WELCOME

– to the –

Department of Radiology University of Wisconsin–Madison



Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH

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TAB1

About the Radiology Department

OVERVIEW

Since being established in 1927, the Department of Radiology has committed itself to the advancement of human health through innovation in imaging and image-guided therapies and has made enormous impacts on patient care, research, and education in the field of diagnostic and interventional radiology.

Presently, the Department comprises 125 faculty members across 12 sections. Approximately 108 faculty members engage primarily in clinical activities and approximately 21 participate mostly in research and teaching. 17 faculty are on the tenure track (typically 50% or more research effort), 78 on the clinical health science (CHS) track (70% clinical effort, 30% academic effort), and 30 on the clinician teacher (CT) track (90% clinical effort). The faculty development program is robust, with 36 faculty promoted and 6 appointments since 2020.

Our Department trains 37 residents and 24 fellows annually. Under the UW Health umbrella, providers care for patients at UW Health University Hospital, UW Specialty Clinics, the Carbone Cancer Center, the American Family Children's Hospital, UW Health at East Madison Hospital, the Williams S. Middleton Veterans Administration Hospital, and additional partner sites, including UnityPoint Health-Meriter Hospital and more.

Thomas Grist, MD became the Department of Radiology's seventh chair in 2005. Under Dr. Grist's leadership, the number of faculty in the Department has more than doubled. Extramural research funding has also grown significantly, from just over \$1 million in 2005 to over \$18 million in 2022.

Our faculty in the Department of Radiology provide world-class care through a variety of specialized clinical programs, including subspecialists in 12 diagnostic and interventional sections and a Community Radiology section that provides full-service radiology coverage across 4 Wisconsin counties and multiple community/rural hospitals. In addition, the Department of Radiology's research resources allow faculty and trainees to contribute to the development of innovative imaging technology. The Department is also committed to providing training programs that produce exceptional radiologists across specialties.



MISSION

The mission of the Department of Radiology is to improve human health through innovation in clinical care, imaging research, and education.

We achieve this because we:

- Provide outstanding, respectful, and culturally sensitive patient care.
- Improve the health of our patients by creating innovative technology and translating imaging research into clinical practice.
- Recruit, educate, and develop imaging healthcare professionals.
- Share our clinical expertise through regional outreach to the people of Wisconsin and their healthcare providers.

VALUE STATEMENT

The UW Department of Radiology provides excellence in patient care in an environment that is respectful of others, adaptive to change, accountable for outcomes, and attentive to the needs of underserved populations.

We are dedicated to sharing our clinical expertise through regional outreach to the people of Wisconsin and their healthcare providers.

We provide an environment for education of our trainees, staff, and healthcare professionals through scholarly conferences and continuing education programs.

We improve human health by developing innovative imaging technology through basic and translational research in collaboration with colleagues at UW–Madison and beyond.

We support the Wisconsin Idea to improve people's lives beyond our walls by collaborating with industry to translate new technology into daily clinical practice.

We support the economic development of Wisconsin and the financial wellbeing of UW Health.

We recruit and develop dedicated faculty and health professionals who inspire their co-workers and students towards lifelong learning, research discovery, service to their community and clinical excellence.



The University of Wisconsin-Madison Department of Radiology has a rich history of innovating the field of radiology. The Department began from humble beginnings on May 18, 1927, when the Board of Regents appointed Dr. Ernst Pohle as the first professor of radiology. Since then, we have grown to 125 faculty members and 11 sections. Learn more about our greatest achievements and milestones below:



Beth Burnside Takes on Notable Leadership Roles at the UW SMPH



Beth Burnside, MD. MPH, MS. professor of Radiology in the Breast Imaging section named Senior Associated Dean of the SMPH and Deputy Director of Institute of Clinical Translational Science. Burnside is an accomplished researcher with over 90 publications with an interest in improving population based screening and the diagnosis of breast cancer.

2018

Radiology Curriculum Integrated Within the SMPH Forward Curriculum

Jason Stephenson, MD, Tabby Kennedy, MD and Allison Grayev, MD lead the department's initiatives to integrate Radiology across all three phases of the medical school curriculum through

vertical and horizontal integration.





2015

UW Partners with GE Healthcare to Create Low-Dose CT Protocols

Led by Myron Pozniak, MD, the University of Wisconsin has solidified its role as a recognized leader in imaging through the development of new low-dose CT protocols, now being shipped with all GE scanners. These protocols are designed to reduce radiation dose, acquire clinically useful images, and reduce the rate of repeat scans. As a result, clinical departments worldwide can now "image gently and image well."

2014

HOPE Program Founded

Bridget Willey, PhD, RDMS, RVT. 👖 RDCS. RT(R), founded the HOPE



Program in 2013. This program was started from a community philanthropic investment by the UW SMPH Department of Radiology. HOPE is designed to grant underrepresented high school and college mentors with the opportunity to explore a variety of health occupations and professions in a hands-on, immersive Saturday seminar.

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Charles Mistretta, PhD, and Charlie Strother, MD, return to X-ray DSA work to provide a time series of 3D images, improving image frame rate and catheter tracking.

Department of Radiology Partnership

Allison Grayev, MD becomes co-director of

Commercial Introduction of 4D DSA

with Gross Anatomy

Anatomy at the UW SMPH.

2013



Perry Pickhardt, MD and colleagues publish seminal article: "Opportunistic Screening for Osteoporosis Using Abdominal Computer Tomography Obtained for Other Indications" in *Annals of Internal Medicine*. 2013

2017

2014

2010 单

Grand Opening of Wisconsin Institutes for Medical Research (WIMR) and the WIMR Imaging Science Center



WIMR was designed to foster cross-discipline research and to support bringing new developments from the lab bench to the bedside. It has provided a stable home for the UW Carbone Cancer Center, and created new collaborations

between the Departments of Radiology and Medical Physics and many facets of the School of Medicine and Public Health.

Quantification of Liver Fat with MRI

Scott Reeder, MD, PhD and Claude Sirlin, MD publish comprehensive work on fat quantification in the liver in Magnetic Resonance Imaging Clinics of North America.



2010

Women Physicians in Radiology Group Established at UW

The Women Physicians in Radiology committee was founded by Lynn Broderick, MD. FACR, Beth Bumside. MD, MPH. MS, Susan Rebsamen, MD, FACR and Elizabeth Sadowski, MD. The mission of the WPR was to facilitate the success of women in all ranks of the radiology community and to promote academic and clinical excellence in all faculty, residents and students, regardless of gender identification.



Diffusion Tensor Imaging of the Brain Published

Andrew Alexander, PhD and Aaron Field, MD, PhD, FACR had their article, "Diffusion Tensor Imaging of the Brain" published in *Neurotherspectres* and quickly became a widely-cited work.



2007 单

2009 🛡

2007

Establishment of CT Colonography

"CT Colonography vs. Colonoscopy for the Detection of Advanced Neoplasia" by David Kim, MD, Perry Pickhardt, MD, J. Louis Hinshaw, MD and colleagues published in the *New England Journal of Medicine*.



MR Angiography and 4D Flow Advancements

UW MR Angiography team publishes article on 4D flow measurements using PC-VIPR in the American Journal of Neurosadiology



2005

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2005

Thomas Grist Named Chair

Thomas Grist, MD. FACR is named Chair of the Department of Radiology, succeeding Patrick Turski, MD. FACR.

2004

First Human Trial of Innovative Cancer Agent

The first patient was dosed with NM404, a cancer therapy agent developed

by Jamey Weichert, PhD. The agent has demonstrated tumor uptake in over 50 types of cancer, and can be used for both diagnostic and therapeutic applications. This team later went on to develop Alkylphosphocholine analogs for broad-spectrum cancer imaging and therapy, published in *Science*

Translational Medicine in 2014.



2002 🔶

Tomotherapy Provides CT-Guided Highly Controlled Radiation Dose Delivery

Department of Medical Physics Professor Thomas Rockwell "Rock" Mackie, PhD., develops Tomotherapy, a vanguard of modern image-guided radiation therapy (IGRT). Introduced commercially in 2007. Tomotherapy is now in clinical use at more than 500 sites worldwide.

1995-2000

1996

Mistretta, Grist, and Korosec Develop 3D TRICKS



3D TRICKS (time-resolved imaging of contrast kinetics) is an improved version of time-resolved MR angiography and remains the preferred commercial method to this day. Charles Mistretta, PhD, Thomas Grist, MD, FACR, and Frank Korosec, PhD, were the inventors of 3D Tricks. Their work on Time-Resolved Contrast-Enhanced 3D MR Angiography was published in *Magnetic Resonance in Medicine*.

1995

Juhl and Cameron Honored for Achievements



John Juhl, MD and John Cameron, PhD were awarded the special Roentgen Centennial Commemorative Medal Award from the Radiological Society of North America and the American Association of Physiscists in Medcine for their numerous early groundbreaking contributions to the field of Radiology.

Tumor Ablation Lab Founded

After finding that the current ablation technology was underpowered and ineffective, radiologist Robert Turrel, MD, and then-Professor of Imaging Sciences Fred T. Lee, Jr, MD, founded the Tumor Ablation Lab. The lab developed microwave ablation technology from the ground up, with the assistance of Professor of Electrical and Computer Engineering Daniel van der



Weide, PhD, and then-students Christopher Brace, PhD, and Paul Laeseke, MD, PhD. No microwave ablation equipment existed at UW, forcing the group to improvise with items including WWII-era hand guides, homebuilt. After several years of testing and improving the device, Lee, van der Weide, Brace, and Laeseke licensed the device through the Wisconsin Alumni Research Foundation, allowing them to offer the treatment to patients.

1995

1995

First On-Campus MRI Revolutionizes Soft Tissue Imaging

In a strategic partnership with GE HealthCare, UW installs the first on-campus whole body MRI machine. UW scientists and physicians were able to image soft tissue in exquisite detail, and do so safely, with no ionizing radiation.

1981

The Department of Medical Physics Becomes Their Own Department



The Department of Medical Physics splits off as an independent department at UW School of Medicine and Public Health, becoming the first department of medical physics in the U.S, under the leaderhip of John Cameron, PhD, the inaugural Department Chair.

1981

Patrick Turski Named Chair

Patrick Turski, MD, FACR is named Chair of the Department of Radiology, succeeding Joseph F. Sackett, MD.

1984

Digital Subtraction Angiography Unveiled

After nearly a decade of collaboration between Charles Mistretta, PhD and Andrew Crummy, MD, FSIR, the first commercial prototype of a digital subtraction angiography (DSA) instrument was unveiled at the 1981 Radiological Society of North America meeting in Dallas.



Soon, Mistretta and his departmental colleagues were in extreme demand all across the globe to explain and demonstrate the capabilities of DSA.

1981

Joseph Sackett Named Chair

Joseph F. Sackett, MD is named Chair of the Department of Radiology, succeeding Francis F. Ruzicka, MD.





Move to Clinical Sciences Center

Hamstrung by a lack of space and resources, UW Radiology's campaign for improved facilities came to fruition in 1979, when they moved across campus to the new Clinical Sciences Center.



Department leaders were faced with the challenge of moving over two hundred patients from 1300 University Avenue to their new home at the CSC. After much deliberation, they devised a strategy. Using a convoy of eight appropriately equipped moving vans, they successfully transferred all two hundred patients in just under four hours.

1977

Francis Ruzicka Named Chair

Francis F. Ruzicka, MD is named Chair of the Department of Radiology, succeeding John H. Juhl, MD.



1973

Andrew Crummy Innovates On Arrival

Upon his arrival at UW, Andrew B. Crummy, MD, FSIR, wasted no time in introducing cutting-edge arteriogram techniques to cardiovascular and neuroradiology, in addition to championing ultrasound as a diagnostic tool.

1964

John Cameron Pioneers Two New Techniques

In the span of just one year, John Cameron, PhD solved two important challenges to research: dosimetry and measuring bone density. First, he successfully measured dose of radiation administered to a University Hospitals patient, using a technique called thermoluminescent dosimetry (TLD). Second, he invented a technique for measuring bone density, used in the diagnosis of osteoporosis. Cameron applied a small beam of radiation to the bone and measured the photons that passed through with a detector.

1979

Joseph Sackett Revolutionizes Spine Imaging with Introduction of Metrizamide

Joseph Sackett, MD, FACR, was the first radiologist in North America to use metrizamide as a contrast agent for spine imaging. His landmark 1977 paper demonstrated the safety and efficacy of metrizamide, a vast improvement over the previous oil-based agent. In fact, modern-day metrizamide techniques are still based on Sackett's research.

1976

Mary Ellen Peters Joins Faculty

Mary Ellen Peters, MD, SMPH class of 67, was one of the first female faculty to join the UW Department of Radiology in 1973. She was a pediatric and chest radiologist and served as a vice chair. She retired in 1999 and had been awarded numerous teaching awards including the Deans Teaching Award. Most recently Peters was granted the WMAA emeritus award in 2013 for ongoing service to the SMPH.



1964

John H. Juhl Named Chair



John H. Juhl, MD is named Chair of the Department of Radiology, succeeding Lester Paul, MD.

1963

John Juhl and Lester Paul Create Groundbreaking Textbook

"The Essentials of Roentgen Interpretation" is published, authored by John H. Juhl, MD, and Lester W. Paul, MD. The all-inclusive radiology textbook was quickly established as a unique and first rate compendium of the field.



THE ESSENTIALS OF DENTGEN INTERPRETATION



1957

Dedication of "Cancer Research Hospital," Including a State-of-the-Art X-ray Therapy Unit

Located in a new C wing of the Wisconsin General Hospital, the new Cancer Research Hospital included a million-volt GE x-ray therapy unit—the first of its kind in Wisconsin. The unit itself weighed over two tons, and was placed in a custom built treatment room with 18' thick walls.

1927

A Career in Radiology: Paul Hodges

Paul Hodges, MD, who started his Radiology career when he was an undergraduate at UW, was hired by the Dean to run the x-ray machine at Madison General Hospital in exchange for room and board, laundry and \$10 a month. Paul had initially apprenticed with his uncle in Ashland Wisconsin, taking x-rays at age 14. He



went on to become the Chair of Radiology at the University of Chicago. He invented the x-ray photo-timer, along with Russel Morgan, MD, who went on to become Chair of Radiology at Johns Hopkins.

1910



Lester Paul Named Chair

Lester W. Paul, MD is named Chair of the Department of Radiology, succeeding Ernst Pohle, MD. He was the the 1st UW Radiologist to pass the ABR exam in 1936.

1951

1959

UW Board of Regents Appoints Ernst Pohle as UW's First Professor of Radiology



The German-born Ernst Pohle, MD came to the U.S. in 1923, and after stints at Mt. Sinai in Cleveland and the University of Michigan, took charge of UW's Department of Radiology. A prototype physician-scientist, Pohle was primarily interested in the use of radium and x-ray therapy in the treatment of cancer.

1912

First Reference to Radiology at University of Wisconsin-Madison

First reference to radiology at the University of Wisconsin-Madison is a paper entitled "A Paper On the Action of X-rays on Development," by C.R. Barden.

ABOUT MADISON

The changing seasons in many ways define life in Wisconsin, and in Madison we find creative ways to get the most out of each one. Built on an isthmus and surrounded by lakes, Madison blends the city and campus, green spaces and urban areas, to create a place unlike anywhere else. Take a trip around the sun with us and explore for yourself.

FALL

The sky changes, leaves turn, sweaters come out, and the city is glowing with deep autumn colors. Look for reflections of light on water and golden sunsets. Grab a hot chocolate, and take a walk along the lake or a morning hike through the Arboretum. Be one of 80,000 Badger fans at Camp Randall Stadium. This is a time of change and excitement.

WINTER

Wisconsin winters are epic: cold and enormously beautiful. Badgers don't hibernate—we transform a snow-blanketed campus into a hotbed of activity. Bundle up and get ready to hit the ski trails, team up on the ice, or walk out on frozen Lake Mendota and enjoy the serenity that winter affords.

SPRING

There's no shortage of drama in Wisconsin in spring. Warmer temps tease open daffodil and lilac buds. The iconic sunburst chairs make a triumphant return to the Memorial Union Terrace, while the city's residents emerge to enjoy State Street's many sidewalk cafés and restaurants.

SUMMER

The summer months are fleeting, so we relish every moment: cannonballs into Lake Mendota, hikes around Devil's Lake, leisurely afternoons at the Terrace. Meanwhile, fairs and festivals abound, as long sunny days turn to nights before you realize it, complete with photo-worthy sunsets.

