

## Radiology



### Staff Physicians and Faculty

William E. Shiels II, DO, Chief

Brent H. Adler, MD

David Gregory Bates, MD

Larry A. Binkovitz, MD, MEd

Brian D. Coley, MD

Stephen M. Druhan, MD

Andrea L. Franklin, DO

Elizabeth A. Hingsbergen, MD

Mark J. Hogan, MD

Frederick R. Long, MD

Lisa Copenhaver Martin, MD

James W. Murakami, MD, MS

Julie C. O'Donovan, MD

Andrew J. Rabe, DO

Jerome A. Rusin, MD

Sally S. Wildman, DO

Nicholas A. Zumberge, MD

*Comprehensive pediatric medical imaging and interventional radiology services are provided from birth through young adulthood in the Department of Radiology at Nationwide Children's Hospital. Procedures are also performed for selected adult patients with congenital or pediatric diseases. All procedures are performed by board-certified, pediatric radiologists who are available 24 hours a day, seven days a week for urgent and emergent pediatric imaging needs.*

*The Department of Radiology performed 172,503 diagnostic and interventional radiological procedures in 2007. Included in this total are 23,927 Emergency Department procedures and 46,286 procedures at the Close To Home<sup>SM</sup> Centers. In addition to plain radiographic examinations, Nationwide Children's Hospital Radiology provides a complete range of diagnostic procedures including MRI, CT, ultrasound, fluoroscopy, nuclear medicine and bone densitometry. Nationwide Children's Radiology provides an exhaustive range of interventional radiological procedures that include both diagnostic and therapeutic interventional radiological procedures. Therapeutic procedures include: vascular embolization; radiofrequency ablation of bone, soft tissue and solid organ tumors; ablation of lymphatic malformations, venous malformations and arteriovenous malformations; percutaneous ablation of neck ranulas; percutaneous ablation of dermoid and epidermoid cysts; soft tissue foreign body removal; fibrinolysis and drainage of thoracic empyema; abscess drainage; rheumatoid joint and tendon sheath steroid injections; and thyroid gland ablation.*

*Innovation and international leadership in the Department of Radiology is best seen in procedures provided uniquely at Nationwide Children's Hospital that include controlled ventilation CT of the chest and cardiovascular system; ultrasound-guided lumbar puncture in infants; dual drug sclerotherapy of lymphatic malformations; ultrasound-guided soft tissue foreign body removal; percutaneous ablation of dermoid and epidermoid cysts in the neck, face and orbit; and percutaneous ablation of simple and plunging salivary gland ranulas.*

*The Department of Radiology is involved in extensive research in the areas of controlled ventilation CT; thoracic empyema treatment; percutaneous treatment of various head and neck cystic masses; percutaneous treatment of orbital vascular malformations and congenital cysts; development of new sclerotherapy procedures; radiofrequency ablation of benign and malignant tumors; and educational systems for interventional radiology.*

### Clinical, Teaching and Research Interests

**William E. Shiels II, DO**, is Chief of the Department of Radiology at Nationwide Children's Hospital, President of Children's Radiological Institute, Inc., and Clinical Professor of Radiology and Pediatrics and Category M on the graduate faculty in Biomedical Engineering at The Ohio State University College of Medicine. He is also an Adjunct Professor in the Department of Radiology at the Medical University of Ohio. His primary radiological areas are interventional radiology and ultrasound, with his greatest clinical focus in treating infants and children with vascular malformations, as well as congenital and acquired abnormalities of the head and neck. His basic science research activities are focused on mechanisms of induction/development and subsequent percutaneous ablation of lymphatic malformations. His clinical research focuses in the areas of soft tissue foreign body removal and percutaneous treatment of lymphatic malformations. His educational research focuses on training systems for interventional radiology, specifically for procedural competency development and maintenance training.

**Brent H. Adler, MD**, is Section Chief of Musculoskeletal Radiology in the Department of Radiology at Nationwide Children's Hospital. He is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and Adjunct Assistant Professor in the Department of Radiology at the Medical University of Ohio. He is a member of the Editorial Board of Pediatric Radiology.

