Coley BD, Don S, Farley S, Frush DP, Hernanz-Schulman M, Kaste SC, Morrison G, Sidhu M, Strauss KJ, Treves ST. **Approaches to promotion and implementation of action on Radiation Protection for children.** *Radiat Prot Dosimetry.* 2011; 147:137-41.
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81. Goske MJ, Applegate KE, Rehani MM, Del Rosario Perez M. **Large-scale quality improvement for radiation protection of children worldwide: lessons from the past applied to the present.** *AJR Am J Roentgenol.* 2012; 198:992-5.
82. Greiner HM, Holland K, Leach JL, Horn PS, Hershey AD, Rose DF. **Nonconvulsive status epilepticus: the encephalopathic pediatric patient.** *Pediatrics.* 2012; 129:e748-55.
83. Guillerman RP, Brody AS. **Contemporary perspectives on pediatric diffuse lung disease.** *Radiol Clin North Am.* 2011; 49:847-68.
84. Guimaraes CV, Leach JL, Jones BV. **Trainee misinterpretations on pediatric neuroimaging studies: classification, imaging analysis, and outcome assessment.** *AJNR Am J Neuroradiol.* 2011; 32:1591-9.
85. Hawkins CM, Racadio JM, McKinney DN, Vu DN. **Varicocele retrograde embolization with boiling contrast medium and gelatin sponges in adolescent subjects: a clinically effective therapeutic alternative.** *J Vasc Interv Radiol.* 2012; 23:206-10.
86. Herman JP, Lindquist D, Komoroski RA. **Linking cerebral metabolic function to stress vulnerability (Commentary on Knapman et al.).** *Eur J Neurosci.* 2012; 35:411.
87. Hernanz-Schulman M, Goske MJ, Bercha IH, Strauss KJ. **Pause and pulse: ten steps that help manage radiation dose during pediatric fluoroscopy.** *AJR Am J Roentgenol.* 2011; 197:475-81.
88. Jacola LM, Byars AW, Chalfonte-Evans M, Schmithorst VJ, Hickey F, Patterson B, Hotze S, Vannest J, Chiu CY, Holland SK, Schapiro MB. **Functional magnetic resonance imaging of cognitive processing in young adults with down syndrome.** *Am J Intellect Dev Disabil.* 2011; 116:344-59.
89. Jaimes C, Jimenez M, Shabshin N, Laor T, Jaramillo D. **Taking the Stress out of Evaluating Stress Injuries in Children.** *Radiographics.* 2012; 32:537-55.
90. Jones BV. **Acute Encephalitis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:86.
91. Jones BV. **Approach to the Pediatric Brain.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:2.
92. Jones BV. **Approach to the Pediatric Spine.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:2.
93. Jones BV. **Arachnoid Cyst.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:34.
94. Jones BV. **Arteriovenous Fistula.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:70.
95. Jones BV. **Arteriovenous Malformation.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:68.
96. Jones BV. **Brain Abscess.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:84.
97. Jones BV. **Brainstem Glioma.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:46.
98. Jones BV. **Callosal Dysgenesis.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:12.
99. Jones BV. **Caudal Regression Syndrome.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:8.
100. Jones BV. **Cavernous Malformation.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:72.
101. Jones BV. **Cephaloceles.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:8.
102. Jones BV. **Chance Fracture.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:34.

103. Jones BV. **Chiara 2.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:24.
104. Jones BV. **Chiari 1.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:22.
105. Jones BV. **Child Abuse.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:54.
106. Jones BV. **Childhood Aneurysms.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:74.
107. Jones BV. **Choroid Plexus Tumors.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:52.
108. Jones BV. **Colloid Cyst.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:32.
109. Jones BV. **Cortical Dysplasia.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:20.
110. Jones BV. **Craniocervical Junction Injuries.** *Diagnostic imaging. Pediatrics.* Salt Lake City, Utah: Amirsys, Inc.; 2012:30.
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295. Podberesky DJ. **Hepatic Adenoma**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:112.
296. Podberesky DJ. **Hepatocellular Carcinoma**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:114.
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302. Podberesky DJ. **Sano Shunt**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:88.
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348. Towbin AJ. **Post-Transplant Lymphoproliferative Disease**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:186.
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380. Zbojniewicz AM. **Chronic Foreign Body**. *Diagnostic imaging. Pediatrics*. Salt Lake City, Utah: Amirsys, Inc.; 2012:44.
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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 Interim Radiologist-in-chief (7/1/11-8/1/11), Associate Director, Physician Services and Education; Associate Chief, Academic Affairs

Research Interests Imaging the pediatric head and neck

Blaise V. Jones, MD, Professor

Leadership Associate Chief, Clinical Services; Division Chief, Neuroradiology; Division Co-Chief, MRI

Research Interests Brain neoplasms and cerebrovascular diseases

Todd A. Abruzzo, MD, Associate Professor

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

Research Interests Musculoskeletal diseases

Diane S. Babcock, MD, Professor Emerita

Williams S. Ball, MD, Professor

Research Interests Childhood stroke, neoplasms, sickle cell disease, brain perfusion imaging

Alan S. Brody, MD, Professor

Leadership Associate Director, 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, 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

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, MRI; 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; Endowed Chair, The Corning Benton Chair for Radiology Education

Research Interests Radiation protection for children, communication of radiation risk to families, practice quality improvement related to imaging in children, patient care and communication

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

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, Instructor

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

Marcia Komlos, , Instructor

Research Interests Neuroradiology, education

Steven J. Kraus, MD, Associate Professor

Leadership Division Chief, Radiography and Fluoroscopy

Research Interests Gastrointestinal malformations

Kamlesh U. Kukreja, MD, Instructor

Research Interests Vascular interventions (Arterial and venous thrombolysis, IVC filters, renal artery angioplasty)

David Larson, MD, Associate Professor

Leadership Chief, Quality Improvement; Endowed Chair, The Janet L. Strife Chair for Radiology Quality & Safety

Research Interests Healthcare Quality Improvement, patient safety, CT dose reduction and image optimization

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, Assistant 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

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, Assistant 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

Susan E. Sharp, MD, Assistant Professor

Research Interests Pediatric nuclear medicine, focusing on SPECT/CT and PET/CT.