#1 Top 100 Best Places to Live in America Livability, October 2021

#4 Fittest City in the U.S. ACSM American Fitness Index, July 2020

#1 Best Places in the U.S. for Raising Children diversitydatakids.com, January 2020

#3 Best State Capitals to Live In wallethub.com February 2020

RANKINGS

#1 Cities Where Women Are Most#2 BSuccessfulBettasmartasset.com, April 2019#1 Ci#3 Top 100 Best Places to LiveBalarLivability.com February 2019smart#1 for Quality of Life and Industry#8 ADiversityBestaBusiness Facilities Magazine, July 2018#15 EOne of the Best Small Cities inUS N

America National Geographic, January 2018 #2 Best Cities for Farmers' Markets Better Homes & Gardens, June 2019

#1 Cities with the Best Work-Life Balance smartasset.com January 2020

#8 America's Best Small Cities BestCities.org

#15 Best Public Schools in U.S. US News, September 2018

TAB2

Annual Research Summary



Department of Radiology Annual Research Summary 2022

			<u>2017</u>		<u>2018</u>		<u>2019</u>		<u>2020</u>		<u>2021</u>		<u>2022</u>	
Academy NIH Ranking (NIH year; Oct 1 - Sep 30)			39th		19th		33rd		20th		20th			
Blue Ridge for Medical Research Ranking (NIH year; Oct 1 - Sep 30)			36th		22nd		33rd		10th		11th		11th	
# of Federal & Non-Profit Grants Submitted (FAF year; Jan 1 - Dec 31)			49		50		57		61		56		61	
Research Financials (IIW fiscal year: Jul 1 - Jun 30)			2017		2018		2019		2020		2021		2022	
Federal Grant Funding		Ś	3.635.668	Ś	4.687.703	Ś	<u></u> 5.435.736	Ś	<u></u> 5.891.323	Ś	6.616.522	Ś	<u></u> 8.343.640	
Contracts/Clinical Trials Funding		\$	920,668	\$	948,877	\$	759,814	\$	1,823,687	\$	2,021,127	\$	2,481,462	
UW Institutional Grant Funding (Including ICTR KL2)		Ś	298.275	Ś	461.338	Ś	410.950	Ś	318.194	Ś	949.913	Ś	441.107	
Clinical Department Academic Fund (Legacy R&D)		Ś	1.358.000	Ś	1.350.186	Ś	1.397.880	Ś	1.460.706	Ś	432.000	Ś	425.520	
MAMA (Grants Awarded & Salary on Grants)		\$	256,347	\$	236,907	\$	223,432	\$	224,537	\$	224,126	\$	250,482	
Cap Ex Allocation		\$	101,447	\$	87,922	\$	98,869	\$	115,330	\$	98,159	\$	140,826	
Collaborative Research Agreement Revenue		\$	4,415,839	\$	5,470,506	\$	4,911,895	\$	4,820,808	\$	4,474,350	\$	4,082,976	
WARF Royalties (Licenses, Patents, Equity Trust)		\$	304,917	\$	300,549	\$	155,755	\$	596,474	\$	581,158	\$	574,175	
VCGRE and SMPH Contributions to Start-Ups	Totals	\$ \$	610,000 11,901,161	\$ \$	150,000 13,693,988	\$ \$	540,000 13,934,331	\$ \$	300,000 15,551,059	\$ \$	75,000 15,472,355	\$ \$	250,000 16,990,188	
			,,	•	-,,-	•		•	-,,	•	-, ,	•	-,,	
Research Staff and Salary Funding (UW fiscal year; Jul 1 - Jun 30)			<u>2017</u>		<u>2018</u>		<u>2019</u>		<u>2020</u>		<u>2021</u>		<u>2022</u>	
\$ Faculty Salary Funded by Extramural Grants **(FAF year; Jan 1 - Dec 31)		Ş	951,714	Ş	1,180,337	Ş	1,207,492	Ş	1,425,755	Ş	1,305,756	Ş	1,484,177	
S Faculty Salary Funded (136, R&D Allocation)		Ş	532,403	Ş	/84,622	Ş	835,916	Ş	1,351,306	Ş	1,512,971	Ş	1,764,893	
S Research Support Start Salary Funded		Ş	1,608,368	Ş	1,943,776	Ş	1,878,065	Ş	2,413,873	Ş	3,025,550	Ş	3,139,058	
S Departmental Sciencist Salary Funded		ې د	312,292	ې د	104 001	ې د	110 247	ې د	020,508	ې د	521,305	Ş ¢	484,200	
S Departmental IT Salary Support Funded		ې د	11/ 720	ခု င	104,001	ې د	119,547 2/17 728	с	235 001	၃ ၄	155,595	э ¢	258 056	
S Departmental OCT Study Coordinator Support Funded		Ļ	-	Ļ	-	ہ خ	6 366	ې د	200 361	ې د	235,577	ç	111 961	
\$ Departmental Animal Services Support Funded			-		-	Ŷ	-	Ś	54.277	Ś	41.010	Ś	41.010	
	Totals	\$	3,627,674	\$	4,727,781	\$	4,863,704	\$	6,400,236	\$	7,022,084	\$	7,424,031	
Research Staff and Salary Supported (UW fiscal year: Jul 1 - Jun 30)			2017		2018		2019		2020		2021		2022	
# of Faculty with Salary on Research Funding **(FAE year: Ian 1 - Dec 31)			24		30		30		30		29		28	
# Research Support Staff Positions			33		45		38		41		56		53	
# of Departmental Scientists			6		7		7		8		7		9	
# of Post-Docs, Grad Students, Lab Scientists			42		36		35		39		35		42	
# Shapiro Students Mentored			5		5		4		11		12		8	
Publication Productivity (Jan 1 - Dec 31)			<u>2017</u>		<u>2018</u>		<u>2019</u>		<u>2020</u>		<u>2021</u>		<u>2022</u>	
Publications			328		337		321		306		383		372	
Citations (as of January 8th)			-		-		189,262		206,419		237,051		262,688	
Patents Filed			7		8		6		7		8		10	
Patents Issued			5		9		10		10		11		7	
IDRs Disclosed			23		13		24		19		16		21	
Regulatory Portfolio (Jan 1 - Dec 31)			<u>2017</u>		<u>2018</u>		<u>2019</u>		<u>2020</u>		<u>2021</u>		<u>2022</u>	
Total Active IRB Protocols			138		134		142		126		123		122	
New IRB Protocols			21		24		16		17		23		18	
Total Active Projects Under Umbrella IRB Protocols														
MRI Using Investigational Devices			34		32		27		12		30		24	
CE MRI Using Investigational Devices			15		11		3		0		3		0	
PET Using Investigational Devices			-		-		-		-		4		6	
US Using Investigational Devices			-		-		-		-		4		2	
Cirrical imaging and Outcomes Research			42 25		70 20		21		152		153		165	
TOTAL ACTIVE PROTOCOLS ONGER IND			20		۷ð		51		10		20		12	
New Protocols Linder IND			4		4		2		1		7		2	

TAB3

Past, Present & Future Exercise

PAST, PRESENT & FUTURE

In spring 2023, the Department engaged UW–Madison Office of Strategic Consulting to facilitate a strategic planning exercise. During three monthly faculty meetings, the consultants conducted an activity to encourage our colleagues to reflect on the past, assess the present, and prepare for the future. The activity was conducted around the three pillars of our mission: Clinical, Education and Research.

EDUCATION HIGHLIGHTS

• ACCOMPLISHMENTS

- Awarded Aunt Minnie's Best Radiology Residency training program in 2017 and a Finalist in 2022.
- Multiple faculty in leadership roles in ABR and various radiologic societies.

• SETBACKS

- Lack of dedicated time for medical and PA school teaching has resulted in fewer participating faculty.
- Limited resident numbers decrease ability to take full advantage of clinical educational opportunities.

• STRENGTHS

- Excellent, passionate educators, great clinicians, leaders in radiology.
- Excellent clinical programs in place providing diverse case experience.
- Strong IT support.

• WEAKNESSES

- Increasing clinical volumes, decreasing time to educate OR As clinical volumes increase, time to educate decreases.
- Inadequate ways to assess and reward good day-to-day teaching (currently based on being present in the reading room).
- Limited resident numbers.

• THREATS

• Continued increasing clinical volumes without an increase in the number of residency slots and faculty FTE .

• OPPORTUNITIES

- Leverage technology to create interactive and enduring material in combination with live teaching episodes.
- Increase faculty numbers to allow education and clinical needs to be met.

CLINICAL HIGHLIGHTS

ACCOMPLISHMENTS

• During COVID, implemented a more functional home workstation with electronic messaging and supplied them to residents and fellows. This improved productivity and allows for remote teaching and communication with techs and colleagues.

• SETBACKS

• Underfunding the capital equipment for several years was a significant setback, especially given the capital value of our imaging equipment assets and the technical revenue designed for replacement and upgrades.

• STRENGTHS

- Forward-looking stance on technology & innovation.
- We are recognized as innovative within the health system.
- New ideas (i.e. Center for High Value Imaging concept) promise to increase our agility.

• WEAKNESSES

- Lack of effective solutions to increase diversity within faculty, impacting our ability from meeting health equity goals.
- Tech pay lower than peers.
- Challenges with fellow recruitment.

• THREATS

• Lucrative (money/time/remote-work) private practice or telerad jobs luring academic faculty away.

OPPORTUNITIES:

- Using AI, remote readers, Clinical Track radiologists, and foreign graduates to cover the expanding workload and enable educators to teach and the researchers to do research.
- Have the compensation be appropriate for each of our career paths.



RESEARCH HIGHLIGHTS

ACCOMPLISHMENTS

- Strong leadership presence on world stage, highly-cited research publications, increasingly-high rankings in Blue Ridge Institute for Medical Research (grant funding).
- Numerous successful corporate partnerships (commercialization of innovations).
- Several successful start-up companies.

• SETBACKS

• Increasing clinical and administrative demands, including complicated and ever-changing requirements for booking travel, training requirements, and staff shortages.

• STRENGTHS

• Strong support for innovative research: startup packages, R&D funding, high-end computing and imaging equipment, numerous support staff, academic time, umbrella IRB protocols, MD-PhD collaborations, corporate partners.

• WEAKNESSES

- Strict IT rules that restrict research freedom and accessibility.
- Limited space.
- Staff shortages.
- Clinical vs academic split causes nuances that can disincentivize research.

• THREATS

- Heavy clinical volume is limiting academic time.
- Increasing IT requirements are obstructive.

• **OPPORTUNITIES**:

- Recruit top talent.
- Better incentivize research.
- Procure unique luminary instruments.
- Obtain more research space, reduce IT barriers.
- Integrate with other UW programs.
- Fund Tenure Track sabbaticals at clinical salaries and allow sabbaticals for CHS faculty.



TAB4

Organization Chart







Updated 8/7/23

TAB5

Leadership Teams

Section Chiefs



Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Vice Chairs



Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Quality & Safety

Research

Education Leadership: Medical Students





David Kim, MD Senior Vice Chair of Education



Medical Student Education







Matthew Lee, MD Assistant Block Leader

Phase 2 Surgical and Procedural Care Block

Education Leadership: **Residency**

Diagnostic Radiology Residency



David Kim, MD Program Director, Diagnostic



Mitchell Daun, MD Associate Program Director, Diagnostic

Nuclear Medicine Residency



Allison Grayev, MD Associate Program Director, Diagnostic



David Kim, MD Senior Vice Chair of Education



Tim Ziemlewicz, MD Associate Program Director, Diagnostic



Nevein Ibrahim, MD

Associate Program Director, Nuclear



Scott Periman, MD Associate Program Director, Nuclear

Interventional Radiology Residency



Mark Kleedehn, MD Program Director, Independent & Integrated Interventional Tim Ziemlewicz, MD Associate Program Director, Integrated Interventional



Education Leadership: Fellowship



Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



David Kim, MD Senior Vice Chair of Education



Greg Avey, MD Director of Fellowship Programs



J. Louis Hinshaw, MD Program Director

Abdominal Imaging and Intervention Fellowship



Roberta Strigel, MD Program Director

Breast Imaging and Intervention Fellowship



Jeffrey Kanne, MD Program Director

Cardiothoracic Imaging Fellowship



Prashant Nagpal, MD Program Director

MRI and Combined MRI-MBA Fellowships



Andrew (Drew) Ross, MD Program Director

Musculoskeletal Imaging and Intervention Fellowship







Scott Perlman, MD Program Director

PET-CT/Molecular Imaging Fellowship

Administrative Leadership



Chief Administrative Officer



Leah Krasniqi, MBA Associate Department Admin



Lisa Aumann, MBA Sr Radiology Project Specialist, UW Health



Andy Craven, MBA IT Director I, SMPH



Colleen Cate Professional Development Specialist



Philip Danzer Assistant Director of Research



Sarah Fallon Event Manager



Tyler Gause Administrative Supervisor



Anna Hildebrandt Communications Manager



Ashley Hinrichs Administrative Supervisor



Kimberly Hoppe, MSN Nurse Practitioner Supervisor, UW Health



Michelle Justice HR Associate Director, SMPH





Claire Ly, MBA Finance Manager



Carol (Cat) Tomerlin Supervisor of Coding, UW Health



Katie Yang, MS Assistant Director of Education

TAB6

Section Facesheets





MD







Emily Johnson

MD





Edward Lawrence, David Kim, MD, PhD



Matthew Lee, MD



Perry Pickhardt, MD

Ali Pirasteh,

MD

Myron Pozniak, MD



Jessica Robbins,

MD



MD

Elizabeth Sadowski, MD

MD

MD

MD

MD, PhD Warner, MD



Andrew Wentland, Tim Ziemlewicz, MD





BREAST IMAGING & INTERVENTION



Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Prashant Nagpal, MD



Ashley Hinrichs



Lacy Fl<mark>uckiger</mark>



David Bluemke, MD, PhD



Thomas Grist, MD



Scott Nagle, MD, PhD



Scott Reeder, MD, PhD



Mark Schiebler, MD



Starts Aug 2023

Jak<mark>ub Siemb</mark>ida, MD



COMMUNITY RADIOLOGY

Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Newrhee Kim, MD



Melody Schmitt

Erika Quesada





Zachary Borden, MD

Edward Borman, MD



Lynn Broderick, MD



Samuel

Charles, MD

Tyler Dailey, MD



Chris Mitchell Daun, MD Guglielmo, MD

John Jerisha,

MD



MD

Section Admin



Nicholas Laucis, MD



B. Keegan Vinny Meduri, Markhardt, MD MD

Peter Chase,

MD



Bora Ozel, MD



John Park, MD



Pamela Tyler Prout, Propeck, MD MD



Conrad Pun, MD



MD



Charles Elizabeth Stepherson, Teigen, MD DO







Minnie Kieler,

MD



IMAGING SCIENCES

Department of Radiology UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Frank Korosec, PhD



Ellen Morin



Aisha Malik





Christopher Brace, PhD

Tyler Bradshaw, PhD

Weibo Cai, PhD



John Garrett, PhD

Leah Henze Bancroft, PhD



PhD

PhD

Tim Szcz-

Diego Hernando, Samuel Hurley, Kevin Johnson,

PhD

Starts July 2023

Alan McMillan, PhD PhD



Labros Meimetis, Walter Peppler, PhD

Alejandro Roldán-Alzate, PhD



Alexey Samsonov, PhD ykutowicz, PhD



Pallavi Tiwari, PhD



Orhan Unal, PhD



PhD

Martin Wagner, Jamey Weichert, PhD



James Pipe,

PhD





Ran Zhang, PhD



Bruce Collick,

PhD



Julia Velikina, PhD








Richard Bruce, MD



Associate Chiet

PhD





Robert Bour, MD

PhD



Bancroft, PhD



Diego Hernando, PhD



PhD



PhD



Alan McMillan,

PhD

INFORMATICS



Walter Peppler, Alexey PhD Samsonov, PhD



Mark Schiebler, MD

Hurley, PhD





Pallavi Tiwari, PhD

Giuseppe Toia, MD



Orhan Unal, PhD



Ryan Woods, MD





Tim Szczykutowicz, PhD

Joseph Tang, MD







Orhan Ozkan, MD



Holly Jackson





Prasad Dalvie, MD



Aaron Eifler, MD



Starts Aug 2024

Sean Golden, MD



Mark Kleedehn, MD



Erica Knavel Koepsel, MD



Paul Laeseke, MD, PhD



Eric Monroe, MD



Jason Pinchot, MD



Lindsay Stratchko, DO



John Swietlik, MD



Michael Woods, MD







Section Admin





Kenneth Lee, MD, MBA

- Nicole Howard
- Natalie Roisum





Jade Anderson, MD



Sandip Biswal, Donna Blankenbaker, MD

Mitchell Daun, MD



Nicholas Laucis, MD



Humberto Rosas, MD

Andrew Ross, MD



MD



Lindsay Stratchko, DO



MD



Joseph Tang, Symanski, MD

B. Keegan

Markhardt,

MD

Michael Tuite, MD









Steve Cho, MD



Section Admin





Nevein Ibrahim, Matthew Larson, MD MD



Nandakumar Menon, MD



Scott <mark>Perlman,</mark> MD



Ali Pir<mark>asteh,</mark> MD







Jonathon Swanson, MD



Anne Anderson



Faculty

Teresa (Tess) Chapman, MD



Kara Gill, MD



Jane Lyon, MD



MD



Bradley Maxfield, Eric Monroe, MD Molly Raske, MD



Matthew Shore, MD





Jeffrey Kanne, MD



Lacy Fluckiger





Maria Daniela Martin, MD

Brian Mullan, MD



Scott Nagle, MD, PhD



Prashant Nagpal, MD



Mark Schiebler, MD

TAB7

Departmental Summary

Department of Radiology Summary

OVERVIEW

Since being established in 1927, the Department of Radiology has committed itself to the advancement of human health through innovation in imaging and image-guided therapies and has made enormous impacts on patient care, research, and education in the field of diagnostic and interventional radiology.

