1930s

1931 Mallinckrodt Institute of Radiology officially opens with staff of four radiologists and one physicist

1933 First residents — Allan B. Phillips and William Y. Burton — are accepted

1937 First laminograph (developed in 1936 at MIR) used to examine World Series Champion pitcher Paul “Daffy” Dean; considered earliest recorded example of sectional imaging used to assess sports-related musculoskeletal injury

1940s

1941 Cyclotron constructed on WashU’s undergraduate campus is first dedicated to producing isotopes for medical and biological research

1942 U.S. government commandeers cyclotron to produce some of world’s first plutonium; in the end, half of Manhattan Project’s plutonium comes from WashU

1950 Then director Hugh Wilson appoints radiophysicist and future PET pioneer Michel Ter-Pogossian, forever changing the history of MIR

1954 First pediatric radiology program established at MIR

1960s

1963 MIR builds first cyclotron in U.S. on a medical campus and second in the world dedicated to medical research

1964 Newly appointed MIR director and neuroradiologist Juan Taveras establishes first official subspecialties by dividing faculty into six groups based on local anatomy

1970s

1970s PET invented by MIR researchers Michael Welch and Michel Ter-Pogossian

1972 Neuroradiology and Ben Mayes come together to create MIR’s first fellowship

1974 CT scanner — one of first six in U.S. — acquired by MIR

1976 One of first five mammography units in U.S. arrives at MIR
1980s
1983 Along with two colleagues, MIR radiologist Michael Vannier publishes first 3D reconstruction of single CT slices of the human head
1984 MIR researchers develop fluoroestradiol (FES), the first radioactive form of estrogen used as a PET imaging agent for detecting breast cancer

1990s
1990s MIR develops widely adopted criteria for diagnosing pulmonary emboli
1992 MIR works with CTI PET Systems to develop some of the first whole-body PET imaging techniques

1992 Newsweek publishes “Decade of the Brain,” an article highlighting neurologist and radiology professor Marcus Raichle’s PET research and development of nearly all existing techniques for mapping the brain

2000s
2002 Quadriplegic actor Christopher Reeve’s treatment regimen — designed by WashU faculty with imaging studies performed by MIR — results in some motor function restoration
2004 MIR expands resident total to 72, making it largest program in U.S.
2008 Mark Mintun, director of the Center for Clinical Imaging at MIR, uses PET imaging to detect Alzheimer’s disease before clinical symptoms appear

2010s
2010 MIR becomes home to the Human Connectome Project
2014 MIR becomes one of first eight programs in U.S. approved for an Integrated IR Residency program
2015 “Cancer Goggles,” invented by Optical Radiology Lab director Samuel Achilefu, allow doctors to see cancer cells during surgery

2022 Your residency training begins
A Look Inside

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Director Richard L. Wahl, MD, is an alumnus of MIR’s residency (’82) and fellowship (’83) programs.
Welcome to Mallinckrodt Institute of Radiology

As Mallinckrodt Institute of Radiology’s director, and a graduate of the residency and fellowship programs, I know firsthand why MIR is the best training experience to launch your career in radiology.

You will learn from world-renowned radiologists in an environment that provides patient-centered care to a diverse group of patients with both common and complex illnesses. We use exceptionally advanced imaging equipment and provide unique opportunities for clinical and laboratory research. We also provide exclusive service to nationally ranked Barnes-Jewish and St. Louis Children’s hospitals, as well as a chance to collaborate with other specialists from consistently top-ranked Washington University School of Medicine. And if that’s not enough, there’s our modern, future-focused medical campus that is surrounded by some of the most vibrant, thriving — and affordable — communities in the U.S.

Please accept my invitation to explore our programs, tour our facilities, and meet our faculty and trainees. Once you do, you’ll understand why MIR is the premier destination in radiology training.

Richard L. Wahl, MD
Elizabeth E. Mallinckrodt Professor of Radiology
Director, Mallinckrodt Institute of Radiology
Head, Department of Radiology
Washington University School of Medicine
After more than a decade at the helm of one of the most respected radiology programs across the globe, Jennifer E. Gould, MD, knows a thing or two about what makes for a successful residency. As with all Mallinckrodt Institute of Radiology program directors, Gould’s accomplishments in the field of radiology are too numerous to mention, but here are a few highlights:

- Diagnostic Radiology Residency Program Director since 2006
- Volunteer for the American Board of Radiology since 2004, serving as a board examiner for the oral examinations in diagnostic radiology and interventional radiology
- Chair of the Core Exam writing committee for interventional radiology
- Volunteer for the ACGME with roles in writing the Milestones for Diagnostic Radiology and Interventional Radiology, as well as serving on the Advisory Committee for the Interventional Radiology residency

**Education**

- **2002–2003** Vascular and interventional radiology fellow, Mallinckrodt Institute of Radiology, Washington University
- **1998–2002** Diagnostic radiology resident, Mallinckrodt Institute of Radiology, Barnes-Jewish Hospital
- **1997–1998** Internal medicine intern, Barnes-Jewish Hospital
- **1993–1997** MD, Washington University School of Medicine
- **1989–1993** BA, Cornell University
Diagnostic Radiology Residency Program

Mallinckrodt Institute of Radiology's Diagnostic Radiology Residency Program consistently ranks among the top three in the country. At MIR, you’ll train alongside globally recognized radiologists who are dedicated to clinical care, education and your personal success. Below are just a few of the reasons our diagnostic radiology residency is a national standout:

**Faculty-to-Resident Ratio**
Our 1-to-1 faculty to resident ratio provides unmatched clinical training in interpreting imaging studies and performing image-guided procedures. Face-to-face readout is used on all services so residents get personal feedback on all reviewed cases.

**Class Size**
With an average class size of 16, residents have flexibility with vacation time, rotations and on-call scheduling.

**Hands-On Training**
We provide hands-on training to build graduated competence. Residents rotate through three hospitals during training: Barnes-Jewish Hospital, St. Louis Children’s Hospital and Barnes-Jewish West County Hospital, training alongside attending radiologists.

**Daily Education**
Morning rotation-specific conferences and core training noon lectures expose our residents to an extensive and diverse caseload. Numerous interdisciplinary conferences include the departments of medicine, surgery and pathology, which demonstrate the radiologist’s role in both diagnosis and treatment.

**Research & Educational Projects**
MIR offers countless opportunities to participate in mentored radiology research that results in national meeting presentations and publication in major journals. First and second year residents are reimbursed for one meeting each academic year, up to a maximum of $1,500. MIR will reimburse third and fourth year residents for more than one meeting each academic year, up to a maximum of $2,000.

**Contact**
Missi Varner | melissia.varner@wustl.edu | 314.362.2819

**NRMP Matching Number:** 1353420A0
Research Residency Track

Mallinckrodt Institute of Radiology has an extensive and collaborative research program. Up to three highly motivated individuals interested in a career in academic radiology are admitted to the Research Residency Track each year.