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

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

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

Joint Appointment Faculty Members

Michael Taylor, MD, Assistant Professor (Cardiology)

Research Interests Cardiovascular imaging

Jennifer J. Vannest, PhD, Assistant Professor (Neurology)

Research Interests Neuroimaging of language development and language function in neurological disorders

Clinical Staff Members

- **Suraj Serai, PhD**,
Clinical MR Physicist

Trainees

- **Marlene J. Baumann, MD**, PL7, Sunny Upstate Medical University Hospital, Syracuse, NY
- **Kelly R. Dietz, MD**, PL6, University of Minnesota Medical Center, Minneapolis, MN
- **Shelby Fierke, MD**, PL6, Baylor University Medical Center, Dallas, TX
- **Jennifer H. Johnston, MD**, PL6, Tulane University School of Medicine, New Orleans, LA
- **Michael A. Murati, MD**, PL6, University of Minnesota Medical Center, Minneapolis, MN
- **Mittun C. Patel, MD**, PL6, Scott and White Memorial Hospital, Temple, TX
- **Francis R. Pianki, DO**, PL6, Grandview Hospital, Dayton, OH
- **Andrew T. Trout, MD**, PL6, University of Michigan, Ann Arbor, MI
- **Lily L. Wang, MD**, PL7, Prince of Wales/Sydney Children's Hospitals, Randwick, Australia
- **Shannon N. Zingula, MD**, Mayo Clinic, Rochester, MN

Division Collaboration

Radiology; Oncology; Pediatric Ophthalmology; Pharmacy » T. Abruzzo, MD, J. Leach, MD, B. Jones, MD, J. Perentesis, MD, R. Nagarajan, MD, L. Wagner, MD, D. Adams, MD, T. Cripe, MD, M. Absalon, MD, B. Weiss, MD, M. O'Brien, T. Hummell, MD, M. Fouladi, MD, C Philips, MD, C. West, MD, and C. Lambert, MD

A Pilot study of intra-ophthalmic artery topotecan infusion for patients with retinoblastoma for which ocular enucleation remains the only standard treatment option.

Radiology; Nephrology; Neurosurgery » K. O'Brien, J.L. Leach, MD, B.Jones, MD, J. Bissler, MD, M. Zuccarelo, MD, and TA Abruzzo, MD

Calcifications associated with pediatric intracranial arterial aneurysms: Incidence and correlation with pathogenetic subtypes

Radiology; Hematology/Oncology; Anesthesia » TA. Abruzzo, MD, M. Patino, MD, J. Leach, MD, R. Rahme, MD, and J. Geller, MD

Cerebral vasoconstriction triggered by sympathomimetic drugs: Relevations of cerebral angiography during

intra-arterial chemotherapy for retinoblastoma

Radiology; Neurology; Neurosurgery » R. Rahme, MD, L. Jimenez, MD, OM, Adeoye, MD, K. Alwell, MD, CJ. Moomaw, MD, J. Khoury, MD, TA. Abruzzo, MD, AJ Ringer, MD, D. Kleindorfer, MD, and BM. Kissela, MD
Malignant MCA territory infarction in the pediatric population: subgroup analysis of the Greater Cincinnati/Northern Kentucky Stroke Study

Radiology; Pulmonary; Pathology » A. Brody, MD, L. Young, MD, and T. Boyd, MD
Childhood Interstitial Lung Disease

Radiology; Nephrology and Hypertension » A. Brody, MD and J. Bissler, MD
Renal Angiomyolipomas

Radiology; Otolaryngology » A. Brody, MD, B. Hopkins, MD, and B. Koch, MD
Diagnostic capability of airway in croup and bacterial tracheitis

Radiology; Pulmonary » A. Brody, MD, L. Young, MD, and M. Rattan, MD
TSC-LAM Study

Radiology; Pulmonary » A. Brody and R. Amin
Randomized controlled study of sildenafil in children and young adults with mild to moderate cystic fibrosis lung disease

Radiology; Hematology » A. Brody and K. Kalinyak
Role of Placenta Growth Factor in Sickle Acute Chest Syndrome

Radiology; Hospital Medicine » A. Brody and L. Ambroggio
Diagnostic Tools for Detecting Pneumonia in Children

Radiology; Pulmonary » A. Brody, R. Amin, and R. Fleck
Pilot Study of Cardiac MRI to Assess Pulmonary Perfusion and Pulmonary Hemodynamics in Patients with Cystic Fibrosis

Radiology; Bone Marrow Transplantation » A. Brody and S. Davies
Computed Tomography Induced DNA Double-Stranded Breaks Formation and Subsequent Repair as a Marker of Radiation Sensitivity

Radiology; Behavioral Medicine and Clinical Psychology » A. Brody, MD and S. Powers, MD
HRCT & Growth in preschoolers receiving behavioral and nutrition treatment

Radiology; Gastroenterology » A. Brody, MD and J. Franciosi, MD
A phase 2, open-label, multicenter study to assess the safety and efficacy of certolizumab pegol in children and adolescents with active Crohn's disease

Radiology; Fetal Surgery » MA. Calvo, BM. Kline-Fath, C. Bitters, AC. Merrow, C. Guimaraes, and FY. Lim
Prenatal imaging of amniotic band sequence: utility and role of fetal MRI as an adjunct to prenatal US

Radiology; Surgery; Fetal Care Center » A. Bischoff, MA. Calvo-Garcia, N. Baregamian, MA Levitt, FY. Lim, J. Hall, and P. Alberto
Prenatal counseling for cloaca and cloacal exstrophy - challenges faced by pediatric surgeons

Radiology; Surgery; Fetal Care Center » MA. Calvo, BM Kline-Fath, MA Levitt, FY Lim, LE. Linam, MN Patel, S. Kraus, TM Cromblehomme, and A. Pena
Fetal MRI clues to diagnose cloacal malformations

Radiology Imaging Research; General and Community Based Pediatrics » K. Cecil, PhD and K. Yolton, PhD
Environmental Toxicants & Imaging in a Birth Cohort

Radiology Imaging Research; Neurology » K. Cecil, PhD and D. Gilbert, MD

Anomalous Motor Physiology in ADHD

Radiology Imaging Research; Radiology; Neurology » K. Cecil, PhD, M. Care, MD, and D. Franz, MD

Everolimus Therapy of Giant Cell Astrocytomas in Patients with Tuberous Sclerosis Complex

Radiology Imaging Research; Radiology; Gastroenterology and Hepatology and Nutrition » K. Cecil, PhD,

W.S. Ball, Jr., MD, and J. Heubi, MD

Rare Disease Clinical Research Network: Smith-Lemli-Opitz Syndrome: A Longitudinal Study of Patients

Receiving Cholesterol Supplementation: Sterol and Isoprenoid Research Consortium

Radiology Imaging Research; Neurology » K. Cecil, PhD, D. Lindquist, PhD, J. Clark, PhD, and T. DeGrauw, MD

Treatment of Creatine Transporter Deficiency

Radiology Imaging Research Center; Radiology; Gastroenterology and Hepatology ; Nutrition » K. Cecil,

PhD, D. Podberesky, MD, and S. Zanthakos, MD

NASH Network: Cystemaine bitartrate delayed-release for the treatment of nonalcoholic fatty liver disease

(NAFLD) in children (CyNCH) Trial

Radiology Imaging Research; Behavioral Medicine and Clinical Psychology » M. Difrancesco, PhD and D.