Presently, the Department comprises 125 faculty members across 12 sections. Approximately 108 faculty members engage primarily in clinical activities and approximately 21 participate mostly in research and teaching. 17 faculty are on the tenure track (typically 50% or more research effort), 78 on the clinical health science (CHS) track (70% clinical effort, 30% academic effort), and 30 on the clinician teacher (CT) track (90% clinical effort). The faculty development program is robust, with 36 faculty promoted and 6 appointments since 2020.

Our Department trains 37 residents and 24 fellows annually. Under the UW Health umbrella, providers care for patients at UW Health University Hospital, UW Specialty Clinics, the Carbone Cancer Center, the American Family Children's Hospital, UW Health at East Madison Hospital, the Williams S. Middleton Veterans Administration Hospital, and additional partner sites, including UnityPoint Health-Meriter Hospital and more.

Thomas Grist, MD became the Department of Radiology's seventh chair in 2005. Under Dr. Grist's leadership, the number of faculty in the Department has more than doubled. Extramural research funding has also grown significantly, from just over \$1 million in 2005 to over \$18 million in 2022.

Our faculty in the Department of Radiology provide world-class care through a variety of specialized clinical programs, including subspecialists in 12 diagnostic and interventional sections and a Community Radiology section that provides full-service radiology coverage across 4 Wisconsin counties and multiple community/rural hospitals. In addition, the Department of Radiology's research resources allow faculty and trainees to contribute to the development of innovative imaging technology. The Department is also committed to providing training programs that produce exceptional radiologists across specialties.

POINTS OF PRIDE The Department of Radiology 2022 Year in Review			CLINICAL OPERATIONS		FACULTY DEVELOPMENT	
R RANKINGS			700K+ diagnostic scans read		10 faculty promoted	6 newly hired faculty
#1 #11 Hospital in Wisconsin for Grants (Source: U.S. News & World Reports) Overall Radiology Department (Source: Blue Ridge Institute for Medical Research)		23K procedures completed		COMMUNICATIONS		
		EDUCATION		569 new Twitter followers in 2022		
\$32K average amount per individual R&D grant RESEARC		ARCH	SEMIFINALIST for Best Residency Program		3.4K total Twitter followers	464K total impressions
\$18 MILLION in intramural & extramural grants	32 grants awarded to faculty	372 publications authored by faculty	428 hot cor 15 medical students applying into Radiology	rs of resident teaching iferences 9 students in summer research mentoring program	WW ھUW محالفان	iscRadiology ogywisc.edu

Pictured: The Department of Radiology 2022 Points of Pride, summarizing accomplishments across all domains of the academic and clinical mission

OUR MISSION

The mission of the Department of Radiology is to improve human health through innovation in clinical care, imaging research, and education.

We achieve this because we:

- Provide outstanding, respectful, and culturally sensitive patient care.
- Improve the health of our patients by creating innovative technology and translating imaging research into clinical practice.
- Recruit, educate, and develop imaging healthcare professionals.
- Share our clinical expertise through regional outreach to the people of Wisconsin and their healthcare providers.

VALUE STATEMENT

The UW Department of Radiology provides excellence in patient care in an environment that is respectful of others, adaptive to change, accountable for outcomes, and attentive to the needs of underserved populations. We are dedicated to sharing our clinical expertise through regional outreach to the people of Wisconsin and their healthcare providers. We provide an environment for education of our trainees, staff, and healthcare professionals through scholarly conferences and continuing education programs. We improve human health by developing innovative imaging technology through basic and translational research in collaboration with colleagues at UW–Madison and beyond. We support the Wisconsin Idea to improve people's lives beyond our walls by collaborating with industry to translate new technology into daily clinical practice. We support the economic development of Wisconsin and the financial wellbeing of UW Health. We recruit and develop dedicated faculty and health professionals who inspire their co-workers and students towards lifelong learning, research discovery, service to their community and clinical excellence.

CLINICAL CARE

The Department of Radiology has cultivated a collegial environment of talented physicians, advanced practice providers, researchers, trainees, and staff, all committed to improving human health through advances in imaging. Across all 12 sections, the Department offers extensive services, with 23,000 procedures completed and over 700,000 diagnostic scans read in 2022.

UW Health is the integrated health system of the University of Wisconsin–Madison, serving more than 700,000 patients each year in the Upper Midwest and beyond with 1,849 physicians and 21,000 staff at seven hospitals and more than 80 outpatient sites. UW Health is governed by the UW Hospitals and Clinics Authority (a public authority recognized in Wisconsin statutes) and partners with UW School of Medicine and Public Health to fulfill patient care, research, education, and community service missions. UW Health Hospitals includes both University Hospital on the UW–Madison campus and UW Health at East Madison Hospital, and has been ranked No. 1 in Wisconsin for 10 years in a row by U.S. News and World Report. University Hospital is one of only 25 U.S. hospitals named to Newsweek's "Top 100 Global" list, which includes hospitals in 11 countries around the world. American Family Children's Hospital is also nationally ranked as a top children's hospital. Further, UW Health has been designated by the Human Rights Campaign Foundation as a Leader in LGBTQ Healthcare Equality in the Healthcare Equality Index.

Clinical Facilities

UW Health University Hospital is a 505-bed hospital with more than 1,600 active medical staff who annually care for nearly 25,000 admissions a year. University Hospital is a Level One adult and pediatric trauma center, and it is home to one of the nation's largest transplant programs, performing more than 600 transplants per year. UW Specialty Clinics handle over 800,000 outpatient visits yearly.

The Carbone Cancer Center, one of 41 comprehensive centers for cancer treatment and research recognized by the National Cancer Institute, offers innovative cancer treatment to patients throughout the Midwest. Imaging is a signature program in the Cancer Center, which was recently awarded a 7-year renewal, the longest term awarded by the NCI.

The American Family Children's Hospital is a nationally ranked 87-bed facility with pediatric and surgical neonatal intensive care units. It provides the most advanced inpatient, outpatient, and home care, focusing on routing, preventive health care, as well as more specialized needs for infants through adolescents.

UW Health at East Madison Hospital, a 56-bed hospital and wellness center, provides "universal care," and leading the regional care for inpatients and outpatients in orthopedic and sports medicine among other general surgery specialties.

Digestive Health Center (DHC) is a 56-bed center that assists patients with everything from routine colonoscopy to disorders of the esophagus, stomach, small intestine, colon, liver, pancreas, and gallbladder.

UnityPoint Health-Meriter Hospital is a private, non-profit 337-bed hospital. It offers care in every major medical specialty and provides Obstetrical Ultrasound training for radiology residents, through the UW Department of Obstetrics and Gynecology.

The Williams S. Middleton Veterans Administration Hospital, an 87-bed general medical and surgical hospital also attached to University Hospital, treats approximately 34,000 veterans annually, either as inpatients or outpatients.

Eastpark Medical Center (to be completed in 2024) is a large ambulatory facility dedicated to cancer care and signature programs that will serve patients in the region and will be home to a full imaging center and an expanded theranostics and image guided therapies program for cancer care.



Pictured: Map showing the location of our clinical sites, including our regional specialty outreach and cancer center sites

Clinical Sections

Abdominal Imaging and Intervention

- Clinical faculty are experts in the use of CT, ultrasound, MRI, plain radiographs, and fluoroscopy for diagnosis and intervention in the chest, abdomen, and pelvis
- Extensive grant funding and independent research laboratories in tumor ablation and diapeutic cancer agents
- Supports up to six abdominal radiology fellows per year

Breast Imaging and Intervention

- A nationally recognized team of radiologists who provide comprehensive, multidisciplinary breast care for patients, including digital breast tomosynthesis (DBT) mammography, breast ultrasound, breast MRI, and stereotactic, ultrasound-guided, and MRI-guided breast biopsy
- Provides imaging services at two Breast Centers (University Hospital, 1 South Park Clinic) and six additional dedicated screening facilities with state-of-the-art imaging equipment
- Offers screening and diagnostic services at regional facilities throughout Southern Wisconsin

Cardiovascular Imaging

- Provides innovative, advanced clinical care in non-invasive cardiovascular imaging, including cardiac
 magnetic resonance imaging (MRI), magnetic resonance angiography (MRA), cardiac and coronary
 computed tomography (CCTA), and computed tomography angiography (CTA)
- Performs over 5000 non-invasive cardiovascular CT and MR studies each year
- Develops innovations with a significant impact on clinical care, including time-resolved contrast-enhanced MRA (TRICKs), pulmonary MRA for pulmonary embolism, non-contrast-enhanced MRA, four-dimensional (4D) flow MRI, low-dose CTA and CCTA, and 3D printing

Community Radiology Division

- Board-certified, subspecialty trained radiologists with diverse expertise provide care in more than 20 sites across south central Wisconsin, bringing high quality medical imaging to patients at rural hospitals and outpatient clinics
- Community Division members are active in a number of quality and patient safety initiatives, organized medicine, research and education as well as serving as volunteers in a variety of non-profit organizations in Dane County

Imaging Sciences

- Faculty and academic staff scientists who conduct research in a variety of areas, including MRI, CT, X-ray, nuclear medicine, ultrasound imaging, contrast agent development, and ablation technique development
- Provide clinical and technical support for the imaging modalities, as well as support in biomedical statistics, image processing, RF coil development, and translating imaging research into clinical practice.

Informatics

- Section members play key roles in pursuing informatics initiatives that focus on three pillars: technology (efficient and accessible tools for data discovery and delivery), process (processes that are innovative and compliant with security and privacy requirements), and people (communication and effective change management).
- By coordinating industry partnerships with companies like GE, Change Healthcare, Aidoc, GE, and Microsoft, members ensure that UW researchers have access to cutting-edge technology that is effectively implemented.

Interventional Radiology

- Members of the section provide high-quality image-guided interventional services for UW Health patients with complex procedures especially in transplant and interventional oncology patients.
- Involved in researching new diagnostic and treatment modalities, including thermal ablation, image-guided histotripsy, Selective Internal Radiation Therapy, evaluation of US parameters in assessing TIPS patency and function, and evaluation of CTA perfusion studies in measuring post-PTA vascularization for stroke treatment.

Musculoskeletal Imaging and Intervention

- The section is composed of internationally renowned experts in all modalities used to image the spine and joints, and skilled professionals in injections to treat back and neck pain
- Section members provide imaging interpretation and imaging-guided intervention of the spine, joints and extremities
- MSK ultrasound program offered five days a week at Science Drive Medical Center and UW Health East Madison Hospital, as well as an ultrasound research program at WIMR

Neuroradiology

- Section members provide comprehensive diagnostic imaging of the brain, the spine and spinal cord, and of the head and neck region, using radiography and fluoroscopy, computed tomography (CT), and magnetic resonance (MR) imaging
- Offers state-of-the-art imaging techniques as well as interventional diagnostic and therapeutic procedures, including percutaneous biopsy of head and neck tumors, intra-arterial chemotherapy, and preoperative embolization of tumors and vascular malformations of the head and neck

Nuclear Medicine/PET Imaging

- The section is composed of experts in multiple areas including general nuclear medicine and PET imaging, nuclear cardiology, and the imaging and treatment of patients with thyroid cancer
- Therapies in patients with various forms of cancer are routinely performed with unsealed sources such as radioactive iodine and labeled antibodies
- State-of-the-art imaging equipment including PET/CT and SPECT/CT

Pediatric Imaging

- Section members provide pediatric imaging in all imaging modalities, and participate in the imaging of children at hospitals and imaging centers throughout Madison and across southern and central Wisconsin
- Supports the American Family Children's Hospital subspecialty pediatric physicians and their patients

Thoracic Imaging

- Image and assist in treatment decisions for a host of cardiopulmonary diseases
- Section members participate in the forefront of all cardiothoracic imaging modalities and contribute to the Intensive Care Unit (Trauma and Life Support Center (TLC)), outpatient pulmonary medicine, and more

RESEARCH

The Department aims to improve human health by developing innovative imaging technology through basic and translational research in collaboration with colleagues at UW–Madison and beyond. In 2022, the Department had over \$18 million in research support, as well as 262,000 citations and 372 publications. In the same year, the Department was ranked 11th in grant funding by the Blue Ridge Institute for Medical Research.

The Department of Radiology provides a wealth of research resources, including access to cutting-edge facilities and technology. In addition, due to collaborative relationships with industry leaders, the Department is often involved in developing and testing new MRI, CT, PET/MRI, PET/CT, ultrasound, and ablation technology. The Department also offers extensive research infrastructure, including grant writing support, media specialists, research nurses, research technologists, and data managers. There are 56 research support staff positions, 2 Departmental scientists, and 35 post-docs, graduate students, and lab scientists. The Department recently invested in three new forward-looking areas of research: artificial intelligence for precision medical imaging, image guided therapies, and the development and application of theragnostic agents in the treatment of cancer.

Wisconsin Institutes for Medical Research

The Imaging Sciences Center at the Wisconsin Institutes for Medical Research (WIMR) is a cutting-edge translational and interdisciplinary research facility with over 70,000 square feet of dedicated research space and more than 300 Medical Physics and Radiology personnel. The Imaging Sciences Center also offers state-of-the-art imaging technology in CT, MR, PET/CT, PET/MR, angiography, ultrasound, PACS, small animal imaging, and a major investment in artificial intelligence (AI) in medical imaging. This technology is capable of imaging from "mouse to man." In addition, the WIMR Imaging Sciences Center also includes an active patient subject clinical trials effort as well as the capability to image patients using advanced, pre-FDA cleared, imaging devices.

University of Wisconsin-Madison

The collaborative research environment at the University of Wisconsin–Madison (UW–Madison), including the School of Medicine and Public Health (UW-SMPH), is exceptional. There are expert scientists in many areas, as well as state-of-the-art core facilities. The ability to easily access expertise within any area of the campus provides an incredible setting for faculty and staff.

The UW–Madison campus encompasses 936 acres with an additional 1,607 acres of off-campus properties and has approximately 3.4 million square feet of building space dedicated towards research. The campus also has 1.7 million square feet towards academic support (this includes support staff for the research mission).

UW–Madison has long been recognized as an institution that excels in research. In fiscal year 2019 (July 2018-June 2019), almost \$1.1 billion in extramural research dollars were awarded to the university, of which over \$656 million were federally funded. In the last ten years, UW–Madison has consistently been in the top six institutions in terms of total NIH research support. Twenty Nobel Prizes and 38 Pulitzer Prizes have been awarded to UW–Madison faculty or alumni.