**David Gregory Bates, MD**, is Section Chief, Fluoroscopy, Gastrointestinal and Genitourinary Radiology at Nationwide Children's Hospital. He is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine, and is also an Adjunct Assistant Professor-Radiology at the Medical University of Ohio. He is a member of the Children's Radiological Institute, Inc. His primary clinical specialization is fluoroscopic imaging of the gastrointestinal and genitourinary tracts, with special interest in imaging of the child with urinary tract infection. His secondary clinical specializations are neuroradiology and diagnostic ultrasonography. Dr. Bates currently serves as a member of the Safety Endpoint Adjudication Committee for an international multicenter study evaluating potential complications of a new pentavalent rotavirus vaccine.

**Larry A. Binkovitz, MD, MEd**, is the Section Chief of Nuclear Medicine in the Department of Radiology at Nationwide Children's Hospital. He is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and Adjunct Assistant Professor in the Department of Radiology at the Medical University of Ohio. He also has an MEd degree. His primary clinical interest in radiology is nuclear medicine.

**Brian D. Coley, MD**, is the Assistant Chief in the Department of Radiology and the Section Chief of Sonography at Nationwide Children's Hospital. He is also a Clinical Professor of Radiology and Pediatrics at The Ohio State University College of Medicine and Clinical Assistant Professor of Radiology at the Medical University of Ohio. He is secretary of the Society for Pediatric Radiology, a member of the Board of Governors of the American Institute of Ultrasound in Medicine, and an assistant editor for Pediatric Radiology. His research interests focus on pediatric imaging, particularly the use of ultrasound in diagnostic and interventional radiology.

**Stephen M. Druhan, MD**, is a pediatric radiologist and the Residency Education Coordinator for the Radiology Department at Nationwide Children's Hospital.

**Andrea L. Franklin, DO**, is the Assistant Section Chief of Nuclear Medicine in the Department of Radiology at Nationwide Children's Hospital. She is also a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and Adjunct Assistant Professor at the Medical University of Ohio.

**Elizabeth A. Hingsbergen, MD**, is Section Chief for General Radiography in the Radiology Department at Nationwide Children's Hospital. She is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and is also an Adjunct Assistant Professor-Radiology at the Medical University of Ohio. She is a member of the Children's Radiological Institute, Inc. Her clinical interest is in pediatric radiology and resident teaching.

**Mark J. Hogan, MD**, is the Chief of the Section of Vascular and Interventional Radiology in the Department of Radiology at the Nationwide Children's Hospital. He is a Clinical Associate Professor of Pediatrics and Radiology in The Ohio State University College of Medicine and also holds clinical academic appointments at the Medical University of Ohio and Ohio University. Dr. Hogan also serves as the Residency Education Coordinator for the Radiology Department at Nationwide Children's Hospital. He is a member of the Trauma Committee, the Conscious Sedation Advisory Group, the IV Task Force, and the GI Motility Team, and he has worked on the Thrombophilia Team.

**Frederick R. Long, MD**, is Section Chief, Body MRI and CT in the Radiology Department at Nationwide Children's Hospital and Director of Nationwide Children's Hospital Radiology Research Program. He is Clinical Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and Clinical Assistant Professor at the Medical University of Ohio. He is a member of the Children's Radiological Institute, Inc., a principle investigator in the Center for Perinatal Research and a member of the biomedical engineering graduate faculty at The Ohio State University. His clinical specialization is body imaging with a focus on cardiopulmonary disease and tumors in children. His clinical research interests include high resolution, quantitative and functional imaging of the infant heart and lung as well as the development of advanced CT and MRI techniques for body imaging. Funded research involves the development and application of controlled ventilation CT in children with cystic fibrosis. He is also a funded research consultant working on high resolution infant lung imaging.

**Lisa Copenhaver Martin, MD**, is the Section Chief of Emergency Radiology and the Assistant Section Chief of Neuroradiology in the Radiology Department at Nationwide Children's Hospital and a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine. She is

an Adjunct Assistant Professor in the Department of Radiology at the Medical University of Ohio. She is a member of the Children's Radiological Institute, Inc. Her clinical interests are neuroradiology and trauma.

**James W. Murakami, MD, MS**, is a Pediatric Radiologist in the Radiology Department at Nationwide Children's Hospital. He is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and an Adjunct Assistant Professor of Radiology at the Medical University of Ohio. He is a member of the Children's Radiological Institute, Inc. His clinical interests are pediatric neuroradiology and pediatric interventional radiology.