Beebe, MD

fMRI study of sleep deprivation in teens

Radiology Imaging Research; Rheumatology » M. Difrancesco, PhD and H. Brunner, MD

fMRI/DTI study of neuropsychiatric lupus

Radiology Imaging Research; Child Psychiatry » M. Difrancesco, PhD and E. Harris, MD

fMRI/TMS study of OCD

Radiology Imaging Research; Pulmonary Medicine » M. Difrancesco, PhD and R. Amin, MD

fMRI/DTI study of the baroreflex and blood pressure control

Radiology Imaging Research; Anesthesia » M. Difrancesco, PhD, M. Konig, MD, and J. Leach, MD

Study of anesthesia impact on BOLD effect

Radiology Imaging Research Center; Heart Institute » C. Dumoulin, PhD, R. Giaquinto, and M. Taylor, PhD, MD

Constructing new pediatric cardiac MR imaging coils

Radiology Imaging Research Center; Heart Institute » C. Dumoulin, PhD, T. Knilans, MD, and J. Towbin, MD

Developing MR guided electrophysiology

Radiology Imaging Research Center; Perinatal Institute » C. Dumoulin, PhD, J. Tkach, PhD, J. Whitsett, MD, J.

Greenberg, MD, N. Hillman, M. Ikegami, A. Jobe, S. Kallapur, and S. Merhar

Delivery of the first ONI MR scanner and animal study under a developmental biology protocol for neonatal

sheep (N-12)

Radiology Imaging Research Center; Perinatal Institute » C. Dumoulin, PhD, J. Tkach, PhD, B. Haberman, MD,

W. Brady, and S. Merhar, MD

Installation of MRI scanner inside the NICU

Radiology Imaging Research Center; Pulmonary Medicine » C. Dumoulin, PhD and R. Amin, MD

Recruitment of senior imaging faculty member to focus on pulmonary imaging. Expansion of business plan to

include commitments from Radiology, Pediatrics, and Perinatal Institute

Radiology Imaging Research Center; Oncology » C. Dumoulin, PhD and J. Perentesis, MD

Created business plan to bring clinical HIFU equipment and new faculty to the institution

Radiology Imaging Research Center; Oncology » C. Dumoulin, PhD, M. DiFrancesco, PhD, and J. Perentesis, MD

Proton therapy task force for CCHMC for providing recommendations regarding technical aspects of this new therapy

Radiology Imaging Research Center; Nephrology » C. Dumoulin, PhD, Y. Li, PhD, J. Wanasapura, PhD, and J. Bissler, MD

Novel uses of high intensity focused ultrasound in the treatment of preclinical models of angiomyolipomas associated with tuberous sclerosis complex

Radiology; Cardiology » R. Fleck, MD, J. Wanasapura, PhD, M. Taylor, MD, K. Hor, MD, D. Benson, MD, and L. Cripe, MD

Cardiac MRI research

Radiology; Pulmonary Medicine » R. Fleck, MD, J. Wanasapura, PhD, S. Serai, PhD, R. Amin, MD, and Dr. McPhall

MR imaging research in cystic fibrosis and congenital muscular dystrophy

Radiology; Endocrinolog » R. Fleck, MD and I. Little-Gutmark, MD

MR Imaging and modeling of the airway in Turner's Syndrome

Radiology; Pulmonary Medicine; Otolaryngology; Surgery; Genetics; Plastics; DDBP; Outcomes Research and Administration » R. Fleck, R. Amin, MD, M. Rutter, MD, R. Cotton, MD, S. Shott, MD, H. Billmire, MD, H. Saal, MD, S. Oppenheimer, MD, and M. Seid, MD

Upper airway Steering Center Development Team

Radiology; Pulmonary Medicine; Otolaryngology; Surgery; Anesthesia; Biostatstics » R. Amin, MD, R. Fleck, MD, S. Shott, MD, E. Gutmark, PhD, S. Khosla, MD, M. Mahmoud, MD, K. McConell, MS, and M. Fenchel, MS

Dynamic computational modeling of obstructive sleep apnea in Down syndrome

Radiology; Neurology » M. Gelfand, MD, K. Holland, MD, K. Lee, MD, and D. Rose, MD

Evaluation and improvement of localization of epileptogenic foci in patients with intractable seizures

Radiology; Hematology-Oncology » M. Gelfand, MD and J. Palumbo, MD

PET with non-imaging CT in Langerhans cell histiocytosis (and additional localization CT as needed) to substantially reduce effective dose

Radiology; Hematology-Oncology » M. Gelfand, MD, R. Dasgupta, MD, and L. Wagner, MD

Lymphoscintigraphy with SPECT for sentinel node localization in soft tissue sarcomas

Radiology; UC Radiation Safety; UC Radiation Physics; Hematoogy/Oncology » M. Gelfand, MD, V. Morris, MS, L. Lemen, PhD, B. Tarpin, MD, and B. Weiss, MD

Reduction of personnel dose in administration of I-131-MIBG by measurement of dose from each step of the radiopharmaceutical administration

Radiology; Hematology-Oncology » M. Gelfand, MD, B. Weiss, MD, and S. Sharp, MD

I-131-MIBG therapy in neuroblastoma

Radiology; Hematology-Oncology » M. Gelfand, MD and T. Cripe, MD

PET/CT imaging in bone sarcomas after limb salvage surgery

Radiology; Hematology-Oncology » M. Gelfand, MD, T. Cripe, MD, S. Sharp, MD, and A. Durrani, MD

Changes on PET and CT imaging after limb salvage surgery for bone tumors

Radiology; Orthopedics » M. Gelfand, MD and C. Mehlman, MD

SPECT in patients with back pain

Radiology; Hematology-Oncology » M. Gelfand, MD and M. O'Brien, MD

Retrospective study of children with primary bone lymphomas

Radiology; Hematology/Oncology; Pulmonary; Gastroenterology » N. Yazigi, MD, L. Young, MD, J. Blessing, MD, M. Gelfand, MD, and S. Sharp, MD

PET imaging findings in lymphoproliferative diseases

Radiology; Oncology » M. Gelfand, MD, S. Sharp, MD, and M. Absalon, MD

Dose reduction in follow-up PET/CT imaging of lymphoma: When does localization CT actually provide additional diagnostic information?