School of Medicine and Public Health

The UW-SMPH has the largest research commitment of any school or college on the UW–Madison campus, receiving over \$439 million in extramural support in fiscal year 2020. More than 1,200 faculty members work in 27 Departments and 21 centers and institutes, and have active research programs covering virtually every aspect of basic, clinical, and public health research. Existing internationally recognized centers include the UW Paul P. Carbone Comprehensive Cancer Center, the UW Institute for Clinical and Translational Research (a CTSA program), the McArdle Laboratory for Cancer Research, the UW Stem Cell and Regenerative Medicine Center, and the Waisman Center. New facilities, such as the Wisconsin Institutes for Medical Research and the UW Cardiovascular Research Center, ensure that UW–Madison will remain at the forefront of basic, clinical, and translational research, ultimately improving the health of the residents of Wisconsin and beyond.

EDUCATION

Undergraduate Medical Education

Our mission is to educate medical students at the University of Wisconsin School of Medicine and Public Health in the field of Radiology with an emphasis on providing better understanding of available imaging modalities, appropriate and evidence-based use of imaging, and the role of Radiology in the care of patients through a collegial educational environment and direct interaction with world class faculty and access to advanced imaging equipment. Several Department of Radiology faculty members hold leadership roles in the medical doctor curriculum and continue to play a larger role in educating learners:

- Allison Grayev, MD Assistant Block Leader of Phase 1 Anatomy
- Tabassum Kennedy, MD Assistant Block Leader Phase 2 Acute Care Block
- Matthew Lee, MD Assistant Block Leader Phase 2 Surgical and Procedural Care Block

Graduate Medical Education

Our graduate medical education program includes 37 residents across four programs and 24 fellows across nine programs (one accredited).

Residency

The Department of Radiology Residency is driven by renowned faculty in all of the subspecialties of radiology as well as highly qualified and motivated radiology residents. The residents are deeply involved in all aspects of the program and help to determine its shape. The outgoing residents leave well-equipped for a successful career as a radiologist. A variety of clinical settings, from the University Hospital and specialty clinics such as the Digestive Health Center to the Children's hospital and the VA, lead to a wide-ranging, comprehensive experience for the resident. As residents advance in the program, they assume progressive responsibility in the imaging care of the patient. Teamwork, communication, and collegiality are core tenets in the workplace.

Key Curricular Tenets

- Excellent clinical programs drive a robust imaging experience in all areas of Radiology for residents. Internationally recognized expertise at UW leads to specific experiences difficult to get at all programs. For example, the CT colonography screening program allows residents to set a solid foundation in CTC interpretation.
- Strong emphasis on procedures. Image-guided procedures are incorporated in each subspecialty, allowing for procedural experience throughout the year in addition to formal interventional rotations.
- A well-developed comprehensive curriculum, composed of innovative lectures that provide residents with the foundations of imaging sciences, physics, and non-imaging interpretive skills.
- Numerous quality opportunities for residents to participate in research projects with nationally and internationally renowned faculty.
- Opportunities for residents to participate as teachers within the medical student curriculum and beyond

Residency Pathways

- Diagnostic Radiology Residency, including options for Early Specialization in Interventional Radiology and a Research Track
- Integrated Interventional Radiology Residency
- Independent Interventional Radiology Residency
- Nuclear Medicine Residency

Fellowships

Fellowship Programs at the University of Wisconsin Department of Radiology provide outstanding training to our fellows and prepare them to excel as sub-specialty clinicians, researchers, and leaders in academic radiology. In addition to superb clinical training, fellows have the opportunity to work closely with research mentors who lead in their fields. The Department of Radiology offers training in nine subspecialty programs. We take pride in preparing fellows for their careers.

Fellowship Programs

- <u>Abdominal Imaging & Intervention</u>
- Breast Imaging & Intervention
- <u>Cardiothoracic Imaging</u>
- <u>MRI</u>
- <u>Combined MRI/MBA</u>
- <u>Musculoskeletal Imaging & Intervention</u>
- <u>Neuroendovascular Surgery</u>
- Neuroradiology
- <u>PET-CT/Molecular Imaging</u>



Pictured: Summary graphic of undergraduate and graduate medical education and training opportunities offered through the Department of Radiology

The UW Department of Radiology is committed to a culture of inclusion and respect among our patients, faculty, staff, and trainees. Our goal of supporting a diverse workplace and leveraging everyone's skills and attributes is integral to our mission of providing remarkable healthcare to our patients.

The Department of Radiology has created short- and long-term strategic plans that focus on empowering our faculty and staff with the knowledge and skills to mitigate our biases and create an environment that is supportive and inclusive for all individuals. These efforts are led by Dr. Maria Daniela Martin, the Department's inaugural Director of Diversity and Inclusion, and Dr. Anand Narayan, Vice Chair for Equity, and include:

- Inclusive Mentoring
 - In the Building Equitable Access to Mentorship (BEAM) program, Radiology faculty mentor medical students from underrepresented backgrounds in medicine
 - The Health Professions Shadowing Program (HPSP) is a two-week professional development program designed to promote access, equity, and diversity in healthcare
 - The Women Physicians in Radiology group promotes the academic and clinical success of women in the Department
- DEI-specific Resources and Training
 - UW Health provides resources (links to articles, videos, podcasts, books, and other useful materials) and trainings on unconscious bias, health disparities, and more, to promote personal and professional growth
 - UW–Madison offers additional resources and hosts DEI-focused events and seminars
- Health Equity Research Database for Radiology
 - This open-access database, the first of its kind, contains more than 250 articles focused on racial health equity within radiology

Our faculty and staff are committed to the mission, vision and values shared by both UW Health and the UW School of Medicine and Public Health. Through teaching, mentoring, and community work, we hope to promote an environment of equity to our students, trainees, and patients.

DEPARTMENT LEADERSHIP STRUCTURE

The Department Chair, Thomas Grist, MD has a Leadership Cabinet comprising Vice Chairs (10) for Clinical Operations, Communications, Community and Outreach Radiology, Education, Equity, Faculty Development and Enrichment, Finance, Informatics, Quality, and Research; and Section Chiefs (12) for Abdominal Imaging and Intervention, Breast Imaging and Intervention, Cardiovascular Imaging, Community Radiology, Imaging Sciences, Informatics, Interventional Radiology, Musculoskeletal Imaging and Intervention, Neuroradiology, Nuclear Medicine/PET Imaging, Pediatric Radiology, and Thoracic Imaging.

Department Leadership:

Chair: Thomas Grist, MD Senior Vice Chair of Clinical Operations: Michael Tuite, MD Vice Chair of Communications: Tabassum (Tabby) Kennedy, MD Vice Chair of Community and Outreach Radiology: Newrhee Kim, MD Senior Vice Chair of Education: David Kim, MD Vice Chair of Equity: Anand Narayan, MD, PhD Vice Chair of Faculty Development and Enrichment: Jessica Robbins, MD Vice Chair of Finance: Jonathan Swanson, MD, MBA Vice Chair of Informatics: Richard Bruce, MD Vice Chair of Quality & Safety: Tyler Prout, MD Senior Vice Chair of Research: Scott Reeder, MD, PhD

Section Leadership:

Abdominal Imaging and Intervention: J. Louis Hinshaw, MD Breast Imaging and Intervention: Mai Elezaby, MD Cardiovascular Imaging: Prashant Nagpal, MD Community Radiology: Newrhee Kim, MD Imaging Sciences: Frank Korosec, PhD Informatics: Richard Bruce, MD Interventional Radiology: Orhan Ozkan, MD Musculoskeletal Imaging and Intervention: Kenneth Lee, MD, MBA Neuroradiology: Tabassum (Tabby) Kennedy, MD Nuclear Medicine/PET Imaging: Steve Cho, MD Pediatric Radiology: Jonathan Swanson, MD, MBA Thoracic Imaging: Jeffrey Kanne, MD



Pictured: A visual summary of the UW Health Strategic Vision and how each Department of Radiology Vice Chair supports each area of the mission

COMMUNITY OUTREACH

The University of Wisconsin Department of Radiology Community Division consists of 25 board-certified, subspecialty trained radiologists. This diverse group of radiologists combines expertise in Angio-Interventional Radiology, Cardiothoracic Imaging, Computed Tomography, Body Imaging, Breast Imaging, Musculoskeletal Imaging and Intervention, Magnetic Resonance Imaging, Neuroimaging, Nuclear Medicine, Pediatric Radiology and Ultrasound in community hospital and outpatient clinic settings. Community Division faculty also provide occasional coverage at University Hospital and Clinics, Madison, WI and maintain close ties with our academic colleagues.

The Community Division embodies the Wisconsin Idea, bringing high quality medical imaging to patients in south central Wisconsin. Imaging procedures and protocols that previously may have only been available at academic medical centers are being provided to patients in smaller patient-centered hospitals and outpatient

clinics through the efforts of the Community Division. In addition, Community Division members are active in a number of quality and patient safety initiatives, organized medicine, research and education as well as serving as volunteers in a variety of non-profit organizations in Dane County.

CONCLUSION

The Department of Radiology offers a collaborative and supportive environment and a strong base of research and clinical resources. Throughout its history, the Department has continually produced innovators and leaders in the field of radiology. We aim to improve human health, both by providing excellent clinical care and by developing innovative imaging technology through basic and translational research. We are dedicated to creating a community where all learners, staff, and faculty feel valued, included, and empowered. And we have the necessary organizational governance and administrative resources to allow ideas to become action.

The UW–Madison Department of Radiology is poised to continue its upward trajectory, pursuing our vision of being the national leader in radiology for patient care, medical research, and training the next generation of educators, physicians, and researchers.

TAB8

Newsletters



Radiology News

VOL. 25 - FALL/WINTER 2022-23

Research Report: IDiA Lab for Precision Medicine p. 4

Interventional Radiology Innovations p. 6

Global Community Outreach p. 16

Photo Credit: Sandip Biswal, MD

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Letter from the Chair

We are at the beginning of a period of substantial growth, both within our Department and across the UW Health organization. Expanding our programs to meet the individual needs of patients across Wisconsin has led to some truly exciting developments for our Radiology community. New physicians, new clinical programs, new research labs – I'm simply

awestruck at talent that each individual has brought to the Department. Particularly, to see what could be and make the conscious steps towards that vision takes an incredible amount of work. I continue to be humbled to call such remarkable leaders my colleagues. It's truly an exciting time at the University of Wisconsin.

One area of the growth that most excites me is our innovative research division. As reported in the last newsletter, we recently hired Pallavi Tiwari, PhD as a part of a campus-wide cluster hire focused on artificial intelligence in medical imaging. Dr. Tiwari gives us a glimpse into what she's working on in the new Integrated Diagnostics and Analytics Laboratory for Precision Medicine in the coming pages.

As well, you will learn more about the innovations in our clinical programs. Lindsay Stratchko, DO is leading a new program focused on MSK Interventional Oncology. Erica Knavel Koepsel, MD created a new cryoablation program focused on using ablation techniques to treat prostate cancer. What's amazing about these new clinical programs is the new patient populations we are able to reach and treat effectively.

As we look ahead into the New Year, I am delighted with the progress our Department has made in 2022. Compared to where we were this time last year, our outlook has shifted significantly. Many of our faculty and staff put in extra hours to address the surging numbers of patients, but we made it through together. After a challenging couple of years, the amazing growth we are seeing now just reflects the strength of the UW Department of Radiology.

EDUCATION

Radiology Shapiro Summer Research Program



Another summer, another set of amazing Shapiro Summer Research projects! This 10-week UW School of Medicine Public Health program is an opportunity for medical students to work with faculty mentors on a research project during the summer between their first and second years of school.

This summer also marked the third year of the Department of Radiology's Shapiro Summer Research Mentoring Program, led by Faculty Director of the Shapiro Program, **Andrew Ross, MD, MPH**. This program provides students with peer mentoring sessions, career talks, clinical shadowing, and an opportunity to present their work as a graphical abstract to the Department of Radiology. These presentations were given virtually on Friday, August 5th; students also presented their work at the Annual Medical Student Research Forum on Monday, November 21st, which returned to an in-person event at the Health Sciences Learning Center for the first time since 2019.

Dr. Ross said, "I think UW SMPH attracts strong medical students, and they are always surprising you with the talents that they bring to the table. They can really help faculty advance their research projects by not only bringing their enthusiasm and hard work but also with a surprising set of skills, whether it be programming or a background in bioengineering. So, not only is it rewarding to support the early advancement of a dedicated student within the research world, but they also help faculty bring their research projects forward."

See a full list of the 2022 Shapiro Scholars, their faculty mentors, and their research projects:

Emiliano Fraire, mentored by Allison Grayev, MD and Anthony Kuner, MD: Spinal Anatomy Learning Modules for First Year Radiology Residents

Mahad Siad, mentored by Giuseppe Toia, MD: Semi-quantitative T2 Signal Assessment Mode for Liver Lesion Characterization

Firas Hikmat, mentored by Steve Cho, MD, Changhee Lee, MD, and Tyler Bradshaw, PhD: *Machine Learning Model Training for Bone Lesion Detection*

Madhu Gowda, mentored by Meghan Lubner, MD and Jason Abel, MD: Liver Surface Nodularity (LSN) Tool Can Identify Perinephric Fat Invasion (PFI) of Renal Cell Carcinoma (RCC) in CT Imaging

Arissa Milton, mentored by Anand Narayan, MD, PhD: Community Identified Barriers and Solutions to Mammogram Screening

Ritika Punathil, mentored by Andrew Ross, MD, MPH: *Health Equity in Radiology: Creation of a Publicly Accessible Database*

Annie Zlevor, mentored by Fred Lee, MD: Reduction of physician radiation exposure in abdominal biopsies through use of electromagnetic navigation system

Alex Wright, mentored by Tim Ziemlewicz, MD: Novel Technique for Determining Prognosis of ADPKD

RESEARCH

Integrated Diagnostics and Analytics (IDiA) Laboratory for Precision Medicine



Pallavi Tiwari, PhD joined the University of Wisconsin – Madison as part of a cross-campus collaboration to expand the UW's leadership in the field of artificial intelligence (AI) through a university-wide cluster hire. Dr. Tiwari's cluster hire was supported by investments made by the Department of Radiology, School of Medicine and Public Health

(SMPH), the Vice-Chancellor for Research and Graduate Education (VCRGE), the Carbone Cancer Center (UWCCC), and the Department of Medical Physics.

Dr. Tiwari has been hard at work creating the Integrated Diagnostics and Analytics (IDiA) Laboratory for Precision Medicine. Its focus will be developing imaging informatics techniques using AI, machine learning, statistical modeling, and pattern recognition for applications in oncology and neurological disorders. One of the primary focuses of the IDiA lab is to identify computerized image-based (also known as radiomic) phenotypes, and their associations with genomics (radiogenomics) and histo-pathology (radio-pathomics) for disease characterization, prognosis, and response prediction.

Dr. Tiwari said, "The research in my group focuses on developing artificial intelligence and machine learning approaches for solving challenging clinical problems in oncology and neurological disorders. For instance, we focus on addressing questions such as who to treat? How to treat? Did the treatment work? These are critical, time-sensitive questions; the answers to which are often nebulous due to the lack of sufficient diagnostic information based on current clinical care. One area of interest in our group is Glioblastoma (GBM), an aggressive brain cancer with a median survival of 15 months. Unlike some of the other cancers, treatments for GBM have not changed much in the last two decades and still consists of chemoradiation treatment. However, roughly 50% of patients fail chemotherapy within 6-months of treatment initiation. Our group is interested in developing image-based biomarkers that can allow for optimizing treatment decisions for these patients so patients who are not suited for chemotherapy are not being subjected to this drug and perhaps may be more suited for other experimental treatments."

The IDiA Lab will also collaborate with the Machine Learning for Artificial Intelligence Initiative. Dr. Tiwari added, "Given my background in Biomedical Engineering and Radiology, I am looking forward to augmenting the already outstanding AI and Machine Learning community across the medical and engineering schools."



Grants Overview

Kevin Johnson, PhD received a two-year R21 grant for \$414,500 from the National Institutes of Health for his project, "Optimizing MRI for Neurologic Screening using Radiologist Crowdsourcing."

Steve Cho, MD received a four-year \$457K grant from the U.S. Department of Defense for his project, "An Integrative Radiogenomic Framework for Predicting Treatment Failure in Children, Adolescents & Young Adults with Hodgkin Lymphoma."

Amy Fowler, MD, PhD received a four-year grant for \$789,000 from the American Cancer Society for her project, "Functional Impact of Progesterone Receptor Gene Mutations in Breast Cancer."

Reinier Hernandez,

PhD received a one-year \$50,000 Head and Neck Cancer SPORE grant from the University of Wisconsin for his project, "In situ vaccination combining IL-2 engineered extracellular vesicles and radiation therapy."