**Combined Training** This specialized track, which combines training in general diagnostic radiology with dedicated time in research, provides up to 48 weeks of full-time research with one or more faculty mentors and a lecture series (Monday Morning Breakfast Seminar) dedicated to educating residents in translational research. Topics include information on obtaining grant funding, where to go for Institutional Review Board submission assistance, patent filing, and how to navigate the Office of Technology Management. The remaining time is spent rotating on clinical services preparing to be a clinical radiologist. Research residents typically complete the first year of clinical training before starting any dedicated research time.

**Unique Support System** Research residents are given guidance toward the selection of a research mentor, as well as information about the multiple laboratories, facilities, infrastructure and pilot support available at Washington University.

**Funding** MIR received $40.6 million in externally sourced research revenue in fiscal year 2020 and ranked fourth among radiology departments in NIH funding. In addition, our support staff is well-equipped to assist residents in the submission of grant applications. MIR trainees routinely receive Radiological Society of North America (RSNA) resident-fellow research awards to fund their research.
NIH T32 Training Grant  Research residents have the opportunity to apply internally to participate in an NIH-funded T32 training program—Training Opportunities in Translational Imaging Education and Research (TOP-TIER). TOP-TIER’s focus is on training clinical scientists in translational imaging, research, innovation and entrepreneurship.

Facilities and Advanced Equipment  MIR has six laboratories and eleven research support facilities, including the Center for Clinical Imaging Research (CCIR), the East Building MR Facility, and the Center for High Performance Computing (CHPC). The MR Facility and CCIR maintain a total of six research-dedicated whole-body MRI scanners, including four Siemens 3T Prisms, a 3T Vida, and a simultaneous Siemens PET/MR whole body scanner. There are two dedicated research PET/CT scanners, one being a Siemens Vision, which was one of the first installed in the U.S. In addition, four cyclotrons and an equipped radiopharmacy supply both research and clinical radiotracers for the university. The Preclinical Imaging (PCIF) and Small Animal MR (SAMR) Facilities were newly renovated in 2019. Their new space in the East Building contains a new small animal simultaneous acquisition PET/MRI (3T/7T dual boot) scanner, a 12T and two 4.7T small animal MR scanners, and an Inveon PET scanner. A Bruker 9.4T MRI scanner was also installed this year.

How to Apply  This track is offered through the NRMP match under a training program number (see below) separate from the diagnostic radiology training program. Interested applicants are encouraged to also apply to the Diagnostic Radiology Residency Program.

NRMP Matching Number: 1353420A1
Early Specialization in Interventional Radiology (ESIR)

Up to three residents will be selected from each residency class for ESIR status. ESIR residents focus on interventional radiology during their fourth year of diagnostic residency training, completing an ICU month, as well as at least eight IR and IR-related rotations. The balance of the year features diagnostic radiology rotations, including nuclear medicine and breast imaging, to meet training requirements.

ESIR residents easily meet requirements for advanced placement in an Independent IR residency. (To learn more about the Independent IR Residency Program, see page 33.)
Combined Diagnostic Radiology/Nuclear Medicine Residency Track

Mallinckrodt Institute of Radiology has long been recognized for advancing the scope and practice of nuclear medicine, as well as training individuals for careers in academic and private practice nuclear medicine.

Up to two residents from each diagnostic radiology residency class will be accepted for a specialized training track that will enable graduates to obtain dual certification in diagnostic radiology (American Board of Radiology) and nuclear medicine (American Board of Nuclear Medicine). Candidates are selected during or by the end of the second year of residency training and, depending on a resident’s interest, both four and five-year options are available.

**Four Year Training** This option allows 16 months of training in nuclear medicine during a four-year diagnostic radiology residency. In the first three years, residents complete the same rotations as the other diagnostic radiology residents. In the fourth year, residents in the combined track focus on nuclear medicine. The four-year program is best suited for individuals who are interested in practicing clinical nuclear medicine.

**Five Year Training** This option allows for up to 28 months of training in nuclear medicine, with a minimum of 24 months required. This includes completing a four-year diagnostic radiology residency, with year four training focused on nuclear medicine, followed by a one-year nuclear medicine residency/fellowship. Some of the time spent in nuclear medicine is devoted to research in the field. This pathway is most suited for individuals who are interested in practicing academic nuclear medicine.
Curriculum: Years 1, 2 and 3

Mallinckrodt Institute of Radiology residents in all programs and tracks spend the first three years rotating through a core curriculum. Our goal is to progressively build competence, turning our residents into well-rounded radiologists, skilled in all areas of diagnostic radiology. Core rotations include:

**Body Computed Tomography** During their first rotation, residents quickly become familiar with normal cross-sectional anatomy of the chest, abdomen and pelvis, and develop an understanding of pathologies seen on CT. In subsequent rotations, they refine their knowledge of diagnoses frequently found on CT and become proficient with advanced CT protocols.

**Body Magnetic Resonance** This busy clinical service covers all aspects of body MRI and body MRI angiography. Residents experience a high-volume body-MRI practice with a mix of thoracic, abdominal, and pelvic MRI and MRA imaging. PET/MRI exposure is a feature of our program.

**Breast** Our breast imaging facility is co-located with a breast surgical practice, providing residents the opportunity to train and work alongside attending radiologists and breast surgeons. Residents learn how to interpret diagnostic and screening mammograms including tomosynthesis, receive training in breast MRI, and perform sonographic and stereotactic breast biopsies and needle localizations.

**Cardiac** Our cardiac MRI/CT imaging service — one of the largest in the nation — is staffed daily by a cardiac radiologist. Radiology residents are involved in dictating and processing all cases, and have access to cath and echo images for correlation. Residents see a wide variety of cardiovascular pathology. As a result, residents become proficient in understanding cardiovascular disease processes, EKG-gated MRI and CT techniques and protocols, and complex post-processing of images.
Chest The cardiothoracic imaging rotation covers the review of chest radiographs for Barnes-Jewish Hospital, which includes its medical, surgical, neurosurgical and cardiothoracic intensive care units. With world-class pulmonary and lung transplant programs, and cardiac and thoracic surgery services, this rotation exposes residents to a wide variety of diagnoses, from routine to rare and complex.

Emergency/Trauma First-year residents rotate through the acclaimed Charles F. Knight Emergency Trauma Center at Barnes-Jewish Hospital, a Level 1 Trauma Center. The hospital has more than 80,000 emergency visits annually, including about 13,000 trauma patients. Second, third and fourth-year residents have independent call for both Barnes-Jewish Hospital and St. Louis Children’s Hospital, the latter being the only pediatric hospital in Missouri and Illinois with a Level 1 Pediatric Trauma Center designation. Faculty backup is available to review images from home or come in when needed, and each shift ends with a face-to-face readout with subspecialty attendings.