Radiology; Oncology » M. Gelfand, MD, S. Sharp, MD, J. Geller, MD, and M. Fouladi, MD

Fluoro-Dopa PET imaging of brain tumors in children

Radiology; Medical Affairs/Pediatrics » M. Goske, MD and K. Mandel, MD

ACR Quality Improvement Registry in CT scans in children, part of the national Dose Index Registry

Radiology; Hematology » K. Kukreja, MD and R. Gruppo, MD

Develop guidelines for local tPA therapy for the hospital. Part of multidisciplinary thrombosis group

Radiology; Hematology/Oncology » B. Jones, MD and J. Geller, MD

A pilot study of intra-ophthalmic artery topotecan infusion for patients with retinoblastoma for which ocular enucleation remains the only standard treatment option

Radiology; Hematology/Oncology » B. Jones, MD and M. Fouladi, MD

A pilot study of bevacizumab-based therapy in patients with newly diagnosed high grade gliomas and diffuse intrinsic pontine gliomas

Radiology; Hematology/Oncology » B. Jones, MD and T. Hummell, MD

A study of the incidence of dural venous anomalies in children diagnosed with intracranial neoplasms

Radiology; Hematology/Oncology » B. Jones, MD, M. Fadell, MD, and D. Adams, MD

Prenatal diagnosis and postnatal follow-up of rapidly involuting congenital hemangioma

Radiology; Hematology/Oncology » B. Jones, MD, C. Phillips, MD, L. Miles, MD, M. Sutton, MD, K. Crone, MD, and M. Fouladi, MD

Medulloblastoma with melanotic differentiation

Radiology; Hematology/Oncology » B. Jones, MD, T. Hummel, MD, F. Mangano, MD, and J. Geller, MD

The clinical heterogeneity of desmoplastic infantile ganglioglioma

Radiology; Emergency Medicine » B. Jones, MD and L. Babcock-Cimpello, MD

Axonal injury in mild traumatic brain injury: KL2 mentored career development program in clinical and translational research

Radiology; Neonatology; Neurology; Radiology Imaging Research Center » B. Jones, MD, T. Tkach, PhD, R. Giaquinto, W. Loew, PhD, R. Pratt, PhD, B. Daniels, L. Donnelly, MD, and C. Dumoulin, PhD

An MRI imaging system for imaging neonates in the NICU

Radiology; Psychology » B. Jones, MD, K. Dietrich, PhD, and K. Cecil, PhD

Early lead exposure, ADHD, and persistent criminality: Role of Genes and environment

Radiology; Neurosurgery » B. Jones, MD, T. Abruzzo, MD, L. Serrano, MD, H. Kocaeli, MD, N. Zumberge, MD, F. Mangano, MD, M. Zuccarello, MD, and K. Crone, MD

Neurovascular phenotypes among children with ruptured idiopathic intracranial arterial aneurysms and

comparison with the adult phenotype

Radiology; Neurosurgery » B. Jones, MD, R. Buckley, MD, F. Mangano, MD, and WH, Yuan, PhD

Longitudinal comparison of diffusion tensor imaging parameters and neuropsychological measures following endoscopic third ventriculostomy for hydrocephalus

Radiology; Otolaryngology » R. Radhakrishnan, MD, HJ. Son, MD, and B. Koch, MD

Pictorial review of petrous apex lesion in the pediatric population

Radiology; Oncology » K. Kukreja, MD and J. Geller, MD

Develop multi-disciplinary program for treatment of HCC

Radiology; Neurology » HY Kim, MD and B. Wong, MD

Neuromuscular disorders

Radiology; Cardiology » HY Kim, MD and K. Hor, MD

Cardiac MR in patients with neuromuscular disorders

Radiology; Neurology; Epidemiology » HK Kim, MD, AC Merrow, MD, S Serai, PhD, S. Salisbury, MD, LL Wang, MD, T. Laor, MD, and B Wong, MD

Do age and body surface area affect the T2 relaxation time value on MRI of skeletal muscles in normal children?

Radiology; Fetal Care Center » B. Kline-Fath, MD, A. Coleman, MD, and YL. Foong, MD

Proportion of solid component in sacrococcygeal teratoma is more predictive of outcome than tumor volume

Fetal cervical teratoma: what is the role of fetal MRI in predicting pulmonary hypoplasia?

Radiology; Neonatology » B. Kline-Fath, MD and S. Merhar

Functional study of neonates with hypoxic ischemic encephalopathy

Radiology; Genetics » B. Kline-Fath, MD and R. Hopkins, MD

Outcomes in fetuses with aqueductal stenosis

Radiology; Neurosurgery » B. Kline-Fath, MD, B. Bixemann, MD, and K. Bierbrauer, MD

Syrinx in the fetal population

Radiology; Rheumatology » T. Loar, MD, HK. Kim, MD, T. Graham, MD, D. Kim, MD, C. Anton, MD, S. Salisbury, MD, J. Racadio, and B. Dardzinski, PhD

T2 relaxation time changes in distal femoral articular cartilage in children with juvenile idiopathic arthritis

Radiology; Epidemiology » T. Laor, MD, H. Kalkwarf, MD, and J. Bean, MD

Fracture risk in children with a forearm injury is associated with bone density and bone geometry measured with peripheral QCT and DXA

Radiology; Orthopedics » T. Laor, MD, R. Desai, MD, and S. Parikh, MD

Intra-articular entrapment of medial collateral ligament

Radiology; Hematology/Oncology » T. Laor, MD, L. Wagner, MD, M. Gelfand, MD, F. Ryckman, MD, H. Al-Ghawi, MD, and K. Bove, MD

Nodular fasciitis presenting as soft tissue sarcoma

Radiology; Orthopedics » T. Laor, MD, K. Shea, MD, N. Grimm, MD, and E. Wall, MD

Bone bruises and meniscal tears on MRI in skeletally immature children with tibial eminence fractures

Radiology; Rehabilitation » T. Laor, MD, R. Talbert, MD, L. Michaud, MD, C. Mehlman, MD, D. Kinnett, MD, S. Foad, MD, B. Schnell, MD, and S. Salisbury, MD

EMG and MRI are independently related to shoulder external rotation function in neonatal brachial plexus palsy

Radiology; Surgery; Hematology/Oncology » T. Laor, MD, B. Weiss, MD, R. Dasgupta, MD, M. Gelfand, MD, J. Breneman, MD, R. Lavigne, MD, R. Elluru, MD, and L. Wagner, MD