Guang-Hong Chen, PhD and **Meghan Lubner, MD** received a four-year \$622K grant for their project, "Clinical Translation of a One-Stop-Shop Imaging Method for Abdominal CT," from the DHHS, NIH, and PHS.

Amy Fowler, MD, PhD received a five-year R01 grant from the NIH for her project, "Precision Imaging of Breast Cancer for Guiding Neoadjuvent Endocrine Therapy" for \$3 million.



Scott Reeder, MD, PhD received a \$76K grant for his project, "LiverMultiScan Collaboration Agreement," from the Cincinnati Children's Hospital to be used by 2040.



Pallavi Tiwari, PhD was awarded a 5-year R01 grant for \$3.95 million for her project, "Quantitative imaging phenotypic classifier for distinguishing radiation effects from tumor recurrence in Glioblastoma," from the NIH and National Cancer Institute.

Christopher Brace, PhD received a \$50,000 oneyear grant from the UW Institute for Clinical and Translational Research for his project, "Microwave Ablation to Correct Length Discrepancy in Children."

Interventional Innovations in the Department

In 2021, our Interventional Radiology section grew with three new faculty members: **Erica Knavel Koespel, MD, Eric Monroe, MD,** and **Lindsay Stratchko, DO**. Each of them brought with them a unique set of skills, and they have already laid the groundwork for new interventional programs that will treat different patient populations.



Erica Knavel Koespel, MD (*pictured left*) was no stranger to UW-Madison as she has been a Badger since medical school, where she was mentored by Fred Lee, MD, a nationwide leader in ablation. She then went on to complete her Diagnostic Radiology Residency and

Vascular Radiology fellowship at UW. After her fellowship, she spent nearly four years at Mayo Clinic in Rochester, Minnesota, where her experience in ablation at UW led her to work with **David Woodrum, MD, PhD**, who taught her different procedures using MR.

Since becoming a UW-Madison faculty, Dr. Knavel Koepsel has been hard at work to jumpstart a new medical program, which is no easy feat. She adds, "There are added challenges with building an MRI-guided program like this. You can bring very limited types of tools in the space since the MRI scanner acts as a giant magnet, training staff on MR safety, and bringing patients safely into the room."

Dr. Knavel Koepsel and her team have already started treating patients, and so far, have completed two ablations and three biopsies. Dr. Knavel Koepsel hopes to add an MR-guided rotation for Interventional Radiology residents to gain exposure to these procedures since so few sites in the United States offer them. She states, "There are 11 MRI-compatible cyro-ablation devices in the United States, we have two of them in Madison – one at the VA and one at University Hospital. From our estimates, there are six other sites in the country that do these types of procedures."



While Dr. Knavel Koespel has been working to treat patients with prostate cancer, **Eric Monroe, MD** (*pictured left*) has focused on pediatric patients with retinoblastoma, which is the most common eye cancer in childhood and provides unique challenges to treatment. Dr. Monroe explained, "If retinoblastoma hasn't spread by the time of diagnosis, it is curable by removing the eye, and this has historically

been the preferred treatment for most cases. A variety of alternatives have been explored in efforts save the eye and vision, such as radiation, which carried with it a lot of problems. Chemotherapy given to the whole body for the treatment of retinoblastoma within the eye or metastatic disease is associated with vomiting, nausea, hair loss, suppression of the immune system, and formation of secondary cancers."

However, there exists a unique treatment called intra-arterial chemotherapy (IAC), during which a tiny catheter is navigated from the artery in a child's leg, through the arteries in the head and neck, and subsequently into the artery supplying the eye. From here, chemotherapy is delivered directly to the vasculature that supplies the eye. "Using IAC to treat retinoblastoma has been greatly refined over the past two decades. and the real impetus for developing this treatment originally was eye salvage in areas where taking the eye out had a lot of cultural stigma," Dr. Monroe recounted. "When you only give chemotherapy to the vasculature that supplies the eye rather than the whole body, you only have to give about 10% of what you give for systemic treatment, but the tumor sees about 10 times as much as it otherwise would. You have a profound effect on the tumor but very little effect on the rest of the body so things you normally associate with chemotherapy are not common side effects for this treatment," he explained.

He has established a new clinical program that utilizes IAC to treat retinoblastoma in pediatric patients at UW Health. He gained many years of experience with this approach while at the University of Washington, one of the first institutions that offered this treatment. Dr. Monroe works closely with Interventional Neuroradiology faculty, **Beverly Aagaard Kienitz**, **MD**, **FACR**, who also gained experience with this technique at University of Washington during its development.

Dr. Monroe notes that UW Health is now one of only 20-25 sites in the country to offer IAC and, one of the few in the Midwest. Before this service was offered at UW Health, many families might choose to have the child's eye taken out, as the burden of frequently traveling to a coastal city, where many of the centers that offer IAC are located, was too much of a barrier to receiving this treatment. With IAC now available at UW Health, parents no longer face this barrier, and their children can be effectively treated close to home.



Last but certainly not least, Lindsay Stratchko, DO (pictured left) has served as the Director of Musculoskeletal Interventional Oncology for the Department. In this program, Stratchko

and her team use ablation techniques to treat metastatic disease involving bone and soft tissue. Dr. Stratchko explains, "The goals of treatment are either to cure a patient of limited metastatic disease or to improve patient quality of life by decreasing cancer-related pain and fracture risk. We have been expanding these procedures, so patients can have improved mobility and remain out of the hospital for pain management. We feel it is important to optimize palliative therapies for patients as they play a valuable role in comprehensive cancer care."

Humberto Rosas, MD, founder of the program, said, "Her work collaborating with the Oncology, Orthopedic, and Neurosurgical Departments as well as her drive in pushing newer technologies forward is why UW will remain one of the leaders in cancer care. We were fortunate to have recruited her and have her as the Director of the MSK Ablation service."

In addition to her clinical work, Dr. Stratchko has been busy presenting on the topic of MSK ablation at national meetings, such as the Society of Interventional Oncology, the Society of Interventional Radiology, and the Western Angiographic & Interventional Society. She also serves on national committees, including the National Comprehensive Cancer Network and Society of Interventional Radiology Standards Committee, to help increase awareness so that more patients may benefit from these effective therapies.

Vivek Prabhakaran Named Co-Director of ICTR TL1 Program

Vivek Prabhakaran, MD, PhD was named Co-Director of the Institute of Clinical Research and Translational Research (ICTR) TL1 Training Program. Dr. Prabhakaran first became involved with the ICTR as a KL2 Scholar and describes ICTR as a "second home". He said, "It was very important for my career develop-

ment as it allowed me to have the protected time and funding for research as an Assistant Professor as well as mentorship and guidance to be a successful clinical and translational multidisciplinary researcher. I have also been involved in ICTR Scientific Review Committee for many years. My research group has received numerous pilot awards, and I have worked with several ICTR TL1 predoctoral fellows as well over the years."

Dr. Prabhakaran has a lot to look forward to in his new role. "I hope to guide the ICTR TL1 predoctoral and postdoctoral fellows in conducting successful multidisciplinary basic, translational, and clinical research. I would like to specifically emphasize the importance of team science and how this will lead to high quality research and publications as well as being successful in obtaining grants. In addition, I would like to help them network and prepare them for their future career," he said.

Elizabeth Burnside, MD, MPH, MS, FACR currently serves as the Deputy Director of the Institute of Clinical Translational Science. She said, "As a past ICTR KL2 scholar, pilot awardee and reviewer, and TL1 mentor, Dr. Prabakaran has already shared his leadership gifts with ICTR and contributed substantially to clinical translational research activities. He embodies the values of team science and interdisciplinarity so crucial to translating innovation to practice and will share these lessons with the next generation of TL1 trainees."

The TL1 Training Program funds both predoctoral and postdoctoral fellowships to support the next generation of translational researchers. Those that are interested are encouraged to apply to these incredible opportunities. Applications for the TL1 Predoctoral Fellowship are due in March annually, while the TL1 Postdoctoral Fellowship accepts applications on a rolling basis.

Faculty & Staff in New Leadership



Greg Avey, MD was appointed the inaugural Associate Vice Chair of Clinical Operations.



Richard Bruce, MD was appointed Vice Chair of Informatics, replacing Gary Wendt, MD.



Jonathon Swanson, **MD** was appointed Section Chief of Pediatric Radiology, replacing Kara Gill, MD.



Mai Elezaby, MD was appointed Section Chief of the Breast Imaging section, replacing Roberta Strigel, MD, MS.



Sarah Fallon was hired as the Event Manager, a newly created role that provides high-level event planning and management.



Leah Krasniqi, MBA was named as the Clinical Sciences Associate Department Administrator, replacing Kim Pinch, MBA.



Claire Ly was named as the Financial Manager, replacing Leah Krasnigi, MBA.



Faculty in the Public Eye



Over the last 6 months, the Department of Radiology has had a strong representation in media, including covers of academic journals. **Pallavi Tiwari, PhD**'s research, "Open Access Stable and Discriminatory Radiomic Features from the Tumor and Its Habitat Associated with Progression-Free Survival in Glioblastoma: A Multi-Institutional Study" was featured on

the front cover of the Au-

gust 2022 edition of the American Journal of Neuroradiology (pictured left). As well, **Perry Pickhardt, MD** and **Meghan Lubner, MD**'s research was featured on the front cover of the September 2022 edition of Radiology: Artificial Intelligence (pictured right).



RSNA

Research by our faculty has also been featured by some prominent online publications. **Roberta Strigel, MD, MS, Anand Narayan, MD, PhD, Mai Elezaby, MD, Daniela Martin, MD,** and **Ryan Woods, MD, MPH**'s work, "Utilization of Screening Mammography in Women Before 50: Cross-Sectional Survey Results from the National Health Interview Survey," was featured by Aunt Minnie in their article, "Many women under 50 aren't getting their yearly mammograms."

The **UW AI & Informatics Team**'s NVIDIA DGX systems initiative was recognized in an article by NVIDIA, "New NVIDIA DGX System Software and Infrastructure Solutions Supercharge Enterprise AI."

Lastly, **Anand Narayan**, **MD**, **PhD** has publicized the critical significance of screening exams over across several platforms. First, he had his research, "The Digital Divide in Radiology: Computer Use for Health Care-related Tasks and Breast Cancer Screening," featured in a training video for the RSNA's Radiology series, "In a Minute." Dr. Narayan was also featured in a video interview with Diagnostic Imaging to discuss the benefits of computed tomography colonography (CTC) for colorectal cancer screening.

UW Radiology Represents at RSNA 2022

The UW-Madison Department of Radiology was well-represented at the Radiologic Society of North America (RSNA)'s Annual Meeting in Chicago on November 27 - December 1. At this year's event, we had several faculty and students recognized, including David Bluemke, MD, PhD, MsB, Meghan Lubner, MD, Scott Reeder, MD, PhD, and Ryan Woods, MD, MPH who were awarded the Honored Educator Award. As well, work by Mai Elezaby, MD, Daniela Martin, MD, Katie Yang, MS, Mark Kleedehn, MD, Jessica Robbins, MD, David Kim, MD, and Anand Narayan, MD, PhD was selected to be featured in a RSNA Daily Bulletin. Dalton Griner, a Medical Physics PhD student, received the 2022 RSNA Trainee Research Prize for the following abstract, "Generalizable Learning of a CT Number Bias Correction Scheme in Low-Dose Photon Counting CT," who he collaborated with Nikou Lei, Ran Zhang, PhD, Guang-Hong Chen, PhD, and Ke Li, PhD.

The Department hosted a **RSNA Social** on Sunday, November 27 at VU Rooftop Bar. We also had presentations every day during the conference, including **Jessica Robbins**, **MD**'s "ITAR: Career Development," "Professional Disruptions in the Workplace," and "Innovative Education for the Future of Radiology," **Meghan Lubner, MD**'s "Gastrointestinal Imaging (Colon and Appendix)," "GI Causes of Acute Abdominal Pain," and "Infection Induced Tumors and Tumorlike Conditions Multimodality Imaging and Complications," **Scott Reeder, MD, PhD**'s "Non-invasive Assessment of Chronic Liver Disease," "MR Safety: From Program Creation to Best Practices (Part 1)," and "ITAR: Practical Tips for Building a Research Career," Giuseppe Toia, MD, MS's "24-Reader Multi-Case Image Evaluation and Task-based Observer Modeling," Lori Mankowski Gettle, MD, MBA's "GU Essentials! A Case-Based Audience Participation Session," Myron Pozniak, MD, FACR's "Imaging Quality Control in the Era of Artificial Intelligence," Roberta Strigel, MD, MS's "Breast Imaging (Factors Influencing Breast Screening - Use and Outcomes)," David Bluemke, MD, PhD, MsB's "100th Anniversary of RADIOL-OGY: Highlight of Landmark Articles from Our Flagship Journal," "Professionalism and Ethics in Research;" "From the Editors of RADIOLOGY," and "Meeting Extras: Meet Drs. David A. Bluemke and Linda Moy, Editors Radiology," Thomas Grist, MD, FACR's "Building A Career in Academic Radiology: A Dialogue on the Trajectory from Residency Onward;" Cristopher Meyer, MD, FACR's "Thoracic Imaging Practice - Polling Session," Eric Monroe, MD's "Pediatric Portal Hypertension;" Paul Laeseke, MD, PhD's "Paradigm shifts in image guided ablation," Greg Avey, MD's "Head and Neck: Dual Energy CT, Tabby Kennedy, MD's "Adult Head and Neck Masses," Vivek Prabhakaran, MD, PhD's "Characterizing White Matter Connectome Abnormalities in Temporal Lobe Epilepsy Patients Using Threshold Free Network Based Statistics," Michael Tuite, MD, FACR's "Shoulder Pre-Op and Post-Op: Beyond Bankart," Kenneth Lee, MD, MBA's "MSK Interventions: How I Do It" and "Science Session with Keynote: Musculoskeletal (Muscle, Tendon, and Nerve)," Donna Blankenbaker, MD, FACR's "Hip Pre-op and Post-op: Impingements and Other Hot Topics" and "Musculoskeletal (Pelvis and Hip)." Check out a full list of presentations on our website!

Retirements



Mark Kliewer, MD retired after 20 years of service to UW – Madison. During that time, he served as Director of Obstetric & Gynecologic Imaging, Chief of Ultrasound, and Research Committee Chair of the Society of Radiologists in Ultrasound.



Jane Lyon, MD retired after 5 years of service to UW - Madison. During that time, she served as Modality Chief of Pediatric &Fetal MRI and the Chief of Pediatric Medical Student Education.



Emily Lewis, MD retired after 18 years of service to UW – Madison. During that time, she served as Ultrasound Modality Section Leader, Member of the Community Radiology Steering Committee, and Meriter Radiation Reduction Committee Chair.

New Faculty



Theresa "Tess" Chapman, MD joined us as a Visiting Professor (CHS) in the Pediatric Radiology section from her previous appointment at the University of Washington – Seattle.



B. Dustin Pooler, MD joined us as a Clinical Assistant Professor in the Community Division from a private practice in Madison; however, he did complete all his education and training here at UW – Madison.



Tyler Dailey, MD joined us as a Clinical Assistant Professor in the Community Division. He recently completed his Musculoskeletal Imaging & Intervention Fellowship at the University of Virginia.



Pallavi Tiwari, PhD joined us as a Visiting Associate Professor in the Imaging Sciences section from her previous appointment at Case Western Reserve University. She is a cluster-hire in AI research in medical imaging.



Matthew Lee, MD joined us as an Assistant Professor (CHS) in the Abdominal Imaging and Intervention section. He recently completed his Abdominal Imaging & Intervention fellowship here at UW-Madison.



Martin Wagner, PhD joined us an Assistant Professor (CHS) in the Imaging Sciences section. Previously, he was a Scientist in the Department of Medical Physics.

HONORS & AWARDS



Christopher Brace, PhD was elected to the American Institute for Medical and Biological Engineering College of Fellows Class of 2022 Ali Pirasteh, MD was accepted into the ICTR KL2 Scholar Program and received \$132,450 funding.



Newrhee Kim, MD and Tyler Prout, MD were elected as Fellows of the ACR.

All **residents in the Class of 2021** passed their certifying exams and now are ABR certified.

David Bluemke, MD, PhD, Meghan Lubner, MD, Scott Reeder, MD, PhD and Ryan Woods, MD, MPH were recipients of the 2022 RSNA Honored Educator Award.