**Julie C. O'Donovan, MD**, is a Pediatric Radiologist in the Radiology Department at Nationwide Children's Hospital. She is a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and an Adjunct Clinical Assistant Professor of Radiology at the Medical University of Ohio. Dr. O'Donovan is a member of the Children's Radiological Institute, Inc. Her clinical interest is in pediatric body and musculoskeletal CT and MR imaging with emphasis on cardiac imaging. Her clinical practice, however, remains broad to include nearly all aspects of pediatric imaging. She is involved in education of radiology residents as well as multiple hospital departments through conferences, lectures, etc.

**Andrew J. Rabe, DO**, is a Pediatric Radiologist in the Radiology Department at Nationwide Children's Hospital. He is a member of Children's Radiological Institute, Inc. His primary clinical and research interests include pediatric interventional radiology.

**Jerome A. Rusin, MD**, is the Section Chief of Neuroradiology in the Department of Radiology at Nationwide Children's Hospital. Dr. Rusin is also a Clinical Assistant Professor of Pediatrics and Radiology at The Ohio State University College of Medicine and Adjunct Assistant Professor in the Department of Radiology at the Medical University of Ohio.

**Sally S. Wildman, DO**, is a Pediatric Radiologist in the Department of Radiology at Nationwide Children's Hospital.

**Nicholas A. Zumberge, MD**, is a Pediatric Radiologist in the Department of Radiology at Nationwide Children's Hospital.

## Research Funding (Over \$50,000)

**Frederick R. Long, MD**

*Efficacy of Pulmozyme in Infants and Young Children with Cystic Fibrosis*, Genentech, Inc. Co-investigator. The Research Institute at Nationwide Children's Hospital is considered the sponsor.

*Changes in Lung Structure and Function in Children with Cystic Fibrosis*, Cystic Fibrosis Foundation – Clinical Research Grant

## Publications

**Bates DG, Sheils WE II, Hogan MJ.** Radiology of the Post-Operative Patient. In: *Re-Operative Pediatric Surgery*, First Edition, (Caniano DA, Teich S, eds.) Springer, December 2007.

**Bates DG.** The Bladder and Urethra. In: *Caffey's Pediatric Diagnostic Imaging*, 11th Edition, Elsevier, November 2007.

**Binkovitz LA, Henwood MJ.** Pediatric DXA: technique and interpretation. *Pediatric Radiology* 37: 21-31, 2007.

**Binkovitz LA, Sparke P, Henwood MJ.** Pediatric DXA: clinical applications. *Pediatric Radiology* 37(7): 625-635, July 2007.

**Binkovitz LA, Henwood MJ, Sparke P.** Pediatric dual-energy X-ray absorptiometry: technique, interpretation, and clinical applications. *Seminars in Nuclear Medicine* 37(4): 303-313, July 2007.

**Bates CM, Adler BM, Schwaderer A, Coley BD.** A patient with recurrent episodes of red urine: question. *Pediatric Nephrology* 22: 187, 2007.

**Coley B.** Appendicitis in children: one radiologist's perspective. *Pediatric Radiology* 37: 1-3, 2007.

**Coley BD.** Sonography of pediatric scrotal swelling. *Seminars in Ultrasound CT MRI* 28: 297-306, 2007.

**Coley BD, Shiels WE II, Kean J, Adler BH.** Age dependent dynamic sonographic measurements of pediatric clubfoot. *Pediatric Radiology* 37: 1125-1129, 2007.

**Golden R, Shiels WE II, Cahill K, Rogers G.** Percutaneous drainage and ablation of orbital dermoid cysts. *Journal of American Association for Pediatric Ophthalmology and Strabismus* 11(5): 438-442, 2007.

**Jadcherla SR, Gupta A, Coley BD, Fernandez S, Shaker R.** Esophago-glottal closure reflex in human infants: a novel reflex elicited with concurrent manometry and ultrasonography. *American Journal of Gastroenterology* 102: 2286-2293, 2007.

**Long FR.** High-Resolution computed tomography of the lung in children with Cystic Fibrosis: Technical factors. *Proceedings of the American Thoracic Society* 4: 1-4, 2007.

**Munden MM, Bruzzi JF, Coley BD, Munden RF.** Sonography of pediatric small-bowel intussusception: differentiating surgical from nonsurgical cases. *American Journal of Radiology* 188: 275-279, 2007.

**Nwomeh BC, Caniano DA, Hogan M.** Definitive exclusion of biliary atresia in infants with cholestatic jaundice: the role of percutaneous cholecysto-cholangiography. *Pediatric Surgical International* 23(9): 845-9, September 2007.