Gastrointestinal/Genitourinary Residents perform all fluoroscopic exams including swallow studies, barium esophagrams, small bowel studies, barium enemas, hysterosalpingograms and retrograde urethrogram. Remote faculty viewing of the fluoro screen in the reading rooms provides opportunities for residents to independently perform GI/GU examinations.

Interventional Working one-on-one with attending radiologists, residents are the primary operators on procedures. Residents gain experience from clinical training and large volume exposure to general body interventional procedures, including percutaneous organ drainage, arterial embolizations, and routine and complex central venous access.

Musculoskeletal In this multi-modality rotation, residents interpret radiographs, ultrasounds, CTS and MRIs of patients with a wide range of bone and joint disorders, including orthopedic, neoplastic, metabolic, rheumatologic and infectious abnormalities. In addition, the musculoskeletal procedure service provides hands-on instruction for performing image-guided diagnostic and therapeutic interventions for a variety of musculoskeletal conditions.
Neuroradiology  Beginning with the first rotation, residents read all modalities in neuroradiology and participate in daily lectures and case conferences dedicated to neuroradiology. In addition to performing fluoroscopically-guided spinal procedures and diagnostic cerebral angiography, residents have the opportunity to participate in interpretation of advanced imaging techniques, including diffusion tractography, functional MRI and PET/MRI.

Nuclear Medicine  While on service, residents benefit from a unique volume of cases, particularly in the areas of cardiac and PET, as well as exposure to pediatric nuclear medicine. The busy service handles a full complement of imaging, including PET/CT, SPECT, SPECT/CT and planar imaging.

OB/GYN Ultrasound  Senior residents, in collaboration with OB/GYN faculty and house staff, learn obstetric ultrasound for the first, second and third trimesters. Residents spend time at Barnes-Jewish Hospital and Missouri Baptist Hospital.

Pediatric  Residents learn pediatric imaging from full-time pediatric radiologists at St. Louis Children’s Hospital. To supplement the daytime experience, residents take radiology call at the hospital during night float and senior call experiences.

RESIDENT in Residence

Name: Brian M. Cusworth, MD
Program: Diagnostic Radiology
Hometown: St. Louis, MO
Favorite local spot: Donut Drive-In, which has the best donuts in town.

Extracurricular involvement: Formerly a professional basketball player. Now a proud father to a 3-year-old daughter and 1-year-old son, and husband to an OB-GYN.

Teachable moment: Ask questions often. Don’t be afraid to do so. We have the best teachers in the world.

Favorite outdoor activity: Walking around the St. Louis Zoo (#1 in the country!) with my wife and kids.

Favorite meal: It’s a tie between Salt + Smoke and Pi Pizzeria. Followed by donuts.

Biggest surprise: How approachable each and every attending is and how much autonomy and trust is given to even the newest of residents.

Why MIR: It may go without saying, but these are world leaders in radiology, the MIR network is limitless, and I love St. Louis.
Rad-Path All residents have an opportunity to attend the American Institute for Radiologic Pathology, with MIR paying the tuition and providing a stipend to defray costs of travel and lodging. Residents who elect not to attend are provided a four-week rad-path study period at MIR.

Ultrasound The ultrasound service performs most of the image-guided biopsies and aspirations for Barnes-Jewish Hospital, and nearly every patient who comes through this service is scanned by a resident after the sonographer completes the initial evaluation. Residents learn image interpretation and scanning techniques on this busy, hands-on rotation.

Vascular Ultrasound Senior residents learn vascular imaging of the extremities and carotid arteries in the vascular surgery section’s ultrasound laboratory.

Barnes-Jewish West County Hospital Designed as a “hospital of the future,” this new 64 private-bed facility opened in November 2019 and features inpatient and outpatient radiology service staffed by MIR faculty. Residents spend one to two months over their four years of training in this facility, primarily rotating on abdominal, musculoskeletal and cardiothoracic services.
Curriculum: Year 4

During their final year of training, residents in the diagnostic radiology residency who are not doing an ESIR, research or diagnostic radiology/nuclear medicine track have the option of completing one or more selective rotations.

Options designed by the subspecialty sections include: abdominal radiology, cardiothoracic radiology, musculoskeletal radiology, breast radiology, interventional radiology, pediatric radiology, neuroradiology and nuclear medicine. Interdisciplinary options, such as informatics, oncology and general radiology, also exist.

These “mini-fellowships” vary from six to 12 weeks in length, though longer selectives can be arranged if the schedule allows. Selectives can often be tailored to focus on a resident’s area of interest. Features vary but often include increased autonomy, teaching opportunities, and academic time for research or quality improvement projects. The year is rounded out with time in nuclear medicine and breast imaging to meet requirements, as well as the assigned call and night float opportunities.

Some residents use allotted time in the fourth year to focus on one or more of the following shorter alternatives:

Global Radiology Rotations MIR’s local chapter of RAD-AID International helps foster an interest in global health among residents. In 2016, the chapter established a collaboration with the Instituto de Cancerología (INCAN) in Guatemala City, Guatemala. By sharing expertise with doctors at INCAN, the MIR team helped provide the training and tools necessary to improve the medical care patients receive on a daily basis. MIR’s Global Radiology Committee is working to expand opportunities through relationships with facilities in other countries and underserved areas of the local community.

Research Opportunities for research abound at MIR. Residents involved in projects that require dedicated blocks of research time are encouraged to pursue a research elective that provides uninterrupted time to work on mentored projects.

Teaching Elective Select residents provide radiology-anatomic correlative training for first-year medical students in the medical school’s Gross Anatomy course through lecture and small group teaching at the cadaver.
Washington University Medical Campus

Washington University Medical Campus, which covers 178 acres over 18 city blocks, is located along the eastern edge of Forest Park in St. Louis’ Central West End neighborhood. Many of our partners, including Barnes-Jewish Hospital, St. Louis Children’s Hospital and the Alvin J. Siteman Cancer Center, are located on campus, though our physicians see patients at locations across the St. Louis region. Our corporate partners include BJC HealthCare, a consortium of health care providers that includes several of our teaching hospitals.

The Campus Renewal Projects Developments on the Washington University Medical Campus and the adjacent Cortex Innovation Community are positioning St. Louis as a national hub for technology and biomedical research. Currently in phase two, the 10-year Campus Renewal Project features a number of large-scale initiatives designed to facilitate the best outcomes for patients, learners and scientists. The already completed phase one included new inpatient towers with additional clinical services for women and infants, as well as expansion of clinical care at Siteman Cancer Center and other surgical programs. Phase two construction includes:

- Improved space for programs including heart and vascular, neurology, critical care, transplants and general medicine.
- Increased critical care capabilities
- Development of programs in medical and surgical services.