Gina Greenwood, MBA was awarded Most Effective Radiology Administrator/Manager from Aunt Minnie.



Oliver Wieben, PhD was selected to the Academy Council of Distinguished Investigators Class of 2022.



John Garrett, PhD won first place for his research at the 2022 International Conference on Software Testing Meeting.



Pamela Propeck, MD and **Anand Narayan, MD, PhD** were elected as Fellows of the Society of Breast Imaging.



Mai Elezaby, MD was accepted into the UW Health Physician Leadership Development Program.

The **Residency Education Program** was named a finalist for Best Radiologic Training Program by Aunt Minnie. The **Department of Radiology** received SNMMI Radiopharmaceutical Therapy Centers of Excellence Designation Approval.

Anand Narayan, MD, PhD was invited to present at the ARRS Breast Cancer Awareness Month 2022 program.

Alison Gegios, MD was selected to participate in the 2022– 2023 AUR/APDR Radiology Career Advancement Lectureship Program.



Eric Monroe, MD was elected to the Board of Directors for the Society of Pediatric Interventional Radiology.





Tabby Kennedy, MD wonthe 2022 UWSMPH Groupon Women in Medicine andScience Impact Award at theGWIMS Women in Medicine& Science Symposium.

Jeffrey Kanne, MD, FACR and Maria Daniela Martin, MD served on the teaching faculty for the American College of Radiology (ACR)'s course, "High-Resolution CT of the Chest."

Ivan Miguel Rosado Mendez, MD and Erica Knavel Koepsel, MD were accepted into the 2022-2023 ICTR/ CCHE Success Together Reaching Independence, Diversity, and Empowerment (STRIDE) program.

Ryan Woods, MD, MPH gave a Grand Rounds talk at Duke University as part of the Radiology Visiting Scholar Program.



Sheena Chu, a Medical Physics graduate student with Radiology mentors/ advisors, won the SABI Research Young Investigator award for her work on the article, "Impact of Online Safety Screening on Outpatient MRI Workflow."

John Garrett, PhD, B. Dustin Pooler, MD, and Perry Pickhardt MD won first place for their research at the 2022 International Society of Computed Tomography Meeting.

Jessica Robbins, MD was invited to give the Annual Whitehouse Lecture at the University of Michigan Department of Radiology on unconscious bias.

Zachary Rosenkrans, a post-doc in the Department of Medical Physics and Radiology, has been recognized by SNMMI's Ones to Watch campaign.



Daniel Liu, an MD student working as a Research Assistant to **Perry Pickhardt, MD**, received the RSNA Trainee Research Prize for his project, "Fully Automated CT Imaging Biomarkers for Opportunistic Prediction of Future Hip Fractures," in the MSK category.



Camille Endres, MBA was named a semifinalist for Most Effective Radiology Administrator/Manager by Aunt Minnie.

Tabby Kennedy, MD was named a semifinalist for Most Effective Radiology Educator by Aunt Minnie.

Lucas Aronson, an undergraduate student researcher, Andrew Wentland, MD, PhD and John Garrett, PhD were awarded a Magna Cum Laude award for their presentation, at the Society of Advanced Body Imaging Annual Meeting.
Brian Mullan Travels to RSNA Global Learning Center in South Africa



From August 13-20, 2022, **Brian Mullan, MD, MS, FACR** traveled to Tygerberg Hospital in Cape Town, South Africa, an RSNA/Stellenbosch Global Learning Center. Dr. Mullan said, "The goal of the program is to help the local host develop into a regional center of excellence that goes on to train other imagers in the region. After working with the group for 2 years, this was our first face-to-face encounter due to delays from COVID."

Dr. Mullan was joined by Dr. Prachi Agarwal, from the University of Michigan, to develop thoracic and cardiovascular imaging. Dr. Mullan expanded, "The focus of the week was four-fold. Part of the time was spent working with the faculty and residents in the clinics, teaching at the boards. Secondly, I worked with the faculty and technologists to refine their imaging protocols and to develop new ones based on their equipment. Thirdly, I gave 10 formal teaching sessions to the local participants that were also webcast via the Radiology Society of South Africa with the training programs at the University of Cape Town and University of Pretoria and over 100 members of the RSSA. Finally, I worked with the faculty and collegiate administration to lay the groundwork for a regional fellowship in cardiovascular and thoracic imaging. This included curricular development, administration, accreditation and financing."

He concludes, "The formal program will continue for another year, but the friendships and the collaborations will continue further."

Thank you to Dr. Mullan for participating in such a great program!



Michael Hartung Mentors International Residents for Imaging Case Competition



Mentorship is an integral part of our clinical, research, and education efforts in the University of Wisconsin-Madison Department of Radiology. **Michael Hartung, MD** is a shining example of the power of mentorship – but his recent efforts take mentorship to a new level.

Each year, Penn Medicine hosts the Penn Radiology Global Health Imaging Case Competition, which is "designed for medical trainees in low- and middle-income countries to present cases unique to their region." Dr. Hartung worked with faculty physicians from Tenwek in general surgery (Dr. Elizabeth Mwachiro) and neurosurgery (Drs. Fraser Henderson and William Copeland) to mentor three Kenyan surgical residents from the Tenwek Hospital to prepare and submit cases to the competition. Dr. Hartung said, "Two of their submissions were accepted for presentation at the event, and both received awards!"

Dr. Ndaro Daniel (PGY1, neurosurgery) was awarded second place for his presentation. "Pediatric traumatic brain injury: surgical and medical management of a penetrating tree branch injury." **Dr. Daniel Moenga (PGY-5, general surgery)** was awarded the "People's Choice Award" for his presentation, "An unexpected cause of abdominal and back pain: three large gossypibomas related to remote surgery." The awards include a cash prize for the trainees and an invitation to publish their cases in Applied Radiology.

Dr. Hartung said, "Mentoring these residents for this event has been an unexpected highlight of my academic year. I am thrilled to see these trainees, their faculty, and Tenwek recognized for their excellent work. I used a combination of email, WhatsApp, and Zoom to connect with trainees in Kenya. This allowed me to efficiently exchange ideas and collaborate to create the abstract, PowerPoint, and final recorded presentation."

Vice Chair of Equity, **Anand Narayan, MD, PhD** added, "Dr. Hartung's commitment to global mentorship will help fos-



ter a robust learning culture where we will continuously share and receive knowledge from partners across the globe."

ALUMNI SPOTLIGHTS

Ben Triche, MD



Ben Triche, MD is a former Abdominal Imaging fellow. After his training at UW – Madison, he joined Tulane University as an Assistant Professor of Body Imaging. He has served as Associate Program Director of Residency, Director of Student Medical Education, and Medical Director of MRI. In his tenure, he has seen significan growth in their abdominal section offerings, including advanced imaging,

particularly Prostate MR, which has seen a nearly 3,000% increase in volume over the last two and a half years. Learn more about Dr. Triche below!

Q: What are your areas of interest? Have you had any achievements you would like to share?

My area of interest is Genitourinary (GU) imaging, specifically in regards to Prostate MR, Penile MR, and MR Urography. I have recently authored and co-authored 7 peer reviewed journal articles, as well as lectured locally, nationally and internationally on various GI and GU imaging topics, one of which won a Cum Laude Award. Medical student and resident education has also become a passion, resulting in back-to-back Radiology Excellence in Teaching Awards.

Q: In reflection, how would you say your training at UW-Madison helped you in your career?

My training at UW- Madison afforded me several opportunities to remain relevant in the realm of abdominal imaging, due to the extremely strong mentoring from the Abdominal Imaging and Intervention section, which continues to this day. Several of my peer-reviewed articles have been in collaboration with the Abdominal Imaging Faculty, and I remain close to all of them through national meetings and various research projects. The entire faculty at UW- Madison, not just the Abdominal Imaging and Intervention section, are very helpful and make you feel like part of their family, despite only having spent one year there.

Q: What advice would you share with prospective and current trainees at UW-Madison?

Do not hesitate! Choose UW-Madison to train, and you will not regret it. It is rare to have so many well-respected and internationally-known faculty be as warm and welcoming as they are. If a New Orleanian like myself can survive the winter (including a polar vortex), anyone can. Geaux Badgers and On Wisconsin!!!

Jeannine Ruby, MD



Jeannine Ruby, MD completed her Diagnostic Radiology residency (2014-2018) and Abdominal Imaging & Intervention fellowship (2018-2019) here at UW-Madison. Since graduating, she has been working as a Radiologist at a private practice, Radiology Waukesha. There, she is the Chair of the Wellness Committee and Section Head of Cardiac MRI and Gastrointestinal and Genitourinary Imaging. Learn more about Dr. Ruby below!

Q: In reflection, how would you say your training at UW-Madison helped you in your career?

The attendings at UW-Madison are unparalleled in their intelligence, curiosity, dedication to patient care, drive for excellence, and passion for teaching. I am grateful for each day I spent in the reading rooms at UW-Madison, as they were an opportunity to learn from the best. To quote Howard Rowley, MD, "...to all the people who taught me and supported me. I stand on the shoulders of giants – everyone from janitors to administrative assistants who have made this possible. I'm grateful for all of those connections." Q: What advice would you share with prospective and current trainees at UW-Madison?

Take advantage of the unique research and travel opportunities available to you during residency and fellowship. I am proud to have published research with Perry Pickhardt, MD, and Scott Reeder, MD, PhD. Under Dr. Pickhardt's tutelage, my oral presentation at the ARRS 2019 Annual Meeting and Scientific Program received the ARRS Magna Cum Laude

Award. I first connected with Dr. Reeder while attending the Practical Imaging and Intervention meeting in Saskatchewan, Canada, a meeting which Fred Lee, MD, encouraged me to attend. I gained perspective on how fortunate we are to have adequate funding and access to state-ofthe-art equipment when I spent one week in Managua, Nicaragua with Mai Elezaby, MD; Christina Hendricks, RDMS; Erica Knavel Koepsel, MD; and Bora Ozel, MD through the nonprofit RAD-AID.



Photo (above): Dr. Ruby with her family.

Want to share your alumni news? Email: radnews@uwhealth.org

POINTS OF PRIDE

The Department of Radiology 2022 Year in Review

RANKINGS



CLINICAL OPERATIONS	FACULTY DEVELOPMENT	
596K diagnostic scans read	10 faculty promoted	6 newly hired faculty
21.5K procedures completed	COMMUNICATIONS	
EDUCATION	569 new Twitter followers in 2022	
AUNT MINNIE FINALIST for Best Residency Program Image: August of the state of	3.4K total Twitter followers	464K total impressions
4420 conferences 15 9 medical students applying into Radiology students in summer research mentoring program	●UW ⑦ radiol	'iscRadiology logy.wisc.edu



Dalton Griner and **Xin**

Tie, Medical Physics Graduate Students, were two of the winners of UW's Cool Science Image Contest with the image on the right.



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Radiology News

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Photo Credit: Sandip Biswal, MD

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Letter from the Chair

The summer is finally upon us here in Madison, WI, after what seemed like a winter that would never end. We shared in facing a number of challenges, including surges and shortages with widespread impact, and yet, I am amazed at how we persevered. We continued to provide excellent patient care while pioneering new areas of research, and I am

so proud to be part of the UW-Madison Department of Radiology community and thrilled to share our hard work with you.

Take a look at some of the amazing work of our faculty and staff. We have an in-depth profile of Dr. Eisenmenger and the UW Flow MRI Research group, whose work was featured on not one but two covers of Magnetic Resonance in Medicine, as well as in-the-news notables from Dr. Aaron LeBeau, Dr. Anand Narayan, and more. You will also get a chance to read about the exciting clinical highlights from our Department, including Dr. Scott Perlman's FDA approval for a clinical investigational new drug.

As you turn the pages of the newsletter, you'll also notice that it is a time for us to be turning the page as well. We are excited to welcome a new class of residents, fellows, and faculty, and bid a fond farewell to those who are moving on to share the Wisconsin Idea in the next phase of their careers.

Meanwhile, we continue to foster work to benefit every family of the state of Wisconsin. This spring, we announced our newest cluster hire in AI medical research. Read on to learn more about these truly outstanding individuals and their contributions to the field of medicine.

Every warm welcome ushers in a transition towards new ideas, new progress, and new memories, and we're excited to share some of these with you. On Wisconsin!

EDUCATION

Welcome the Incoming 2022-2023 Residents



Cameron Fox, MD Diagnostic Radiology Prelim Year: UW-Madison Med School: University of Kansas



Ruben Ngnitewe Massa, MD Diagnostic Radiology Prelim Year: U of Missouri Med School: U of Missouri



Carolina McShane, MD Diagnostic Radiology Prelim Year: St. Mary Mercy Hospital Med School: University of Michigan



Madeline Jentink, DO Interventional Radiology Prelim Year: Amita Resurrection Med School: Midwestern University



Isha Pathak, MD Diagnostic Radiology Prelim Year: U of Illinois-Peoria Med School: Saint Louis University



Vyshnavi Reddy, MD Diagnostic Radiology Prelim Year: Riverside Hospital Med School: University of Toledo



Samuel Koebe, MD Diagnostic Radiology Prelim Year: UW-Madison Med School: UW-Madison



Jessica Perry, MD Diagnostic Radiology Prelim Year: UW-Madison Med School:U of Massachusetts



Anna Sorensen, MD Diagnostic Radiology Prelim Year: UW-Madison Med School: UW-Madison



Changhee Lee, MD Nuclear Medicine Med School: Kyungpook National University

Saying "Good-Bye" to Our Graduating Residents



Pictured (left to right): Back Row: Andrew Vinson, Michael Larson, Ryan Sofka, Scott Mauch. Front Row: Trevor Everett, Anthony Jiang, Molly Peterson, Kaitlin Peterson, Michael Bergquist

The Department of Radiology is excited to celebrate our graduating trainees. We have been fortunate to spend the past four years with some incredible radiologists-in-training, though luckily for us, many of our residents will not be going far. Seven of our eight diagnostic trainees will be continuing their training here for fellowship!

Michael Larson, MD shared that he is staying, because of the "great breadth of studies as well as friendly staff/colleagues provides the opportune environment for continued education." Kaitlin Peterson, MD adds, "I know I will be learning from the best. The UW provides exceptional training in both diagnostic imaging and image-guided procedures. There is a strong emphasis on education and patient care, as well as a wide range of cases which prepares well-rounded fellows."

Resident Class of 2022 Future Plans:

Michael Bergquist, MD (DR) – Neuroradiology Fellowship, UW-Madison Trevor Everett, MD (DR) – Abdominal Imaging Fellowship, UW-Madison Anthony Jiang, MD (DR) – Abdominal Imaging Fellowship, UW-Madison Michael Larson, MD (DR) – Neuroradiology Fellowship, UW-Madison Scott Mauch, MD (DR) – Abdominal Imaging Fellowship, UW-Madison Kaitlin Peterson, MD (DR) – Breast Imaging Fellowship, UW-Madison Molly Peterson, MD (DR) – Breast Imaging Fellowship, UW-Madison Andrew Vinson, MD (DR) – Abdominal Imaging Fellowship, UW-Madison Josiah Magnusson, MD (Nuc Med)– Private Practice – Radiology Regional in Fort Myers, FL

John Kim, MD (IR) – Private Practice – Red Rock in Las Vegas, NV

Brad White, DO (IR) – Private Practice – Radiology Associates of Clearwater, FL

Our Graduating Fellows' Future Plans



Pictured: The graduating Neuroradiology fellows (above) and the MSK fellows (below).