Use of sentinel node biopsy for staging parameningeal rhabdomyosarcoma

Radiology; Pathology; Rheumatology » T. Laor, MD, P. Ladd, MD, K. Emery, MD, S. Salisbury, MD, D. Lovell, MD, and K. Bove, MD

Juvenile dermatomyositis

Radiology; Orthopedics » T. Laor, MD, W. Lippert, MD, M Foad, MD, R. Cornwall, MD, and C. Mehlman, MD

Intra- and inter-rater reliability of glenoid version and glenohumeral subluxation measurements in neonatal brachial plexus palsy

Radiology; Pathology » T. Laor, MD, J. Stanek, MD, and J. Leach, MD

Diprosopus tetraophthalmos: computed tomography as a complement to autopsy

Radiology; Orthopedics » T. Laor, MD, B. Reading, MD, S. Salisbury, MD, R. Cornwall, MD, and W. Lippert, MD

Quantification of humeral head deformity following neonatal brachial plexus palsy

Radiology; Rheumatology » T. Laor, MD, A. Brown, MD, C. Kwoh, MD, and H. Hirsch, MD

Patients with juvenile idiopathic arthritis in clinical remission have evidence of persistent inflammation revealed by 3T MRI

Radiology; Orthopedics » T. Laor, MD, E. Wall, MD, and A. Zbojniewicz, MD

Juvenile pediatric intercenter treatment of osteochondritis dissecans and osteoarthritis research

Radiology; Orthopedics; Biomedical Informatics; Occupational and Physical Therapy » GD Myer, MD, EJ

Wall, MD, MV Paterno, T. Laor, MD, A. Zbojniewicz, MD, AJ Towbin, MD, and M. Wagner, MD

Optimization and External Validation of Non-invasive Outcome Prediction Algorithm for Knee Osteochondritis Dissecans in Children. Submitted for a CCHMC Trustee Grant.

Radiology; Occupational/Physical Therapy; Orthopaedic Surgery » E. Wall, MD, GD Myer, MV Paterno, PT,

PhD, T. Laor, MD, and A. Zbojniewicz, MD

Relationship of osteochondritis dissecans classification to healing and functional outcomes

Radiology; Neurology; Pathology » J. Leach, MD, L. Miles, MD, and M. Miles, PhD

Diffuse Cortical Gliosis Is Associated with Decreased Mitochondrial Electron Transport Chain Complex IV Activity in Epileptogenic Brain Resected from Children with Intractable Epilepsy

Radiology; Neurology; Neurosurgery » J. Leach, MD, H. Fujiwara, MD, H. Greiner, MD, D. Rose, MD, FT

Mangano, MD, T. Author, MD, and K. Holland-Bouley, MD

Ictal High frequency Oscillations with epilepsy surgical candidates secondary to Tuberous sclerosis Complex

Radiology; Oncology; Pathology » J. Leach, MD, MW Bishop, MD, TR Hummel, MD, J. Breneman, MD, C.

Stevenson, MD, L. Wagner, MD, M. Sutton, MD, and L. Miles, MD

Necrosis in Pediatric Patients with CNS Tumors Treated With Proton Beam Radiation Therapy: A Case Series

Radiology; Neurology » J. Leach, MD, K. Lee, MD, C Seo, MD, H. Fujiwara, MD, D. Rose, MD, and M.

Korostenskaj, MD

Real-time functional mapping (RTFM) in a pediatric epilepsy surgery: concordance with fMRI and ESM finding

Radiology; Neurology » J. Leach, MD, HM Greiner, MD, K. Holland, MD, PS Horn, MD, AD Hershey MD, and DF

Rose, MD

Nonconvulsive status epilepticus: the encephalopathic pediatric patient

Radiology; Neurosurgery; Radiology Imaging Research Center » J. Leach, MD, TA Maugans, , C. Farley, M. Altaye, MD, and K. Cecil, PhD

Pediatric Sports-Related Concussion Produces Cerebral Blood Flow Alterations without Structural or Metabolic Brain Injury

Radiology; Neurosurgery » J. Leach, MD and F. Mangana, DO

Imaging and Treatment of pediatric epilepsy; imaging and pathology correlations in pediatric cortical dysplasia; operative neuronavigation in pediatric neurosurgery; SMA syndrome after operative resection in the frontal lobes

Radiology; Oncology » J. Leach, MD and M. Fouladi, MD

High grade glioma imaging and treatment correlations; Imaging of diffuse brainstem glioma and treatment responses

Radiology; Neurology » J. Leach, MD, H. Greiner, MD, K. Holland, MD, and D. Rose, MD

Imaging and treatment of pediatric epilepsy

Radiology; Neurology » J. Leach, MD, D. Franz, MD, D. Kreuger, MD, and J. Mandelt-Tillema, MD

Everolimus alters white matter diffusion in tuberous sclerosis complexes. DTI study.

Radiology; Oncology » J. Leach, MD and J. Geller, MD

A pilot study of intra-ophthalmic artery topotecan infusion for the treatment of retinoblastoma.

Radiology; Neurology » J. Leach, MD, L. Lehman, MD, and M. Kabouche, MD

Pediatric stroke

Radiology; Neurology » J. Leach, MD and J. Mandelt-Tillema, MD

DTI analyses in pediatric multiple sclerosis and demyelinating disorders; DTI analyses in tuberous sclerosis

Radiology; Neonatology » J. Leach, MD, B. Kline-Fath , and S. Merhar, MD

Imaging findings in Twin-twin transfusion syndrome

Radiology; Psychology; Emergency Medicine; Radiology Imaging Research Center; PNRC » J. Leach, MD and S. Wade, PhD

Imaging and neurobehavioral outcomes in traumatic brain injury

Radiology; Emergency Medicine » J. Leach, MD and L. Babcock-Cimpello, MD

Defining axonal injury in children with mild traumatic brain injury

Radiology; Pathology » J. Leach, MD and L. Miles, MD

Imaging/pathology correlations in pediatric cortical dysplasia

Radiology; Center for Safe and Healthy Children » J. Leach, MD and M. Greiner, MD

Does macrocephaly and enlargement of the subarachnoid spaces predispose children to subdural hematomas?