Rankings Washington University School of Medicine is consistently listed among the top 10 medical schools in the U.S. since rankings were first published in 1987. The School of Medicine is ranked #6 in research, while MIR’s radiology program comes in at #5, according to U.S. News & World Report 2019-2020.
The Office of Diversity, Equity and Justice

The Office of Diversity, Equity and Justice (DEJ) promotes equity for all members of MIR by fostering a community that embraces and reflects diversity of backgrounds, experiences and perspectives as a stimulus for innovation and problem solving, local community outreach, excellence in education, research and scholarship, and equity and justice in patient care.

Our aim is for MIR to become a model for diversity and inclusive excellence through progressive hiring practices, policies and cutting-edge research on health disparities relating to radiological health care.

Our Goals

- Recruit, develop and retain diverse trainees, faculty and staff
- Create a diverse, supportive work environment
- Provide a culturally competent and inclusive patient health-care experience
- Enhance accountability, collaboration and efficacy through strategic use of diversity, equity and inclusion (DEI) data in planning and assessment

The Committee

The Executive Diversity Committee (EDC) is comprised of faculty, trainees and staff volunteers committed to promoting diversity, equity, inclusion and social justice within MIR and for those we serve. Members develop policy, participate in strategic planning and organize events to create and nurture a welcoming, inclusive environment within the department. There are also several subcommittees with specific tasks. In addition, the EDC collaborates with the School of Medicine’s leadership on key issues in an effort to expand diversity at the school and increase outreach to the local St. Louis community.

The EDC is led by Gloria J. Guzmán Pérez-Carrillo, MD, director of MIR’s Office of Diversity, Equity and Justice. She is an assistant professor of radiology, co-director of the Advanced Neuroimaging Service, and a clinical neuroradiologist with a research interest in multiparametric advanced diffusion imaging techniques for the evaluation of brain
Programs & Initiatives

We understand that fostering an inclusive environment for our faculty, staff, trainees and patients requires proactive, thoughtful work. MIR is deeply committed to continuing existing efforts and implementing new initiatives that include:

- Building a robust committee and subcommittees focused on short and long-term DEI goals
- Grand rounds featuring leaders in diversity, equity and inclusion
- Expansion of diverse trainee recruitment through second-look visits, summer programs for underrepresented in medicine (URiM) students and outreach to multiple medical student associations
- Mentoring of URiM junior faculty
- Increased community outreach, including facilitating oncological screenings for underserved St. Louis communities and engaging URiM STEM university and K-12 students to increase interest in radiology as a career
- Supplementing existing diversity training for faculty and staff with a recurring, in-depth program that includes implicit bias and microagression training
- Recognition for excellence in DEI
- Close collaboration with other medical departments and DEI leadership of Washington University and the School of Medicine
- Increased DEI signage displayed in MIR offices and facilities
- Townhall listening tours, providing a more intimate space for key MIR groups such as residents, junior faculty or staff to share workplace experiences

and head and neck tumors. She earned her bachelor’s degree at Johns Hopkins University, returned home to earn her medical degree from the University of Puerto Rico School of Medicine and completed a radiology residency at West Virginia University. In addition, she completed a master’s degree in radiology at the Universidad de Granada in Spain and a Master of Public Health from the University of Arizona. No stranger to MIR, she completed two fellowships here from 2014 to 2016 — one in neuroradiology and one as a neuroradiology research fellow.
Interventional Radiology (IR) Residency Program

Interventional radiology as a specialty requires expertise in diagnostic imaging, image-guided procedures and patient care, and the IR training program at Mallinckrodt Institute of Radiology emphasizes all three components. With over 50,000 image-guided procedures performed each year, there is more than enough volume for all trainees. Countless research opportunities, an active IR outpatient clinic, and busy inpatient admitting and consultation services round out the experience. Graduates leave prepared for careers in academic or private practice IR.

Residents work with subspecialty-trained faculty, learning a wide range of adult and pediatric procedures including: venous and arterial imaging, angioplasty/stenting, thrombolysis, venous recanalization, IVC filter placement/retrieval, vein ablation, fibroid embolization, trauma interventions, transarterial chemoembolization, radioembolization, tumor ablation, percutaneous organ access (gastrostomy, nephrostomy, biliary, etc.), TIPS, balloon-occluded retrograde transvenous obliteration and more.

MIR offers three paths to becoming an interventional radiologist:

- Medical students can apply to the Integrated IR Residency through the NRMP.

- Candidates in a Diagnostic Radiology residency can apply to the Independent IR Residency through the NRMP, a two-year pathway for those who have not completed an ESIR year during their diagnostic radiology residency.

- MIR Diagnostic Radiology residents can apply internally for the Early Specialization in Interventional Radiology (ESIR) track. This is a pathway that the residents complete during the fourth year of their diagnostic radiology residency, which, if successfully completed, means they only have to complete one additional year of an Independent IR residency. (To learn more about ESIR track, see page 9.)
Gretchen M. Foltz, MD, arrived at Mallinckrodt Institute of Radiology in 2013 as an attending, bringing a wealth of knowledge and fresh thinking about the field of IR and IR training. Foltz is involved with IR education at all levels, from teaching medical students to developing post-training medical education. She has leadership positions in several national organizations, including the Society of Interventional Radiology, Association of Program Directors in Interventional Radiology and the Radiological Society of North America.

- Interventional Radiology Program Director since program’s start in 2016
- Recipient of a 2019 RSNA Education Research Development Grant, given to those with a passion for advancing the science of radiology education
- Vice chair of the faculty development committee for the Association of Program Directors in Interventional Radiology
- Volunteer for the ACGME with a role in writing the Milestones 2.0 for Interventional Radiology

Education

2012–2013 Interventional radiology fellow, McGaw Medical Center of Northwestern University
2008–2012 Diagnostic radiology resident, University of North Carolina, UNC Hospitals and Clinics
2007–2008 Intern (transitional year), UCLA Medical Center
2003–2007 MD, Medical College of Wisconsin
1998–2002 BS, University of Wisconsin
Integrated IR Residency

This five-year program begins after a yearlong clinical internship for residents, followed by three years of diagnostic radiology training alongside the diagnostic radiology residents and two years of IR training under the thoughtful supervision of the program’s director. The last two years of the IR residency focus on image-guided interventions and invasive diagnostic procedures with additional rotations through the surgical intensive care unit and IR-related areas.

Mallinckrodt Institute of Radiology currently has integrated IR residents in years one through five of their training. While MIR does not require a surgical internship, there is an option of jointly ranking a preliminary surgery position at Barnes-Jewish Hospital.

Acceptance MIR accepts two applicants per year, matched into the program from medical school. Graduates will be eligible to sit for exams and be board-certified in diagnostic and interventional radiology.

Rotations Residents rotate through three hospitals during training: Barnes-Jewish Hospital, St. Louis Children’s Hospital and Barnes-Jewish West County Hospital, receiving comprehensive exposure to the full scope of diagnostic and interventional radiology.