Abdominal Imaging and Intervention

Cameron Adler, MD – Academic Practice – Mayo Clinic Arizona in Phoenix, AZ

Matthew Lee, MD – Academic Practice – University of Wisconsin – Madison

Varun Razdan, MD – Private Practice – Advanced Medical Imaging Consultants in Fort Collins, CO

Barry Rush, MD – Private Practice – Quantum Radiology in Marietta, GA

Margaret Soroka, MD – Private Practice – Zia Diagnostic Imaging in Albuquerque, NM

Musculoskeletal Imaging and Intervention

Mitchell Fox, MD – Private Practice – Greater Niagara Medical Imaging in Ontario, Canada Zachary Stewart, MD – Academic Practice – Massachusetts General Hospital in Boston, MA Daniel April, MD – Private Practice – Radiology Imaging Associates (RIA) in Fort Collins, CO Douglas Handley, MD – Private Practice – Inland Imaging in Spokane, WA Addison Elston, MD – Private Practice – ProScan in Cincinnati, OH

Breast Imaging and Intervention

Jedidiah Schlung, MD – Private Practice – Inland Imaging, Spokane, WA

Laura Bryant-Piatkowski, DO – Private Practice – Wisconsin Radiology Specialists, SC, Milwaukee, WI

Neuroradiology

Marcus Carr, MD – Private Practice – Tualatin Imaging, Portland, OR

Ryan Griesbach, MD – Private Practice, Advanced Medical Imaging Consultants, Ft. Collins, CO

Mitchell Guenther, MD – Private Practice – Diagnostic Imaging Centers, Kansas City, MO

Brad Otto, MD – Private Practice – Carolina Radiology, Myrtle Beach, SC

Nick Stabo, MD – Private Practice – Advanced Radiology in Davenport, IA

Thomas Reher, MD – Private Practice – Dakota Radiology, Rapid City, SD

Vinny Meduri & Matthew Lee Named New Medical Education Directors



The Education Team of the Department of Radiology is proud to welcome **Dr. Vinny Meduri, MD** and **Dr. Matthew Lee, MD** as Co-Directors of Radiology Medical Student Education! Drs. Meduri and Lee will oversee and manage all topics related to medical student education within the Department of Radiology.

"I am honored and excited to continue the work Jason [Stephenson] has done as the head of the Medical Student Education committee. He has laid an excellent foundation for Matt and I to build upon and continue to show the students the critical role Radiology plays in so many facets of medicine," says Meduri, who's no stranger to the UW School of Medicine and Public Health (SMPH) ForWard Curriculum. After joining the Department's Community Radiology division in 2013, he worked with Dr. Grayev on several Integrated Radiology and Anatomy sessions for the Phase 1 Body in Balance course. He has also served as the Director of Radiology Education within the UW SMPH Physician's Assistant Program, leading several lectures of the fundamentals of imaging and was named PA Lecturer of the Year in 2020. More recently, he's also begun teaching an Abdominal Imaging Basics interactive session as part of the Phase 2 Surgical and Procedural Care course's Skills Carnival. Dr. Meduri's enthusiasm, humor, and use of props to demonstrate difficult concepts made him an instant favorite of the students.

Dr. Matthew Lee has the inside view when it comes to the experience of a trainee at SMPH. Dr. Lee earned his MD from UW SMPH in 2011 through its Legacy Curriculum and continued his training as a Diagnostic Radiology resident from

2011 – 2016. Dr. Lee then served for five years as an active-duty radiologist and radiology clerkship director in the United States Navy until returning to the Department to complete a fellowship in Abdominal Imaging and Intervention in 2021. Dr. Lee began a position as an Assistant Professor (CHS) in the Abdominal Imaging and Intervention section in July 2022.

One of the first challenges the new Co-Directors are currently tackling is the unstable landscape of the clinical learning environment during COVID-19; however, Dr. Meduri and Dr. Lee worked with Assistant Director of Education and Communications, Katie Yang, to develop a new virtual reading room system that integrates with the widely-used WebEx Messaging application. Yang said, "I'm excited to work with our new Co-Directors to continue to maintain education offerings during fluctuations in case numbers."

RESEARCH

Zachary Clark Research Symposium Highlights



Pictured: Jennifer Pitts, MD and Jake Lescher, MD watching oral presentations.

On Saturday, April 30, the University of Wisconsin – Madison's Department of Radiology hosted the first in-person Zachary Clark Radiology Research Symposium since 2019. The morning was full of informative oral presentations:

Allison Couillard, MD: "Percutaneous Biopsies in the Abdomen and Pelvis guided by CT Electromagnetic Navigation"

Cameron Adler, MD: "Can Contrast-Enhanced Ultrasound Improve Renal Mass Biopsies?"

Ruiqi Geng, MSc: "Automated MR Image Prescription of the Liver using Deep Learning: Development, Evaluation, and Prospective Implementation"

Zachary Stewart, MD: "Shear wave speed as a useful biomarker of tendon health: Correlation with conventional US and clinical scores in an RCT assessing PRP for treatment of jumper's knee" **Changhee Lee, MD:** "Radiology-Pathology correlation of 18F-DCF-PyL PSMA PET and multi-parametric prostate MRI in men with prostate cancer"

Matthew Lee, MD: "Fully automated body composition biomarkers for predicting overall survival at staging CT for colorectal cancer" Jitka Starekova, MD: "Myocarditis associated with mRNA COVID-19 vaccines: MRI findings" After the oral presentations, attendees had the chance to check out the online poster gallery. Then followed by the keynote speaker, **Pari Pandharipande, MD, MPH, FACR**, who gave her keynote address, "Imaging and Value: A Patient-Centered Approach." Dr. Pandharipande traveled from Columbus, Ohio, where she serves as the Chair of the Department of Radiology at The Ohio State University.

After the Symposium, the Committee awarded Best Fellow Oral Presentation to Zachary Stewart, MD for his presentation, "Shear wave speed as a useful biomarker of tendon health: Correlation with conventional US and clinical scores in an RCT assessing PRP for treatment of jumper's knee". Best Resident Oral Presentation was awarded to Allison Couil-Iard, MD for her presentation, "Percutaneous Biopsies in the Abdomen and Pelvis guided by CT Electromagnetic Navigation." Lastly, Ruiqi Geng, MSc was awarded Best Grad Student Oral Presentation for her talk, "Automated MR Image Prescription of the Liver using Deep Learning: Development, Evaluation, and Prospective Implementation."

For the online posters, **Nicholas Stabo**, **MD** and **Ryan Griesbach**, **MD** won for Best Fellow Poster for their exhibit, "Thoracic Radiology for the Neuroradiologist." Lastly, **Jennifer Pitts**, **MD** won for Best Resident Poster with her poster, "Dislocations about the Knee: Three Diagnoses You Need to Be Able to Make."

UW MRI Flow Group Lands Two Covers of Magnetic Resonance in Medicine



It's only July, and our MRI Flow Group has already had their research published on not just one, but two covers of Magnetic Resonance in Medicine. Back in March, **Dahan Kim, PhD, Laura Eisenmenger, MD, Patrick Turski, MD, FACR,** and **Kevin Johnson, PhD**'s publication, "Simultaneous 3D-TOF angiography and 4D-flow MRI with enhanced flow signal using

Pictured: Drs. Kevin Johnson and Laura Eisenmenger

multiple overlapping thin slab acquisition and magnetization transfer" was featured on that month's cover. Then, in May, Drs. Johnson, Eisenmenger, Turski, and **Oliver Wieben, PhD** were featured on a second cover for their publication, "Virtual injections using 4D flow MRI with displacement corrections and constrained probabilistic streamlines."

This work comes from the UW MRI Flow Research Group under the direction of Oliver Wieben, PhD and Kevin Johnson, PhD. Dr. Turski says, "It is great to see the UW MRI Flow group get the recognition they truly deserve. One has to see the color flow images and movies to really appreciate the clinical value of this technology." This publication will accelerate the introduction of MRI flow imaging into the everyday practice of neuroradiology.

Our faculty are already identifying the ways in which this work can be used in investigating disease. Kevin Johnson, PhD and Laura Eisenmenger, MD are interested in pushing their research into the intersection of Alzheimer's and vascular disease. They, along with Oliver Wieben, PhD, and **Alejandro Roldán-Alzate, PhD**, received an R01 grant from the National Institutes of Health (NIH) and National Institute on Aging (NIA) for their project, *Non-Invasive Imaging Markers to Elicit the Role of Vascular Involvement in Alzheimer's Disease*. Dr. Johnson said, "There is mystery, in that we don't know how Alzheimer's disease is initiated and whether vascular disease plays a role. There is amazing physiology and biology."

We are excited to see the amazing innovations from this research team!



Pictured: The March 2022 cover of Magentic resonance in Medicine (left) and the May 2022 cover (right).

Grants Overview

Steve Cho, MD and Shane Wells, **MD** received a \$500,000 grant from the Duane and Dorothy Bluemke Foundation to research 18F-DCFPyL PSMA PET/MRI for detection of prostate cancer.



Amy Fowler, MD, PhD received an American Cancer Society Research Scholar grant for her project, "Functional Impact of Progesterone **Receptor Gene Mutations in** Breast Cancer," for \$788,936.

Paul Ellison, PhD, Reinier Hernandez, PhD, and Jonathon Engle, PhD are a part of a multisite project "HIPPO: Horizon-broadening Isotope Production Pipeline Opportunities" that was awarded \$2 million the U.S. Department of Energy.

Scott Reeder, MD, PhD and Diego Hernando, PhD received a \$2.1 million R01 grant for their project, ""Fully Automated **High-Throughput Quantitative** MRI of the Liver," from the NIH.

Paul Laeseke, MD, PhD received a \$400,000 grant for his project, "Advanced C-Arm Imaging Platform for Histotripsy Treatment of Liver Tumors," from the NIH.

Kevin Johnson, PhD, received an R01 grant from the NIH and NIA for his project, "Non-Invasive Imaging Markers to Elicit the Role of Vascular Involvement in Alzheimer's Disease."



Diego Hernando, PhD received a \$1 million R01 grant for his project, "Diffusion MRI of the Body," from the NIH.

Veena Nair, PhD and Nagesh Adluru, PhD received a \$3.5 million R01 grant from the NINDS and NIA for their project, "Stroke connectome MRI biomarkers for vascular contributions to cognitive impairments and dementia (VCID) risk assessment."

Lonie Salkowski, MD, PhD, FACR received an R37 grant from the NIH for her project, "Defining and Optimizing Critical Interpretation Skills in Screening Mammography to Improve Cancer Detection."

SOCIETY MEETINGS



Photo (above): A group photo from the Society of Skeletal Radiology Annual Meeting.



Photo (above): **Andrew Ross, MD, MPH** presenting at the Society of Skeletal Radiology (SSR) Annual Meeting.



ARRS 2022

Photo (above): **Allison Grayev, MD** presenting at the American Roentgen Ray Society (ARRS) Annual Meeting.



Photo (above): **Amy Fowler, MD, PhD** celebrates her Jeopardy win at the Society of Breast Imaging Annual Meeting. *Photo Credit: Cedric Pluguez, MD*

Photo (above): **Scott Reeder, MD, PhD** giving speech after being inaugurated as President of the International Society of Magnetic Resonance in Medicine.



Photo (above): Fellow Ryan Griesbach, MD & Resident Isaiah Tan, MD with a Summa Cum Laude award from the American Society of Neuroradiology.

UW Radiology Wins Big at 2022 Society Annual Meetings

The University of Wisconsin - Madison Department of Radiology was well-represented at the Spring meetings at a number society meetings, including: Society of Abdominal Radiology, Society of Interventional Oncology, American Roentgen Ray Society, Society of Thoracic Radiology, Association of University Radiologists, Society of Skeletal Radiologists, American Society of Neuroradiology, Society of Breast Imaging, International Society for Magnetic Resonance in Medicine, and more!

At the Society of Abdominal Radiology Annual Meeting, **Matthew Lee, MD** won the Alexander R. Margulis Award for Best Overall Trainee Paper for his research, "Deriving Critical Thresholds for Automated CT-based Body Composition Measures for Predicting 10yr Risk of Death and Other Adverse Outcomes."

For their presentations at the American Society of Neuroradiology, Isaiah Tan, MD, Howard Rowley, MD, FACR, and Tabby Kennedy, MD received the Summa Cum Laude, "Take a Walk on the Wild Side: CNS Manifestations of Zoonotic Infections." Additionally, Howard Rowley, MD, FACR, Kevin Johnson, PhD, and Laura Eisenmenger, MD received the Certificate of Merit, "Let's Not Forget the Importance of Imaging: The Current State of Radiologic Dementia Evaluation." At the Society of Interventional Oncology Annual Meeting, Annika Rossebo, an undergraduate student, received high praise from faculty members who attended her presentation. Resident Scott Mauch, MD won Best Oral Presentation on his presentation, "Hepatic and Renal Histotripsy in an Anticoagulated Swine Model." Lastly, Paul Laeseke, MD, PhD and Fred Lee, MD's symposium, "Histotripsy: The Future of Liver Therapy?" was one of the best attended presentation in the entire conference.

UW Radiology also received top honors at a few of meetings, including at the Association of University Radiologists Annual Meeting, **Jessica Robbins**, **MD** was inducted as a Fellow of the AUR. At the Society of Thoracic Radiology Annual Meeting, **Cristopher Meyer**, **MD**, **FACR** was awarded the President's Award. Lastly, at the International Society for Magnetic Resonance in Medicine Annual Meeting, **Thekla Oechtering**, **MD** and **Jitka Starekova**, **MD** were named 2022 ISMRM Junior Fellows.

We are so impressed and grateful for how well our trainees and faculty represent UW Radiology nationally and internationally!

Top Clinical Moments



Photo (above): **Erica Knavel Koespel, MD** completed the first MR-guided cryo ablation at UW Health.



Photo (above): Lori Mankowski Gettle, MD, MBA, Fred Lee, MD, Paul Laeseke, PhD, Tim Ziemlewicz, MD, and more celebrate the first patient treated in the first human trial of histotripsy called #Hope4Liver.

Scott Perlman Received Approval from the FDA for A Clinical IND

Scott Perlman, MD, MS recently received approval by the Food and Drug Administration (FDA) to use 18F-Fluorocholine to improve detection and localization of parathyroid adenomas that had previously been difficult to localize. Dr. Perlman and the Nuclear Medicine & Molecular Imaging resident Josiah Magnusson,

MD collaborated with a cross-disciplinary team, including Department of Surgery Chief of the Division of Endocrine Surgery, **Rebecca Sippel, MD, FACS**; Radiopharmaceutical Production Facility's **Scott Knishka, RPH, BCNP, Steve Cho, MD**, and **Yongjun Yan, PhD**; IRB and Compliance Specialists, **Gemma Gliori and Suzanne Hanso**n; and Research Services Assistant Director **Phil Danzer** to complete this application.

The project started with Dr. Sippel receiving referrals from endocrine surgeons at other institutions who had patients with parathyroid adenomas that had previously been very difficult to localize using current imaging modalities. Previous research has indicated that 18F-Fluorocholine, a PET tracer, worked well in identifying parathyroid adenomas; however, this radiotracer is quite new and is not commercially available for purchase. It is manufactured at UWSMPH at the Radiopharmaceutical Production Facility, and so over the past year, Dr. Perlman has been working to develop this as an IND (Investigational New Drug) and gain approval from the FDA to use this radiotracer in clinical PET scans. He is hoping that this tracer will help people who dealt with their hyperparathyroidism, in some cases, for many years. **Ali Pirasteh, MD** has also joined the team to see if PET/MRI/Fluorocholine will also help in the localization of the abnormal parathyroid tissue

Dr. Perlman credits the Department of Radiology, especially **Thomas Grist, MD, FACR**, for granting funds to help pay for the development of this radiopharmaceutical in the Radiopharmaceutical Production Facility. As for the next steps, Dr. Perlman says that he is excited to see if this new PET procedure will accurately locate these very difficult to localize parathyroid adenomas and greatly help our patients.

Congratulations to Dr. Perlman and his team for this amazing accomplishment!

LEADERSHIP UPDATE

Meghan Lubner Reflects on Six Years on the UW Medical Board



For the past six years, **Meghan Lubner**, **MD** has served on the leadership of the Medical Board of the University of Wisconsin Hospitals and Clinics. "I agreed to go on the ballot but did not think I would be elected," Dr. Lubner stated. However, Dr. Lubner was indeed elected and has served consecutive roles within the leader-

ship of the Hospital before serving as its President of Medical Staff.

The journey to the presidency of the board is a six-year commitment. This elected position starts as Secretary/Treasurer for two years and chairs the Medical Records Committee. Then, the next two years, one serves as Vice President and chairs the Credentials Committee. Finally, the person serves as President and chairs the Medical Board for two years. "It has been a challenging and rewarding position," Dr. Lubner noted.

In terms of her duties, Dr. Lubner said, "We review all the minutes for UWHC committees, new delegation protocols, credentialing, and leadership report at monthly meetings. We deal with issues that arise around clinical policies, or other medical staff issues that may be related to professionalism or competence. We review the bylaws on an annual basis, and I also serve as a liaison to the UW Authority Board and sit on the Patient Safety Committee. We solicit suggestions from medical staff regarding process, policies, etc. We also help on Joint Commission visits during the leadership sessions."