Radiology; Anesthesia; Oncology » J. Leach, MD, T. Abruzzo, MD, M. Patino, MD, and J. Geller, MD

Reversible cerebral vasoconstriction syndrome (RCVS) associated with the administration of vasoconstrictors and antihistaminics to a toddler

Radiology Imaging Research Center; Developmental Biology » D. Lindquist, PhD and A. Kuan, MD, PhD

Mouse models of hypoxia/ischemia and treatment effects

Radiology Imaging Research Center; Hematology/Oncology » D. Lindquist, PhD, N. Ratner, PhD, D. Mayes, PhD, E. Jousma, PhD, and J. Wu, PhD

Mouse models of neurofibromatosis I

Radiology Imaging Research Center; Nephrology » D. Lindquist, PhD, J. Wansapura, PhD, and M. Mitsnesfes,

MD

Cardiac dysfunction in dialysis and kidney transplant patients

Radiology Imaging Research Center; Neurosurgery » D. Lindquist, PhD, F. Mangano, MD, and W. Yuan, PhD

Animal models of hydrocephalus

Radiology Imaging Research Center; Hematology/Oncology » D. Lindquist, PhD and B. DasGupta, MD

AMPK signaling

Radiology Imaging Research Center; Neurology » D. Lindquist, PhD and M. Bardgett

Effects of risperidone during adolescence

Radiology Imaging Research Center; Neurology » D. Lindquist, PhD, R. Komoroski, PhD, and J. Herman, PhD

Gender and stress effects on development

Radiology Imaging Research Center; Neurology » D. Lindquist, PhD and G. Gudelsky, PhD

Effects of brain creatine transporter deficiency

Radiology Imaging Research Center; Neurology » D. Lindquist, PhD and R. McNamara, PhD

Effects of Omega-3 deficiency

Radiology Imaging Research Center; Neurology » D. Lindquist, PhD and P. Desai, MD

Dynamic imaging of breast cancer therapy

Radiology; Hematology-Oncology; Surgery; Pathology » ML Baker, MD, DM Adams, MD, AM Hammill, MD, AC

Merrow, MD, R. Dasgupta, MD, MN Patel, MD, SJ Kellie, MD, C. Chute, MD, and A. Gupta, MD

Three cases of angiosarcoma arising in vascular malformations with review of the literature

Radiology; Surgery; Fetal Care Center; Oncology; Pathology » AC Merrow, MD, B. Rymeski, MD, DM. Adams,

MD, R Dasgupta, RG Azizkhan, and A. Gupta

Intraosseous epithelioid hemangioma coexisting with vascular malformation

Radiology; Hematology-Oncology » MA Murati, MD, AC Merrow, MD, MN Patel, MD, and DM Adams, MD

Kaposiform hemangioendothelioma: a spectrum of MRI features

Radiology; Surgery; Pathology » AL Agadi, MD, B Rymeski, MD, AC Merrow, MD, R. Dasgupta, MD, KE Bove,

MD, and A Gupta, MD

Four cases of pediatric deep-seated pyogenic granuloma with review of literature and differential diagnosis

Radiology; Surgery; Dermatology » AC Merrow, MD, JS Frischer, MD, and AW Lucky, MD

Pyloric atresia with epidermolysis bullosa: fetal MRI diagnosis with postnatal correlation

Radiology; Neurology » HY Kim, MD, S. Serai, PhD, AM Zbojniec, MD, AC Merrow, MD, T. Laor, MD, LL

Wang, MD, and B. Wong, MD

Advanced MR imaging techniques of skeletal musculature in children

Radiology; Neurology » HY Kim, MD, AC Merrow, MD, S Serai, PhD, T. Laor, MD, and B. Wong, MD

Objective measurement using T2 relaxation time mapping and MR spectroscopy of minimal fat in normal skeletal muscles of healthy children

Radiology; Neurology » LL Wang, MD, HK Kim, MD, AC Merrow, MD, T. Laor, MD, S. Serai, PhD, and B. Wong,

MD

MR imaging of the skeletal muscles in boys with Duchenne muscular dystrophy: Part 1. Can fatty infiltration and inflammation of the gluteus maximus muscle be used as indicators of clinical assessment in boys with DMD?

Radiology; Neurology » JJ Johnston, MD, HY Kim, MD, AC Merrow, MD, T. Laor, MD, S. Serai, MD, and B. Wong,

MD

MR imaging of the skeletal muscles in boys with Duchenne muscular dystrophy: Part 2. T2 relaxation time mapping as a noninvasive biomarker to determine pathologic fatty infiltration: Comparison between boys with DMD and healthy boys

Radiology; Hematology » S. O'Hara, MD and T. Kalfa, MD

TCD with Transfusions Changing to Hydroxyurea (TWITCH): a phase III randomized clinical trial 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.

Radiology; Hematology » S. O'Hara, MD, T. Quinn, MD, and T. Kalfa, MD

HU (hydroxyurea) Prevent Study in sickle cell patients

Radiology; Hematology » S. O'Hara, MD and T. Quinn, MD

Comparison of the Toshiba Aplio scanner to the Siemens Acuson Sequoia scanner for transcranial doppler ultrasonographic detection of cerebral flow velocities

Radiology; Hospital Medicine; Biostatistics and Epidemiology » S. O'Hara, MD, B. Coley, MD, D. Babcock, MD, L. Ambroggio, MD, M. Macaluso, MD, and S. Shah, MD

Diagnostic tools for detecting pneumonia in children (Thrasher Study)

Radiology; Neurology » S. O'Hara, MD and B. Wong, MD

Glaxo Smith Kline sponsored - Renal stone study in patients with Duchenne's muscular dystrophy

Radiology; Urology » S. O'Hara, MD and P. Reddy, MD

Novartis sponsored - Dose escalating cohort study of Enablex in patients with neurogenic detrusor overactivity

Radiology; Hematology/Oncology » M. Patel, DO and D. Adams, MD

Rapamycin for the treatment of complex vascular malformations

Radiology; Surgery » D. Podberesky, MD and M. Levitt, MD

Imaging of anorectal malformations

Radiology; Gastroenterology » D. Podberesky, MD and L. Denson, MD

Imaging of inflammatory bowel disease in children

Radiology; Gastroenterology » D. Podberesky, MD, R. Kohli, MD, and S. Xanthakos, MD

Imaging of non-alcoholic fatty liver disease in children with MR elastography

Radiology; Cardiology » D. Podberesky, MD, K. Hor, MD, and M. Taylor, MD

Imaging of the liver in Fontan patients with MR elastography

Radiology; Oncology » D. Podberesky, MD and J. Geller, M.D.