Conferences During their first three years, Integrated IR residents will attend all conferences provided by the Diagnostic Radiology (DR) services. During their last two years, IR residents will attend DR conferences when they are rotating on DR services, and IR conferences when they are rotating on IR service. IR specific conferences include:

- Quality and safety every other Tuesday morning
- IR didactic every Wednesday morning
- Hepatobiliary interdisciplinary every Thursday morning
- A mixture of case conference, journal club and interventional oncology every Friday morning

Contact
Melissa Hummel | melissa.hummel@wustl.edu | 314.362.2978

Integrated IR Residency
NRMP Matching Number: 1353416A0
On-Call Opportunities

- Call duty begins the second year of training. At least three radiology residents share on-call responsibilities in the hospital from 5:00 pm-7:00 am on weekdays, and around the clock on weekends and holidays.

- Residents take call for three years with a break in the months preceding the American Board of Radiology Core Examination.

- A night float system is used for most overnight call duty, and additional call shifts are scheduled to manage the busy periods in the evenings and during the day on weekends.

- A large residency and individual class size keeps the volume of call shifts manageable and easily allows for call switches.

- Residents cover the emergency department and hospital, providing interpretation for imaging studies performed after hours without on-site attendings.

- When needed, on-call faculty and fellows are available for phone consultation and teleradiology image review.

- Residents issue preliminary dictations on all studies they review while on call.

- Residents have face-to-face readouts in the morning with subspecialty faculty who provide feedback on their interpretations.

Name: Kacie L. Steinbrecher, MD
Program: Diagnostic Radiology
Hometown: Rochester Hills, MI

Teachable moment:
When your attending tells you that your Saturday shift starts at 4:30 a.m., it is probably a joke. On a more serious note, important teachable moments occur every day, whether it is in the reading room during read-outs, during procedures or at the scanner in the ED.

Favorite outdoor activity:
Tennis and attempting to play golf (both in Forest Park).

Favorite meal:
You can’t beat fried chicken and french fries from Southern. The short ribs at Billie-Jean are a close second if you’re in the mood for something slightly fancier.

Biggest surprise:
The amount of autonomy. Residents definitely take ownership of the services.

Three things you can’t live without during residency:
Spotify Premium, a solid mattress, support of family and friends.

Why MIR:
In addition to world-class training, the collegial atmosphere of the reading rooms and large alumni network make MIR unique.
Radiology Learning Center

The Radiology Learning Center is a two-level facility designed specifically for use by Mallinckrodt Institute of Radiology residents. The 24-hour center features a small kitchen on the lower level, an upper level lounge and a computer lab with access to all necessary institutional programs. Access to STATdx®, eAnatomy™, and SPSS® is currently available, and Qevlar and BoardVitals™ are available to third-year, board-eligible residents. Additional resources are regularly added based on resident recommendations and board review.

The center's library of radiology textbooks are reserved specifically for use by trainees in the program. Residents can check these out for rotation self-study and board review. Access to Washington University School of Medicine's Becker Medical Library, which has a substantial number of relevant radiology textbooks and e-books, is also available to MIR residents.

Conferences

Daily Noon Conference The noon-hour conference, given by a subspecialty-trained faculty radiologist, is designed specifically for resident education. Each conference is recorded and available for review by trainees. Audience response is increasingly used by lecturers to enhance the learning experience.

Teaching Conference Often case-based, a daily teaching conference is given on nearly every rotation, providing residents with additional didactic teaching and the opportunity to practice taking cases in an unknown format. Residents in all years participate. For example, a first-year might identify the findings in a case, followed by a more senior resident synthesizing those findings into a differential diagnosis. A faculty member rounds out the discussion with additional findings, diagnoses and teaching points.

Review Conferences MIR prepares residents for the American Board of Radiology Core Examination and independent practice by hosting its own internal core exam review conference series.
Global Alumni Network

Mallinckrodt Institute of Radiology boasts the world’s largest network of radiology alumni, many of whom hold leadership positions in clinical care, research and teaching. Our unparalleled network creates a diverse path of career opportunities and professional connections that last a lifetime.

Perry J. Pickhardt, MD, is a professor of radiology and chief of gastrointestinal imaging at the University of Wisconsin School of Medicine and Public Health in Madison, Wisconsin. He began publishing widely during his residency at Mallinckrodt Institute of Radiology and remains a prolific researcher, particularly in the field of virtual colonoscopy.

John Neil, MD, is senior vice president and chief physician executive for HonorHealth, a $1.6-billion health network headquartered in Scottsdale, Arizona. Prior to that, Neil spent 16 years in clinical practice as a vascular and interventional radiologist at Scottsdale Medical Imaging. A self-described “lifelong learner,” he has always embraced administrative roles for providing him with the opportunity to “work with exceptionally smart people, continually learn new things, and develop as a professional and a person.”

Christine Peterson, MD, is an associate professor of radiology in body imaging at Penn State Health Milton S. Hershey Medical Center in Hershey, Pennsylvania. She says her instructors and mentors at MIR inspired her to become a professor. As she instructs and counsels the next generation of radiologists, Peterson draws not only on their examples but on the lessons she learned during a major health crisis in her life.
Bonnie N. Joe, MD, is a professor in residence and chief of breast imaging in the Department of Radiology and Biomedical Imaging at the University of California, San Francisco. The connections she forged during her residency at MIR remain strong and have brought her back to campus not only to teach but to learn as well.

Class of ‘02

Michelle Dorsey, MD, is a diagnostic radiologist and the first female chief of radiology at the Phoenix VA Health Care System. Dorsey established the Phoenix VA’s first breast imaging program, which became the VA system’s first ACR designated Breast Imaging Center of Excellence. In October 2018, she was the first physician chosen to represent the Department of Veterans Affairs as a White House Leadership Fellow, a yearlong post in Washington D.C. where she worked to improve customer experience across federal government agencies.

Class of ‘95

David Youmans, MD is a diagnostic and interventional radiologist and former department chair with Princeton Radiology at Penn Medicine Princeton Health. After serving as a decorated officer in the U.S. Navy, he followed his dream of becoming a doctor. Youmans cites his diagnostic radiology residency at MIR as a catalyst for the strong work ethic and empathy that have guided his clinical work.

Class of ‘98
Subspecialty Training

Subspecialty training at Mallinckrodt Institute of Radiology is highly sought after and extraordinarily competitive. In addition to receiving intensive training, trainees teach residents and medical students, consult with clinical colleagues, conduct conferences and attend subspecialty meetings. All trainees also have the opportunity to collaborate with section faculty, many of whom hold key positions in professional radiological societies and organizations.