**Patel A, Coley BD, Jayanthi VR.** Ultrasonography underestimates the volume of normal parenchyma in benign testicular masses. *Journal of Urology* 178: 1730-1732, 2007.

**Rodino-Klapac LR, Janssen PML, Montgomery CL, Coley BD, Chicoine LG, Clark KR, Mendell JR.** A translational approach for limb vascular delivery of the micro-dystrophin gene without high volume or high pressure for treatment of Duchenne muscular dystrophy. *Journal of Translational Medicine* 5: 45, 2007.

**Shiels WE II, Coley BD, Kean J, Adler BH.** Focused dynamic sonographic examination of the clubfoot. *Pediatric Radiology* 37: 1118-1124, 2007.

**Short RE, Shiels II WE, Sfera TJ, Nicol KK, Schofield M, Wiet GJ.** Site-specific induction of lymphatic malformations in a rat model for image-guided therapy. *Pediatric Radiology* 37: 530-534, 2007.

**Singh S, Robinson M, Nahi F, Coley B, Robinson ML, Bates CM, Kornacker K, McHugh KM.** Identification of a unique transgenic mouse line that develops megabladder, obstructive uropathy, and renal dysfunction. *Journal of the American Society of Nephrology* 18: 461-471, 2007.

**Snyder EM, Nguyen RA, Young KJ, Coley BD.** Vesicovaginal Reflux Mimicking Obstructive Hydrocolpos – A Case Series. *Journal of Ultrasound Medicine* 26: 1781-1784, 2007.

van den Berg MM, Hogan M, Mousa HM, Di Lorenzo C. Colonic manometry catheter placement with primary fluoroscopic guidance. *Digestive Diseases and Sciences* 52(9): 2282-6, September 2007 (Epub, April 12, 2007).

Young AS, Binkovitz LA, Adler BH, Nicol KK, Rennebohm RM. Pulmonary hyalinizing granuloma and retroperitoneal fibrosis in an adolescent. *Pediatric Radiology* 37: 91-95, January 2007.

Young AS, Nicol KK, Teich S, Shiels II WE. Catheter-Based Drainage and Agitation for Definitive Cytological Diagnosis of a Ciliated Hepatic Foregut Cyst in a Child. *Pediatric and Developmental Pathology* 10: 153-156, 2007.

## Presentations and Teaching Activities

### Brent H. Adler, MD

*E-Atlas of Urethral Anomalies: Radiographic Pathologic and Clinical Correlation*, Co-Presenter, Poster Presentation, The Society for Pediatric Radiology 50th Annual Meeting and Postgraduate Course, Miami, Florida, April 2007

### David Gregory Bates, MD

*Radiologic Findings in Inflammatory Bowel Disease*, CCFA: 2007 Ohio Nurses Education, The Blackwell Hotel, Columbus, Ohio, February 10, 2007

*E-Atlas of Urethral Anomalies: Radiographic Pathologic and Clinical Correlation*, Co-Presenter, Poster Presentation, The Society for Pediatric Radiology 50th Annual Meeting and Postgraduate Course, Miami, Florida, April 2007

### Larry A. Binkovitz, MD

*E-Atlas of Urethral Anomalies: Radiographic Pathologic and Clinical Correlation*, Co-Presenter, Poster Presentation, The Society for Pediatric Radiology 50th Annual Meeting and Postgraduate Course, Miami, Florida, April 2007

*Ovarian and Fallopian Tube Torsion*, Poster Presentation, Society of Pediatric Radiology (SPR), Miami, Florida, April 2007

*Pediatric DXA*, Society of Nuclear Medicine (SNM) Washington Convention Center, Washington, D.C., June 5, 2007

### Brian D. Coley, MD

*Interesting Pediatric Cases and Pediatric Hip and Spine*, Northeast Ohio Ultrasound Society, Cleveland, Ohio, March 2007

*Just Images: Pediatrics*, Co-Presenter, American Institute of Ultrasound in Medicine, New York, New York, March 2007

*Pediatric Abdominal Doppler*, Ohio Medical Ultrasound Society, Columbus, Ohio, March 2007

*Vesicovaginal Reflux Mimicking Obstructive Hydrocolpos*, Co-Presenter, American Institute of Ultrasound in Medicine, New York, New York, March 2007

*Difficult Cases in Ultrasound: Learn From the Experts' Mistakes*, Co-Presenter, The Society for Pediatric Radiology, Miami, Florida, April 2007