MR imaging of pediatric liver tumors with hepatocyte-specific contrast agents

Radiology; Otolaryngology » D. Podberesky, MD and R. Elluru, MD

Dynamic airway CT imaging

Radiology; Anesthesiology » D. Podberesky, MD and M. Mahmoud, MD

Systems improvement in pediatric MRI

Radiology; Radiology Imaging Research Center; Pediatric Surgery » J. Racadio, MD, M. Patel, MD, N. Johnson, MD, K. Kukreja, MD, R. Nachabe, D. Babic, and D. VonAllmen, MD

Dedicated animal research interventional radiology suite: Philips state-of-the-art Allura FD20 angio-interventional system. Installation in Imaging Research Center

Radiology; Oncology » J. Racadio, MD, M. Patel, MD, K. Kukreja, MD, N. Johnson, MD, and T. Cripe, MD

Herpes Simplex Virus-1 Mutant HSV1716 image guided injection into patients with refractory solid tumor.

Radiology; Gastroenterology » J. Racadio, MD, M. Patel, MD, K. Kukreja, MD, N. Johnson, MD, and S. Xanthalos, MD

NASH (Nonalcoholic Steatohepatitis): IR performs image guided liver biopsies on obese teens.

Radiology; Hematology/Oncology » J. Racadio, MD, M. Patel, MD, K. Kukreja, MD, N. Johnson, MD, and R. Kohli, MD

Iron overload in Sickle Cell: IR performs image guided liver biopsies.

Radiology; Nephrology » J. Racadio, MD, M. Patel, MD, K. Kukreja, MD, N. Johnson, MD, F. Strife, MD, and M. Mitsnesfes, MD

Renal/vascular hypertension in children: angiography and percutaneous balloon angioplasty

Radiology; Radiology Imaging Research Center » J. Racadio, MD, M. Patel, MD, K. Kukreja, MD, N. Johnson, MD, and C. Dumoulin, PhD

MR-guided intervention

Radiology; Radiology Imaging Research Center; Neonatology » M Rattan, MD, C Anton, MD, J Tkach, PhD, and A South, MD

MRI image sequence optimization and normative data collection on neonates using the neonatal MR unit

Radiology; Oncology » S. Sharp, MD, M. Gelfand, MD, and M. Absalon, MD

Altered FDG uptake patterns in pediatric lymphoblastic lymphoma patients receiving induction chemotherapy that includes very high dose corticosteroids

Radiology; Gastroenterology » A. Towbin, MD and Paterno

Cystic fibrosis liver disease "PUSH" study

Radiology; Nephrology » A. Towbin, MD, D. Petry, RT, and J. Bissler, MD

Novartis CRAD001M2302 Trial - Phase 3 trial evaluating the use of everolimus for the treatment of angiomyolipomas in patients with Tuberous Sclerosis

Radiology; Oncology » A. Towbin, MD, K. Kukreja, MD, M. Patel, MD, N. Johnson, MD, J. Racadio, MD, and T. Cripe, MD

HSV 1716 intra-tumoral injection study - Phase 1 trial evaluating the safety of a recombinant herpes virus injection in treating solid tumors

Radiology; Oncology » A. Towbin, MD, K. Kukreja, MD, M. Patel, MD, N. Johnson, MD, J. Racadio, MD, and T. Cripe, MD

Jennerex JX-594 Intra-tumoral Injection Study - Phase 1 trial evaluating the safety of an intratumoral injection of a recombinant vaccinia virus in treating solid tumors

Radiology; Pathology; Oncology » A. Towbin, MD, M. Collins, MD, J. Perentesis, MD, and R. Nagarajan, MD

INI1 and mib-1 Expression in Childhood Chordoma - Retrospective study evaluating childhood chordoma at CCHMC

Radiology; Oncology » A. Towbin, MD, T. Hummel, MD, and B. Weiss, MD

Response of NF1 related plexiform neurofibroma to high dose carboplatin. Case report.

Radiology; Oncology » A. Towbin, MD, A. Meyers, MD, S. Serai, PhD, D. Podberesky, MD, and J. Geller, MD

Characterization of pediatric liver lesions with gadoxetate disodium - evaluation of liver tumors in children using a novel contrast agent

Radiology; Surgery; Oncology » A. Towbin, MD, K. Kukreja, MD, G. Tiao, MD, and J. Geller, MD

Early chemotherapy response and identification of liver transplant candidates in patients with unresectable hepatoblastoma

Radiology; Gastroenterology » A. Towbin, MD, D. Podberesky, MD, L. Denson, MD, and C. Dykes, MD

Biomarkers for Inflammatory Bowel Disease and Treatment Response - Clinical trial evaluating the ability of CT and MR enterography to detect inflammatory bowel disease and comparing it to lab values and endoscopy findings

Radiology; Gastroenterology » A. Towbin, MD, L. Diniz, MD, and P. Putnam, MD

Radiographic Findings in Eosinophilic Esophagitis - Retrospective study evaluating the fluoroscopic findings in patients with eosinophilic esophagitis

Radiology; Pathology » A. Towbin, MD and J. Mo, MD

Focal Nodular Hyperplasia in Children, Adolescents and Young Adults - Evaluation of pathologically-proven FNH at CCHMC

Radiology; Emergency Medicine; Surgery » A. Towbin, MD, A. Spooner, MD, C. Showalter, MD, H. Brodzinski, MD, E. Alessandrini, MD, and D. von Allmen, MD

Risk Stratification to Efficiently Diagnose Appendicitis - Prospective study evaluating the use of a clinical pathway in helping to efficiently diagnose patients with appendicitis

Radiology; Gastroenterology; Cardiology » A. Towbin, MD, D. Podberesky, MD, D. Wallihan, MD, R. Fleck, MD, and M. Campbell, MD

MR Elastography of the liver in patients status-ost Fontan procedure

Radiology; Gastroenterology » A. Towbin, MD and C. Xanthopoulos, MD

Pediatric liver elastography

Radiology; Emergency Medicine; Outcomes Systems » A. Towbin, MD, D. Larson, MD, S. Iyer, MD, and Varadarajan

Decreasing the variability in turnaround time for radiography studies from the emergency department

Radiology; Oncology » A. Towbin, MD and J. Geller, MD

Incidence and etiology of new liver lesions in pediatric patients previously treated for malignancy

Radiology; Oncology » A. Towbin, MD, D. Podberesky, MD, and J. Geller, MD

Hepatoblastoma Imaging with gadoxetate disodium enhanced MRI -- typical, atypical pre and post treatment evaluation

Radiology; Oncology » M. Fouladi, MD, B. Jones, MD, J. Leach, MD, and A. Towbin, MD

Diffuse intrapontine glioma

Radiology; Oncology » TP Cripe, MD, M. Absalon, MD, D. Adams, MD, K. Burns, MD, J. Geller, MD, M. Fouladi, MD, T. Hummel, MD, R. Nagarajan, MD, J. Perentesis, MD, L. Wagner, MD, B. Weiss, MD, D. Bernstein, MD, J. Racadio, MD, M. Patel, MD, N. Johnson, MD, K. Kukreja, MD, and A. Towbin, MD

A phase I dose escalation study of intratumoral herpes simplex virus-1 mutant HSV1716 in patients with non-central nervous system (non-CNS) solid tumors.