Abdominal Imaging
Breast Imaging
Cardiothoracic Imaging
Endovascular Surgical Neuroradiology
Independent Interventional Radiology
Musculoskeletal Imaging and Interventions
Neuroradiology
Nuclear Medicine
Pediatric Radiology
Advanced Abdominal Imaging

Advanced abdominal fellows have the opportunity to interpret a broad array of imaging of common, uncommon and rare conditions in this high-volume practice. Rotations are primarily through the body CT, 3D CT, body MRI, ultrasound and procedure services. Limited time is spent on the GI/GU service and all fellows have an option to staff emergency radiology cases. A daily average of up to 40 MRI, 20 3D CT, 100 US, and 120 CT cases are performed. Fellows gain extensive expertise in all modalities used to image the abdomen and pelvis, confidence using ultrasound and CT to guide percutaneous procedures, and develop proficiency with all components of body MR imaging, including elastography, prostate MRI and MR angiography.

Attending faculty are devoted to clinical care and training, working side-by-side in the reading rooms with fellows throughout the day. In addition, fellows play a key role in the teaching and supervision of residents and have graduated responsibility and independence as the year progresses. A combination of on-service experience, conferences and didactic lectures provide the focus for learning.

Need to Know

- **Accepted**: Seven fellows are accepted into the program per academic year
- **On Call**: Home call one week about once a month; one Saturday half shift per month, on average
- **Research Projects**: Optional
- **Post-training**: About 65% private practice, 35% academic

Program Director **ANUP S. SHETTY, MD**

Contact:
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314.362.1053
Breast Imaging

The breast imaging section is a high-volume Breast Health Center with a high-risk cancer screening program. Our fellows receive comprehensive training in breast imaging, image interpretation and breast interventional procedures. The section performs more than 45,000 breast imaging studies per year, including 40 breast biopsies, 20 breast needle localizations and Magseed placements each week. The program is fully digital and tomosynthesis capable and offers screening and diagnostic exams and image-guided procedures using mammography, tomosynthesis, ultrasound and MRI. Contrast-enhanced mammography is also available.

Radiology services are fully integrated with those of breast surgeons and other ancillary staff to provide comprehensive breast health care. Training primarily occurs in the reading rooms and clinics, where fellows work alongside attending faculty. Each fellow has 12 months of breast imaging with an opportunity for internal paid moonlighting in the general radiology call pool. MIR participates in the National Resident Matching Program for our Breast Imaging Fellowship. The Society of Breast Imaging has announced that it will provide a universal application to interested radiology residents.

Need to Know

- **Accepted:** Four fellows are accepted into the program per academic year
- **On Call:** None
- **Research Projects:** Optional
- **Post-training:** About 50% private practice, 50% academic

**Contact:**
Charlene Lomax
charlenelomax@wustl.edu
314.454.7405

**NRMP Matching Number:** 1353R02F0

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**Program Director** KIMBERLY N. WIELE, MD
Cardiothoracic Imaging

MIR has one of the largest thoracic imaging and cardiac radiology services in the country, interpreting about 120,000 chest radiographs, 12,000 chest CTs, 20,000 total CTs (including abdomen and pelvis), 350 cardiac MRs, and 300 cardiac CTs, and performing 250 lung biopsies every year. Fellows attend “boot camp” lectures/workshops and a cardiothoracic imaging conference series, where cardiology faculty, pulmonologists, cardiologists and pulmonary pathologists provide lectures. In addition, our relationship with St. Louis Children’s Hospital means fellows gain a thorough understanding of the manifestations of cardiopulmonary disease from infancy to old age.

Throughout the year, fellows are responsible for presenting in the following conferences under faculty supervision: thoracic oncology, adult congenital heart disease, pediatric congenital heart disease and aortic surgery. In addition, fellows have the opportunity to attend the interstitial lung disease and Stuart S. Sagel thoracic imaging case conferences. MIR’s chest teaching file has more than 5,000 proven cases.

Need to Know

- **Accepted:** Two fellows are accepted into the program per academic year
- **On Call:** Home call two weeks near the end of training
- **Research Projects:** Optional
- **Post-training:** About 50% private practice, 50% academic

Program Director  CYLEN JAVIDAN, MD

Contact:
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Endovascular Surgical Neuroradiology

Fellows learn to diagnose and treat a wide range of conditions, including brain aneurysms, arteriovenous malformations, dural arteriovenous fistulas, extra- and intracranial atherosclerotic disease, and ischemic stroke. Our service is closely integrated with the departments of neurological surgery and neurology. More than 1,000 diagnostic angiographies and 300 interventional cases, including 150 aneurysm cases, are performed annually, and our stroke caseload increases every year. Supervised by three full-time attendings, fellows learn hands-on through a high-volume caseload in two biplane neuroangiographic suites with full flat panel and 3D capabilities.

The one-year ACGME-accredited program requires a prerequisite diagnostic neuroradiology fellowship for candidates from diagnostic radiology programs. Applicants from neurosurgery and neurology require a prerequisite year of training in catheter angiography and vascular imaging. Weekly didactic, stroke and vascular conferences, and monthly events include an endovascular acute stroke committee and a morbidity and mortality conference.

Need to Know

- **Accepted:** Two fellows are accepted into the program per academic year
- **On Call:** Home call weekly about every three weeks; callbacks as needed for urgent/emergent procedures
- **Research Projects:** Required
- **Post-training:** About 70% private practice, 30% academic

Program Director  JOSHUA W. OSBUN, MD

Contact:
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winklerp@wustl.edu
314.362.5949
Independent Interventional Radiology Program

MIR was excited to welcome the first residents into the Independent IR residency in July. This pathway is for applicants who are currently in a diagnostic radiology residency and are interested in pursuing Interventional Radiology as a specialty. Diagnostic residents can apply for the Independent IR pathway during their third year of training.

After completion of the four-year diagnostic radiology residency, trainees have to complete either one or two additional years in an Independent Radiology Residency, depending on whether they completed an ESIR pathway during their last year of Diagnostic Radiology training. *(To learn more about ESIR, see page 9.)* Each trainee will perform over 1,200 cases during the course of a training year. In addition, trainees will attend the following IR-specific conferences: quality and safety every other Tuesday morning, IR didactic every Wednesday morning, Hepatobiliary every Thursday morning, and a mixture of case conference, journal club and interventional oncology on Friday morning.

Need to Know

- **Accepted:** Two to four applicants currently in a diagnostic radiology training program are accepted per academic year (ESIR pathway is not required)
- **On Call:** Weekday and weekend call is split with 4th and 5th year Integrated IR residents over the course of the year
- **Research Projects:** Encouraged
- **Post-training:** Graduates are eligible to sit for exams and be board-certified in diagnostic and interventional radiology

**Program Director**  
GRETCHEN M. FOLTZ, MD

**Contact:**  
Melissa Hummel  
melissa.hummel@wustl.edu  
314.362.2978

**NRMP Matching Number:** 1783415F0
Musculoskeletal Imaging and Interventions

Our busy clinical practice includes staffing at the main medical center, an outpatient orthopedic center with clinics and surgical suites, and community hospitals. Each fellow works daily alongside one of our six subspecialty-trained MSK radiologists on all of the clinical services, gaining experience interpreting a large volume of radiographs, CT, MRI and ultrasound. Fellows perform image-guided procedures on average two days a week. The program's breadth and depth of diagnostic musculoskeletal imaging and procedures is exceptional and features a case mix that includes traumatic, rheumatologic, metabolic, sports, oncologic and spine imaging.