*Pediatric Renal Doppler, Pediatric Doppler in Neurosonography, and Case Analysis*, Adriatic Vascular Ultrasound Society, Portoroz, Slovenia, May 2007

*Essentials of Pediatric Imaging: Urinary Tract*, Radiological Society of North America, Chicago, Illinois, November 2007

### Elizabeth A. Hingsbergen, MD

*The Interpretation of Chest X-Rays in the Primary Care Setting*, Department of Nursing, Otterbein College, Westerville, Ohio, March 6, 2007

### Mark J. Hogan, MD

*Percutaneous Cecostomy*, Society for Pediatric Urology 56th Annual Meeting, Anaheim, California, May 19, 2007

*Interventional Ultrasound*, Central Ohio Ultrasound Society, Newark, Ohio, September 15, 2007

### Frederick R. Long, MD

*Imaging the Infant Lung*, European Respiratory Society Research Seminar, Leuven, Belgium, February 12-13, 2007

*HRCT of CF Lung Disease in Infants and Young Children*, Northern New England CF Consortium Presentation, Woodstock, Vermont, March 24, 2007

*New Bronchopulmonary Dysplasia*, 2007 Caffey Society Meeting, Traverse City, Michigan, June 20-23, 2007

*Cardiac CT and CT Angiography of Congenital Heart Disease: How to Perform and Interpret*, Haggstrom Distinguished Lecture Series, Omaha Children's Hospital, Omaha, Nebraska, November 1, 2007

*Distinguished Haggstrom Lecture: HRCT of the Lung in Infants and Young Children: Applications to Cystic Fibrosis and Diffuse Lung Diseases*, Omaha Children's Hospital, Omaha, Nebraska, November 2, 2007

*Pediatric Series: Pediatric Chest, Pediatric Interstitial Lung Disease Update*, Scientific Papers, Radiological Society of North America 93rd Scientific Assembly and Annual Meeting, Chicago, Illinois, November 25, 2007

### James W. Murakami, MD, MS

*Techniques of Freehand Invasive Sonography with Thermal Ablation*, Co-Presenter, Radiological Society of North America 93rd Scientific Assembly and Annual Meeting, McCormick Place, Chicago, Illinois, November 28, 2007

### Andrew J. Rabe, DO

*Cat Scratch Disease: Beyond the Epitrochlear Lymph Node*, Society for Pediatric Radiology, Columbus, Ohio, January 2007

*Cat Scratch Disease: Beyond the Epitrochlear Lymph Node*, Society for Pediatric Radiology, Miami, Florida, April 2007

*Congenital Abnormalities of the Lower Genitourinary System*, Society for Pediatric Radiology, Columbus, Ohio, December 2007

### William E. Shiels II, DO

*Practical Concepts of Musculoskeletal Intervention in Children and Young Adults*, Practical Radiology at Whistler, Whistler, Canada, February 4-9, 2007

*Pediatric Liver Tumors: Radiologic/Pathologic Correlation*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., February 15, 2007

*Pediatric Interventions: The Gamut*, 32nd SIR Annual Scientific Meeting, Seattle, Washington, March 3, 2007

*Pediatric Liver Tumors: Radiologic/Pathologic Correlation*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., March 7, 2007

*Ultrasound Guided Breast Intervention*, AOCR Mid-Year Conference, Chicago, Illinois, March 24-25, 2007

*Advanced Techniques of Interventional Sonography*, 1st Annual Ohio Medical Ultrasound Society Meeting, Columbus, Ohio, March 30, 2007

*Pediatric Liver Tumors: Radiologic/Pathologic Correlation*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., April 17, 2007

*"Destressing" the Workplace*, Society for Pediatric Radiology 2007 Annual Meeting, Miami, Florida, April 18-21, 2007

*Percutaneous Treatment of Cystic Masses of the Head and Neck*, Society for Pediatric Radiology 2007 Annual Meeting, Miami, Florida, April 18-21, 2007

*Pediatric Interventional Radiology...of Gifts...and Cures*, Circle of Care: North America Leadership Conference, Boston, Massachusetts, May 2-4, 2007

*Pediatric Liver Tumors: Radiologic Pathologic Correlation*, University of Kentucky, Lexington, Kentucky, May 10-11, 2007