Radiology; Oncology; Infectious Disease » TP. Cripe, MD, M. Absalon, MD, D. Adams, MD, K. Burns, MD, J. Geller, MD, T. Hummel, MD, R. Nagarajan, MD, J. Perentesis, MD, L. Wagner, MD, B. Weiss, MD, D. Bernstein, MD, J. Racadio, MD, M. Patel, MD, N. Johnson, MD, K. Kukreja, MD, and AJ Towbin, MD

Jennerex Viral Injection - phase 1 study

Radiology; Bone Marrow Transplantation and Immune Deficiency » R. Radhakrishnan, MD, AJ. Towbin, MD, M. Komlos, MD, and AH. Filipovic MD

Neuroradiology findings in hemophagocytic lymphohistiocytosis

Radiology; Bone Marrow Transplantation and Immune Deficiency; » R. Radhakrishnan, MD, AJ. Towbin, MD, and AH. Filipovic MC

Role of imaging in hemophagocyte lymphohistiocytic syndrome.

Radiology; Gastroenterology, Hepatology, & Nutrition » D. Dykes, MD, DJ, Podberesky, MD, AJ Towbin, MD, and L. Denson, MD

Increased Prevalence of Strictures and Luminal Narrowing Identified by Enterography in Pediatric Crohn's Disease Patients With Elevated Granulocyte-Macrophage Colony-Stimulating Factor Auto-Antibodies.

Radiology Imaging Research Center; Heart Institute » J Wansapura, PhD, E Purevjav, MD, PhD, and J. Towbin, MD

Cardiac MRI of various mouse models of inherited cardiomyopathy

Radiology imaging Research Center; heart Institute » J Wansapura, PhD and R. Hinton, MD

Biomechanical dysfunction in a mouse model of aortopathy

Radiology Imaging Research Center; Mechanical Engineering » J. Wansapura, PhD and R. Banerjee, PhD

High intensity focused ultrasound of in vivo pig liver

Radiology imaging Research Center; Experimental Hematology » J. Wansapura, PhD, E. Mullin, MD, and P. Malik, MD

Cardiac MRI of sickle cell mice

Radiology Imaging Research Center; Gastroenterology » P. Winter, PhD and R. Kohli, MD

Weight loss surgery related improvement in obesity co-morbidities: Role of bile acids

Radiology; Radiology Imaging Research Center; Heart Institute » P. Winter, PhD, J. Racadio, MD, and M. Taylor, PhD, MD

Serial imaging of inflammation and apoptosis in atherosclerotic plaques

Radiology Imaging Research Center; Developmental Biology » P. Winter, PhD and A. Kuan, MD

Use of iron oxide nanoparticles for tracking the activation and infiltration of immune cells during cerebral infarction

Radiology Imaging Research Center; Neonatology; Pulmonary Biology » P. Winter, PhD and A. Jobe, MD

Use of MRI contrast agents for imaging the distribution of surfactant in the lung

Radiology; Orthopedics; Sports Medicine » A. Zbojniec, MD, S. Parikh, MD, E. Wall, MD, and G. Myer, MD

Intracapsular origin of the long head of the biceps tendon with glenoid avulsion of glenohumeral ligaments

Radiology; Orthopedics; Sports Medicine » SN Parikh, MD, EJ Wall, MD, T. Laor, MD, AM Zbojniec, MD, E. Eismann, and GD Myer, MD

The Reliability to Determine "Healing" in Osteochondritis Dissecans from Radiologic Assessment

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct

ALSIP, C

Enhancing the Patient and Family Experience

Association for Medical Imaging Management Education Foundation

01/01/12-12/31/12

\$7,500

BRODY, A**Therapeutics Development Center - TDN Imaging Core**

Cystic Fibrosis Foundation Therapeutics, Inc

TRAPNE03Y2

04/01/03-12/31/12

\$91,749

CECIL, K**Bipolar Disorder Imaging & Treatment Research Center**

National Institutes of Health(University of Cincinnati)

P50 MH 077138

07/01/07-06/30/12

\$98,972

DUMOULIN, C**Cincinnati Center for Clinical/Translational Sciences & Training**

National Institutes of Health(University of Cincinnati)

UL1 RR 026314

04/03/09-03/31/14

\$23,181

FLECK R / AMIN, R / SHOTT S**Dynamic Computational Modeling of Obstructive Sleep Apnea in Down Syndrome**

National Institutes of Health

R01 HL 105206

9/17/2010-8/31/2014

\$759,075

HOLLAND, S**fMRI of Language Recovery Following Stroke in Adults**

National Institutes of Health(University of Cincinnati)

R01 NS 048281

09/30/08-07/31/13

\$26,334

Pediatric Functional Neuroimaging Research Network

National Institutes of Health

HHSN275200900018C

09/28/09-09/27/14

\$1,060,341

Post-stroke Aphasia and rTMS Treatment (PART) Study

National Institutes of Health(University of Cincinnati)

R01 HD 068488

01/02/12-12/31/16

\$58,243

Reading Fluency Training in Grade 4 and Reading and Writing Fluency Training in Grade 5

US-Israel Binational Science Foundation

09/01/11-08/31/13

\$22,719

LI, Y**Non-Invasive MR-Guided HIFU Therapy of TSC-Associated Renal Angiomyolipomas**

Department of Defense

W81XWH1110299

07/01/11-07/31/13

\$49,287

LINDQUIST, D**Epigenetics of Lead Toxicity in Mouse Brain**

National Institutes of Health(University of Cincinnati)

R21 ES 020048

06/09/11-05/31/13

\$69,850

WANSAPURA, J**Cardiac Structure and Function in Early Familial Cardiomyopathy**

National Institutes of Health

K25 HL 102244

04/15/10-03/31/15

\$134,873

WINTER, P**Monitoring Tissue Oxygenation and Angiogenic Therapy in PAD with Perfluorocarbon Nanoparticles**

American Heart Association

07/01/10-06/30/12

\$65,000

YUAN, W / MANGANO, F**Longitudinal DTI study in Children Treated for Congenital Hydrocephalus**

National Institutes of Health
R01 NS 066932

09/30/09-06/30/13

\$388,965

Current Year Direct **\$2,856,089**

Industry Contracts

BRODY, A

PTC Therapeutics, Inc.

\$49,700

Current Year Direct Receipts **\$49,700**

Total **\$2,905,789**