Mallinckrodt Institute of Radiology's number and variety of interventional procedures is unique and includes vertebral augmentation; percutaneous tumor therapy using radiofrequency ablation, cryoablation and microwave ablation; bone and soft-tissue biopsy; and joint injection and aspiration. In addition, fellows perform spine procedures including facet injection, medial branch block, and central epidural and transforaminal steroid injections. Fellows learn through daily case exposure, independent learning, lectures, and instructional hands-on procedural sessions.

Need to Know

- **Accepted:** Five fellows are accepted into the program per academic year
- **On Call:** Home call with attending backup every 5th week
- **Research Projects:** Encouraged
- **Post-training:** About 65% private practice, 35% academic

Contact:
Linda Macker
mackerlj@wustl.edu
314.362.2916

Program Director  JONATHAN C. BAKER, MD
Neuroradiology

Thanks to a nationally ranked tertiary medical center, world-class neuroscience institute and partnership with St. Louis Children’s Hospital, fellows receive unparalleled training in neuroradiology. The ACGME-accredited program rigorously prepares fellows by providing high-level training in adult and pediatric neuroimaging. The Neuroradiology section reads over 75,000 cases and performs more than 2,700 procedures each year, with 100% of cases reviewed with faculty who are recognized experts in their fields.

Fellows bound for academic practice benefit from an optional second year training program. This allows for individual time to focus on research or advanced clinical practice in pediatric neuroradiology, head and neck imaging, advanced neuroimaging or general neuroradiology. In addition to routine clinical imaging studies, fellows are exposed to a wide range of advanced MRI techniques including functional MRI, tractography, vessel wall imaging, MR perfusion, MR spectroscopy, and PET/MRI. Fellows train in vascular neuroradiology under the guidance of dedicated, radiology-trained neuro-interventionalists. Daily interactive neuroradiology conferences for fellows and a video library of recorded lectures complement the teaching in the reading rooms. MIR maintains a searchable database of proven cases for study and research.

Need to Know

- **Accepted**: Ten fellows are accepted into the program per academic year. A second year of research or advanced clinical practice is optional.
- **On Call**: Home call weekdays overnight (one night at a time) and weekend call (daytime review followed by home call at completion of hospital duties), split evenly among fellows throughout the year.
- **Research Projects**: Optional
- **Post-training**: About 85% private practice, 15% academic

**Program Director**

HILARY ORLOWSKI, MD

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314.362.5949

NRMP Matching Number: 1783423F0
Nuclear Medicine

The primary goal of this ACGME-accredited fellowship is to train radiologists and physicians of diverse backgrounds to become the next generation of leaders in academic and clinical nuclear medicine. The length of the program depends on each resident's prior training. For example, one year of nuclear medicine training is required after completing an ACGME-approved radiology residency.

Trainees gradually assume increased responsibility in the clinical service while always working closely with an attending physician who reviews every case with them. Although diagnostic imaging is emphasized, extensive experience in radioiodine therapy of hyperthyroidism and radionuclide cancer therapy is provided. The program offers training in innovative nuclear medicine technology, such as SPECT/CT, PET/CT and PET/MRI. In addition to general adult nuclear medicine service, the program features a nuclear cardiac imaging service, clinical PET/CT, and a pediatric service. Multiple opportunities are also available to participate in research projects related to new radiopharmaceuticals and therapies.

Need to Know

- **Accepted:** Five fellows are accepted into the program per academic year
- **On Call:** Home call weekly, split evenly among fellows throughout the year
- **Research Projects:** Encouraged
- **Post-training:** About 80% private practice, 20% academic

**Program Director** ROSANA PONISIO, MD

Contact:
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314.362.1474
Pediatric Radiology

Fellows in this ACGME-accredited program are exposed to a variety of classic and complex pediatric pathology. Mallinckrodt Institute of Radiology performs more than 100,000 pediatric imaging studies annually, including about 12,000 ultrasound studies and 8,500 MRI exams. Faculty work with fellows on an individual basis, and interaction with pediatricians from other clinical departments in the reading rooms and in subspecialty conferences enriches the experience. In addition, though they do not read out residents, fellows do oversee them when on call.

All rotations occur at St. Louis Children’s Hospital, one of an elite group of pediatric hospitals verified as a Level 1 Pediatric Trauma Center by the American College of Surgeons (ACS). It’s the only pediatric hospital to receive this designation in Missouri and Illinois. The hospital provides a full range of pediatric services to the St. Louis metropolitan area and a primary service region covering six states. In fact, some patients even travel from abroad for specialty care at St. Louis Children’s.

Need to Know

- **Accepted:** Two fellows are accepted into the program per academic year
- **On Call:** Home call once a week per four-week rotation; in-house Saturday call (7:30 am-5:00 pm), followed by home call the next morning; Sunday call in-house to read out ICU cases, then take calls from home until the following morning; call is always backing up an in-house resident
- **Research Projects:** Required
- **Post-training:** About 70% private practice, 30% academic

Program Director  **GEETIKA KHANNA, MD**

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“Why doesn’t everyone visit St. Louis, Missouri? And frankly, move there?”
Forbes, 25 Best Places to Visit in 2020

Explore St. Louis

Welcome to St. Louis, known as the Gateway to the West. Nestled between the two longest rivers in the country, this historic location is full of vintage buildings, ample cultural attractions and beloved professional sports teams. Yet the diversity and charm of the city’s many unique neighborhoods often come as a pleasant surprise to newcomers. Each boasts its own personality, which means you’ll find a variety of food, fun and experiences wherever you go.

Central West End
Washington University Medical Campus is located in the Central West End, which means uber-charming sidewalk cafés, boutiques and gastropubs are just a few steps away.

The Grove
Located right next door to the Medical Campus, The Grove boasts a diverse array of bars, nightclubs, restaurants and shops that are known for setting trends instead of following them.

The Hill
You’ll find a traditional collection of authentic Italian bakeries, grocery stores, a gelateria, mom-and-pop trattorias and a bustling neighborhood bocce court on The Hill.

Tower Grove Park
Dog-walking, bike-riding, stroller-pushing St. Louisans populate this beautiful Victorian-era park, which is surrounded by diverse and thriving neighborhoods that are home to everyone from hipsters and urban cyclists to WashU scientists and veteran brewmasters.

Cherokee Street
Creativity and the entrepreneurial spirit are alive and well on Cherokee Street, as evidenced by blocks of independent specialty shops, design studios, bakeries and more.