*Pediatric Neck Masses: Radiologic Diagnosis and Intervention*, University of Kentucky, Lexington, Kentucky, May 10-11, 2007

*Radiologic Management of Soft Tissue Foreign Bodies-Case Studies*, University of Kentucky, Lexington, Kentucky, May 10-11, 2007

*Percutaneous Treatment of Head and Neck Cystic Masses*, NWORS/UTMC, Toledo, Ohio, May 16, 2007

*Definitive Percutaneous Treatment of Lymphatic Malformations of the Trunk and Extremities*, APSA 38th Annual Meeting, Orlando Grand Lakes, Florida, May 24-27, 2007

*Pediatric Liver Tumors: Radiologic/Pathologic Correlation*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., August 2, 2007

*Head and Neck Cystic Masses: New Minimally and Micro-Invasive Treatment Solutions*, Genesis HealthCare System/Bethesda Hospital - Grand Rounds, Zanesville, Ohio, August 22, 2007

*Interventional Musculoskeletal Sonography: Hands-On*, Musculoskeletal Ultrasound Society 17th Annual Conference, Paris, France, August 25-28, 2007

*Interventional Musculoskeletal Sonography: Tutorials and Applications*, Musculoskeletal Ultrasound Society 17th Annual Conference, Paris, France, August 25-28, 2007

*Percutaneous Treatment of Lymphatic Malformations*, AAO-HNS Annual Meeting - Washington Convention Center, Washington, D.C., September 17, 2007

*Pediatric Hip Sonography: Dynamic Pathology and Intervention*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., September 20, 2007

*Pediatric Liver Tumors: Radiologic/Pathologic Correlation*, Armed Forces Institute of Pathology (AFIP), Washington, D.C., September 20, 2007

*Radiological Management of Pediatric Emergencies I: Head, Neck, Spine, & Extremities*, AOCR 2007 Annual Convention, Boca Raton, Florida, September 24-28, 2007

*Imaging & Management of Non-accidental Trauma: Clinical & Legal Implications*, AOCR 2007 Annual Convention, Boca Raton, Florida, September 24-28, 2007

*Radiological Management of Pediatric Emergencies II: Chest & Abdomen*, AOCR 2007 Annual Convention, Boca Raton, Florida, September 24-28, 2007

*Childhood Intussusception: Radiographic-Pathologic Correlation*, Boston Children's Hospital, Boston, Massachusetts, October 1-2, 2007

*Pediatric Liver Tumors: Radiologic-Pathologic Correlation*, Boston Children's Hospital, Boston, Massachusetts, October 1-2, 2007

*Techniques of Pediatric Invasive Sonography: A "Hands-On" Course*, Boston Children's Hospital, Boston, Massachusetts, October 1-2, 2007

*Techniques of Freehand Invasive Sonography with Thermal Ablation*, RSNA 2007, Chicago, Illinois, November 30, 2007

*Small Parts Interventional Ultrasound*, RSNA 2007, Chicago, Illinois, November 30, 2007

**Sally S. Wildman, DO**

*E-Atlas of Urethral Anomalies: Radiographic Pathologic and Clinical Correlation*, Co-Presenter, Poster Presentation, The Society for Pediatric Radiology 50th Annual Meeting and Postgraduate Course, Miami, Florida, April 2007

## **Awards and Honors**

**Frederick R. Long, MD**

Listed, Best Doctors in America

**William E. Shiels II, DO**

Honored Speaker, Pediatric Interventional Radiology...of Gifts...and Cures, Circle of Care: North America Leadership Conference, Boston, Massachusetts, May 2-4, 2007

Listed, Best Doctors in America

**Sally S. Wildman, DO**

Honorable Mention, Society of Pediatric Radiology; Wildman S, Adler B, Bates DG, Binkovitz L, Hutmire C, E-Atlas; a Radiographic Atlas of the Pediatric Urethra Pediatric Radiology 2007; 37.

## **Fast Facts**

MRIs: 9,849

X-Rays: 76,228 Main Campus,

40,339 *Close To Home*<sup>SM</sup> Centers

CT Scans: 15,702

Interventional Procedures: 3,580

Nuclear Medicine: 3,342

Fluoroscopy: 5,525 Main Campus,

1,369 *Close To Home*<sup>SM</sup> Centers

Ultrasound: 11,508 Main Campus,

2,600 *Close To Home*<sup>SM</sup> Centers

Total Procedures: 172,503

Outpatient Visits: 58% of total volume