Lafayette Square
This neighborhood is a 30-acre oasis of greenery within an urban landscape that caters to a hip, urban clientele in search of one-of-a-kind culinary experiences.

Maplewood
Look for an eclectic mix of trendy and traditional in Maplewood, including deliciously diverse cuisine, craft breweries, a historic bowling alley and a modern pinball lounge.

The Loop
Delmar Boulevard has been designated one of the “Great Streets of America.” This eclectic main drag features multiple music venues, vintage clothing stores and a wide range of global cuisine.

Clayton
Clayton, host to a variety of must-attend annual events, boasts a number of boutiques, galleries, hotels and restaurants known throughout the region.

Soulard
The city’s oldest neighborhood features red brick townhomes that house restaurants with charming courtyard dining and live music clubs. Soulard is also home to the oldest farmers’ market west of the Mississippi.
Forest Park is almost twice as big as New York’s Central Park. Boasting 1,300 lush acres and five major cultural institutions, the park, located adjacent to the Medical Campus, was rated No. 1 city park in the U.S. by readers of USA Today. Visitors can take in a spectacular vista while on a picnic, tucking into a good book or taking a paddleboat ride. For a more active itinerary, the 6.2-mile dual path provides ample opportunity for running and biking.

**Forest Park Highlights**

**Saint Louis Art Museum** One of the nation’s leading comprehensive art museums, it offers free admission and contains more than 30,000 art works dating from antiquity to the present.

**The Boathouse** Observe wildlife during a paddleboat ride through the lagoons or enjoy a drink and bite to eat on the patio while watching a beautiful sunset over Post-Dispatch Lake.

**The Saint Louis Zoo** Voted “America’s Top Free Attraction” by USA Today, the 90-acre Saint Louis Zoo is home to more than 600 species of animals, many of them rare and endangered. Founded in 1910, the zoo is famed for its world-renowned natural exhibits and an innovative approach to wildlife conservation, research and education.

**Highlands Golf and Tennis Center** The recently updated facility includes a nine-hole golf course, 30-stall driving range, full-service bar and restaurant, and 13 clay tennis courts.

**Missouri History Museum** Originally built as the first national monument to Thomas Jefferson, the always free museum explores the history of St. Louis from its founding in 1764 through present day.

**The Muny** The nation’s oldest and largest outdoor musical theatre features at least seven Broadway-style productions every summer. About 1,500 of the 11,000 seats are free on a first-come, first-served basis.

**The Science Center** This interactive museum features an OMNIMAX® Theater, the James S. McDonnell Planetarium and more than 700 exhibits. General admission is always free.

**Steinberg Skating Rink** Enjoy a hot chocolate at one of the largest outdoor ice skating rinks in the Midwest. Steinberg offers public skating every day it’s open, including holidays.

For more information on Forest Park, visit forestparkforever.org.
Out and About in “The Lou”

**Things to See and Do**

**City Museum**  Created from reclaimed architectural and industrial objects, City Museum features a rooftop Ferris wheel, giant slinky, and working shoelace factory among its exhibits.

**Gateway Arch**  No visit to St. Louis is complete without a ride to the top of this fabulous structure. At 630-feet high and 630-feet wide at its base, this landmark can be seen for miles from both sides of the Mississippi River.

**St. Louis Aquarium**  All aboard for a splashin’ good time. Explore the underwater world and interact with 13,000+ sea animals at the city’s newest attraction.

**The Magic House**  Consistently rated one of the top family attractions in the U.S., this children’s museum boasts more than 55,000 square feet of interactive exhibits.

**Missouri Botanical Garden**  This world-renowned, 79-acre oasis garden features a Japanese strolling garden, geodesic dome conservatory and sprawling, hands-on children’s garden.

**Urban Chestnut Brewing Company**  UCBC is just one of several microbreweries on the St. Louis landscape. Beer aficionados can sip and sample at a number of area locales.

**Music / Arts / Theatre**

**The Fabulous Fox**  A spectacular refurbished movie theatre from the 1920s is now a classic performing arts center and special events venue.

**Stifel Theater**  Thanks to a $79 million renovation, this St. Louis institution provides a stunning backdrop to a wide and diverse array of entertainment and special events.

**St. Louis Black Repertory**  The largest professional African-American theater company in the U.S., the Black Rep provides platforms for theater, dance and other creative expressions that heighten the social and cultural awareness of its audience.

**The Pageant**  Designed to host a wide range of music performances and special events, the Pageant is a 2,000-plus capacity concert nightclub with an up-close and personal vibe.

**Hollywood Casino Amphitheater**  This Live Nation venue boasts 7,000-seats, with lawn seating for another 13,000. And thanks to a state-of-the-art sound system and six video screens, all 20,000 concert goers can experience a front-row view.

**Citygarden**  Open year round and within walking distance of the iconic Arch, Citygarden is a vibrant and serene blending of lush plantings and internationally renowned sculptures.

**Sports / Outdoors**

**Cardinals Baseball / Busch Stadium**  If a day spent watching the 11-time World Champion Cardinals isn’t enough fun, be sure to include a stop by Ballpark Village, the sports-anchored entertainment district located right next door.

**Blues Hockey / Enterprise Center**  Hockey season brings with it a rare medical phenomenon. Everywhere you look, St. Louisans are bleedin’ blue — especially after the franchise’s Stanley Cup win in May 2019.

**Katy Trail**  Bikers and walkers enjoy the 240 miles of scenic landscape on the longest rails-to-trails conversion in the U.S.

**MLS Team in 2023**  A city with a rich soccer history, St. Louis will become home to an MLS expansion team, complete with a brand new stadium near Union Station.
With a welcoming Midwest vibe and an attractive cost of living, it’s no wonder nearly 3 million people are proud to call St. Louis home. Not only is the living easy, it’s affordable. For example, the median home value in the greater St. Louis metropolitan area is $180,685. Compare that to $644,743 in the metro Boston area or $1.4 million in San Francisco. Apartment life is a bargain as well. Consider that the median rent for a one-bedroom apartment in St. Louis is $856. Then think about spending $2,351 for a one bedroom in New York, or more than $2,531 in Palo Alto.

Beyond its affordability, there’s a classic, timeless look to local residential architecture that’s impossible not to love. Throw in a nationally recognized food and craft beer scene and you’ll understand why St. Louis has been dubbed a “hidden gem” and one of the “most welcoming” cities in America.

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All figures represent median rent and home prices according to Zillow.com and Apartments.com as of July 2020.
ST. LOUIS IS AS WELCOMING AS IT IS BUDGET-FRIENDLY
The New York Times, March 2018

THE FIFTH BEST PLACE TO EAT IN THE COUNTRY
Food & Wine, January 2019

25 BEST PLACES TO VISIT IN 2020
Forbes, December 2019

WORLD’S 50 COOLEST PLACES
Time for Kids, 2019