Reflecting on her experience in hospital leadership, she said, "I think that UW Health providers have a good handle on the issues that arise in the day-to-day workflow of running the hospital, the potential impact of decisions made on both staff and patients, and a profound investment in hospital performance and patient outcomes. It has really been a privilege to work with such a thoughtful, committed, engaged, responsible, and remarkable group of UW Health providers."

Michael Tuite, MD, Vice Chair of Clinical Operations said, "Dr. Meghan Lubner has done an amazing job as President of the Medical Board these past six years, especially her steady hand guiding the Board through the COVID-19 pandemic."

We appreciate Dr. Meghan Lubner's service to the University of Wisconsin Hospitals and her fantastic representation of the Department of Radiology!

Faculty in New Leadership



Anand Narayan, MD, PhD was selected as the Assistant Director of Diversity, Equity, and Inclusion at the Carbone Cancer Center.



Donna Blankenbaker, MD, FACR was officially inaugurated as the President of the Society of Skeletal Radiologists for 2022-2024.



Scott Reeder, MD, PhD was inaugurated as President of the International Society for Magnetic Resonance in Medicine.



Thomas Grist, MD, FACR was elected President of the Society of Chairs of Academic Radiology Departments.

Anand Narayan, MD, PhD was appointed as a member of the Health Equity Committee in the Radiological Society of North America.



Amy Fowler, MD, PhD was named the new Associate Editor for the journal, Breast Cancer Research.



Tabby Kennedy, MD was selected to the ASHNR executive committee which will culminate in her presidency for the 2029-2030 term.



Allison Grayev, MD was elected as Secretary/ Treasurer of the Alliance of Medical Student Educators in Radiology.



Lori Mankowski Gettle, MD, MBA was named President-Elect of the Wisconsin Radiologic Society, the WI chapter of the American College of Radiology.

Faculty in the Public Eye

Maria Daniela Martin, MD, Anand Narayan, MD, PhD, and Aaron LeBeau, PhD were featured in major news outlets. Dr. Martin and Dr. Narayan discussed the impacts of screening guidelines while Dr. LeBeau was featured for his innovative work on the ability of shark proteins to prevent COVID-19.

Maria Daniela Martin, MD was interviewed on NBC15 WMTV and Wisconsin Public Radio (WPR) to discuss new guidelines for lung cancer screenings. "The age limit has been brought down. Before, we would screen people aged 55 to 80; now, we have brought it down to 50 years old. The amount of smoking was also brought down. Before, we screened people who smoked about 30 packs a year; now, that number was brought down to 20 [packs a year]," Dr. Martin explains in her WPR interview. She continues, "Even though that does not seem like a big change, that doubles the amount of people that are eligible to be screened in the United States. It's estimated 6.5 million people are now eligible with the new updated guidelines."

Anand Narayan, MD, PhD was featured on WPR and RS-NA's Radiology podcast, where he discussed his work on racial and ethnic disparities in lung cancer screening. "Black individuals who have previously smoked or currently smoke are more likely to develop lung cancer at lower levels of cigarette smoke usage. If you create criteria that are exclusively based on this pack-year number, you may end up excluding patients, specifically Black patients who are at higher risk of developing lung cancer," Narayan said.

Aaron LeBeau, PhD was featured on WMTV and University of Wisconsin News for his research on the ability of VNAR, antibody-like proteins derived from the immune systems of sharks, to prevent the virus that causes COVID-19. "These small antibody-like proteins can get into nooks and crannies that human antibodies cannot access. They can form these very unique geometries. This allows them to recognize structures in proteins that our human antibodies cannot," says LeBeau.



Photo (above): Sharks from Dr. Aaron LeBeau's lab. *Photo Credit: Bryce Richter*

Faculty Promotions Announced



Andrew Ross, MD, MPH was promoted to Associate Professor (CHS).



Maria Daniela Martin, MD was promoted to Associate Professor (CHS).

Vivek Prabhakaran, MD, PhD was promoted to Professor (Tenure).

Diego Hernando, PhD was promoted to Associate Professor (Tenure).



Lori Mankowski Gettle, MD, MBA was promoted to Associate Professor (CHS). **Amy Fowler, MD, PhD** was promoted to Associate Professor (Tenure).





Nevein Ibrahim, MD was promoted to Clinical Associate Professor (CT).



Tabby Kennedy, MD was promoted to Professor (CHS).

Jonathon Engle, PhD, MS was promoted to Associate Professor (Tenure).

Pallavi Tiwari Joining UW to Research Al in Medicine

We are excited to announce that **Pallavi Tiwari, PhD** will be joining the University of Wisconsin – Madison as part of a cross-campus collaboration to expand the UW's leadership in the field of artificial intelligence (AI) through a university-wide cluster hire. Dr. Tiwari's cluster hire was supported by investments made by the Department of Radiology,

School of Medicine and Public Health (SMPH), the Vice-Chancellor for Research and Graduate Education (VCRGE), the Carbone Cancer Center (UWCCC), and the Department of Medical Physics.

Dr. Tiwari earned her bachelor's degree in biomedical engineering from Shri G.S. Institute of Technology and Science, India and her master's and PhD in biomedical engineering from Rutgers – The State University of New Jersey. She will be joining us from Case Western Reserve University where she is currently an Assistant Professor of Biomedical Engineering and the Director of the Brain Image Computing Laboratory. Dr. Tiwari is a leader in machine learning in medical imaging and has been a recipient of several scientific awards, most notably being named as one of 100 women achievers by the Government of India for making a positive impact in the field of Science and Innovation. Dr. Tiwari's research is funded through the National Cancer Institute, Department of Defense, as well as multiple foundations, and state grants.

Department of Radiology Chair, Thomas Grist, MD, FACR said, "We are delighted to have recruited Dr. Tiwari to join UW Radiology to help us accelerate our efforts in developing applications of artificial intelligence in medical imaging. Her scientific and engineering excellence, coupled with her collaborative nature, make her an ideal candidate to fulfill the intent of the Cluster Hire for AI in Precision Medical Imaging and Diagnostics. Pallavi brings an active NIH funded program in the application of AI to improve imaging and diagnostic accuracy in cancer and emerged as our top candidate after an extensive international search. We are grateful that Pallavi recognizes that UW is an outstanding environment for her to work with colleagues across campus in this exciting area and translate her innovative research into clinical practice to ultimately benefit patient care. Many thanks to the search committee and all our UW family who contributed to her recruitment."

RETIREMENTS



Kathleen Baus, MD

It is hard to summarize Kathleen Baus's incredible legacy at the University of Wisconsin – Madison and UW Health. She is not only a founding member of the Community Division, but she is also the first female radiologist hired by Meriter Hospital. Known as a passionate patient advocate, amazing colleague, and world traveler, she is going to be missed after 23 years of service.



Carolyn Haerr, MD

We bid a fond farewell to Dr. Carolyn Haerr after 20 years of service at UW – Madison. During that time, she has served as: Lead Interpreting Radiologist for Mammography, Modality Chief of MSK, Member of the Ethics Committee Meriter/UP, and Chair of the Steering Committee Community Radiology. Congratulations, Dr. Haerr!



LuAnn Greiner, MS, APRN

LuAnn has a long, storied career with nearly 34 years of service at UW Health, with 21 of those years in the Department of Radiology. In 1988, she was hired as a nurse by UW Health where she remained until 2001, when she was hired by Dr. John McDermott to the Department of Radiology as a Nurse Practitioner in the Division of Vascular and Interventional Radiology.



Dana Walker, BS, RDMS, RVT

Dana Walker is retiring from UW Health after 33 years in the Department of Radiology. She started as a staff sonographer in 1989, back when "ultrasound services were only offered in a single department with four rooms." During Dana's tenure, the ultrasound services have expanded to eight separate UW Health locations in the Madison area.

HONORS & AWARDS



Ryan Woods, MD, MPH was selected as a Top Author by the RSNA for his contribution to the RSNA Case Collection. He authored all the cases with trainees and medical students.

UW Department of Radiology ranked #11 by Blue Ridge Institute for Medical Research.

Newrhee Kim, MD accepted a position on the Board of Directors of Meriter Hospital.





Jessica Robbins, MD was inducted as a Fellow of the Association of University Radiologists.

Elizabeth Sadowski, MD was invited to be a Visiting Professor at the University of Texas, Southwestern.

David Bluemke, MD, PhD, MsB serves as the Editor of Radiology, which achieved an impact score of 29.1, compared to the previous year's score of 11.1

Anand Narayan, MD, PhD

Editor for the Journal of the

ogy.

Lindsay Stratchko, DO was awarded the Best Faculty Award from the Department of Radiology's graduating class of residents.



Tim Szczykutowicz, PhD, Aaron Field, MD, PhD, and Jessica Robbins, MD received an Editor's Recognition Award from Radiographics.



Scott Reeder, MD, PhD was inducted as a Fellow of the Society of Abdominal Radiology.

Donna Blankenbaker, MD, FACR was officially inaugurated as the President of the Society of Skeletal Radiologists.



Andrew Wentland, MD, PhD was selected as a member of the Academy Council for Early Career Investigators in Imaging.

Thomas Grist, MD, FACR was elected President of the Society of Chairs of Academic Radiology Departments.



Allison Grayev, MD received the AJR Silver Lifetime Distinguished Reviewer Award.



Ke Li, PhD was a part of the team that compared 3D scans of the extinct North American cheetah Miracinonyx bones and two species of other big cat bones, the modern puma and modern cheetah.

John Symanski, MD received the Skeletal Radiology Journal Distinquished Reviewer award.

Howard Rowley, MD, FACR received the Outstanding Alumnus Award from the University of California - San Francisco.



Thekla Oechtering, MD became the first woman and youngest recipient awarded the Albers Schönberg medal from the German Röntgen Ray Society.

Joseph Grudzinski, MS, PhD, Scientist III and Justin Jeffery, Instrumentation Technologist II, are working with Phantech to develop devices that enable quantitative nuclear medicine imaging.

Christopher Brace, MD was named to the College of Fellows Class of 2022 American Institute for Medical and Biological Engineering.



Greg Avey, MD was awarded the Medical Students' Award for Outstanding Teaching Faculty from the UW -Madison medical students.

Cristopher Meyer, MD, FACR was awarded the President's Award from the Society of Thoracic Radiology.



Meghan Lubner, MD, Scott Reeder, MD, PhD, and Ryan Woods, MD, MPH were awarded the 2022 Honored Educator Award from the Radiologic Society of North America.



Alan McMillan, PhD was awarded the 2021-22 URS **Exceptional Mentor award** from the Undergraduate Research Scholars program.

Tim Szczykutowicz, PhD's research, "Comparison of Strategies to Conserve Iodinated Intravascular Contrast Media for Computed Tomography During a Shortage," published in the Journal of the American Medical Association.

Zachary Stewart, MD, mentored by Kenneth Lee, MD, MBA, was awarded the International Skeletal Society Award for Best Paper for their research.

ALUMNI SPOTLIGHTS

Nathan Durick, MD



Nathan Durick, MD is a former resident (2003-2007) and Abdominal Imaging fellow (2007-2008). After his training at UW – Madison, he joined a private practice firm, Advanced Radiology, S.C., in Moline, IL. When he first joined, his practice had 13 doctors in Iowa and Illinois, and now they are 18 doctors for 10 hospitals in Iowa, Illinois, and Wisconsin! Learn more about Dr. Durick below!

Q: What are your areas of interest? Have you had any achievements you would like to share?

I continue to focus on Body Imaging and Intervention. Early in my career I had a healthy tumor ablation practice, but that has given way to building more of the body imaging side. We have a large Prostate MRI program and VC program, as well as a growing Rectal MRI program. I have grown in my leadership skills and duties. I am currently Chief of Staff at our largest client, UnityPoint Health-Trinity and serve as the Chair of the Clinical Service Group for all the radiology practices within UnityPoint Health.

Q: In reflection, how would you say your training at UW-Madison helped you in your career? I owe so much to the program at UW-Madison. It remains the best radiology residency program in the country. The strong clinical training I received has served me well, and on top of that the people are some of the absolute best in the world: strong teachers, leaders, and friends. The program has had an indelible impact on me personally and on my career as a radiologist.

Q: What advice would you share with prospective and current trainees at UW-Madison?

Soak it all in....every bit of it. It is 4-6 years of priceless training and interactions with some of the best clinicians in our field. The time at UW will be a springboard for your career in whatever path you may choose. The added benefit is that you leave the program feeling part of a family!



Photo (above): Dr. Durick on the beach with his wife and three daughters.

Hailey Allen, MD



Hailey Allen, MD is a former resident (2013-17), who went on to complete her MSK fellowship at the University of Utah in Salt Lake City, near where she grew up. She later stayed on as a faculty member at the University of Utah. She loves taking care of patients in Salt Lake City, including the University of Utah athletes and the Utah Jazz basketball team. She lives with her husband, Bob, and their cat,

Olive, and recently welcomed their first child. In her free time, she loves to hike, ski, and scuba dive! Learn more about Dr. Allen below!

Q: What are your areas of interest? Have you had any achievements you would like to share?

A: I enjoy sports MRI, peripheral nerve imaging, and MSK ultrasound. I have been director of the Utah MSK fellowship since 2018 and have enjoyed seeing several classes of fellows go out into the world. I love doing lectures and case conferences for the residents and was named "Best Presenter" for the department in 2021. Q: In reflection, how would you say your training at UW-Madison helped you in your career?

Every day I work I think about how lucky I was to train at UW! I have the voices of my prior teachers and mentors in my head.

Photo (right): Dr. Allen with her husband on a hike in Utah.



Want to share your alumni news? Email: radnews@uwhealth.org



Photo Credit: Vivek Prabhakaran, MD, PhD



Department of Radiology

UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH



Radiology News

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Letter from the Chair

As we approach 2022, I want to take a moment for reflection. The end of 2021 marks nearly 2 years of living in the COVID-19 pandemic. Our commitment to excellent patient care is stronger than ever, and I am so grateful to our faculty and staff in the Department of Radiology for their hard work.

The members of our Department have invested their time and energy into some remarkable projects, including the launch of a new clinical trial for histotripsy, the development of an artificial intelligence to diagnose COVID-19 pneumonia, impactful work to address healthcare disparities involving imaging, and many more. These projects would not have been possible without funding from the UW and beyond, and I am truly grateful for our faculty to have support for their work.

This year, we've also focused on how to give back to the incredible community of Madison. From our collaboration with the Madison Urban League to funding the HOPE Project, we're empowering the next generations of learners and truly living the Wisconsin Idea.

As the holiday season is upon us, we hope that you'll consider making a donation to the Department of Radiology to help us expand our efforts in research, education, and clinical services.. You can make a general donation or donate to a specific cause, such as a research fund, professorship, or endowment; learn more about how to donate at the end of this newsletter.

I wish everyone and their families a very happy holidays and a joyful New Year!

Research Report

Ground-Breaking #HOPE4LIVER Histotripsy Trial Begins at UW-Madison



Several members of the Department of Radiology, including Fred Lee, MD, Paul Laeseke, MD, PhD, and Timothy Ziemlewicz, MD, have been conducting pre-clinical research on histotripsy, a new non-invasive, non-thermal method to destroy tumors and other tissue, for more than 5 years. "Histotripsy is a novel technology based on external ultrasound that was invented at the University of Michigan. Our friends in Michigan were generous enough to lend us devices to use in our laboratory in human-size pigs, and since then, we have been working to make histotripsy a clinical reality," explains Dr. Lee.

This work has been supported over the years by HistoSonics Inc. "The scientific work started at the University of Michigan, and still goes on there, but translating this work into large models simulating human use, developing the procedure, and refining the technology has happened to a great extent at Wisconsin," says Josh King, Vice President of Marketing at HistoSonics. In addition to supporting the pre-clinical research behind the method, HistoSonics also sponsors ongoing clinical trials evaluating histotripsy safety and efficacy for patients with liver tumors. The next step in the bench-to-bedside path for histotripsy is the new #HOPE4LIVER clinical trial. The trial is currently recruiting patients to treat primary and metastatic liver tumors using histotripsy with the goals of demonstrating the safety of the device and submitting it to the FDA for regulatory approval. The #HOPE4LIVER trial launched at the University of Wisconsin – Madison along with other sites, including University of Michigan, University of Minnesota, University of Kansas, University of Chicago, Medical College of Wisconsin, Tampa General Hospital, and Miami Cancer Institute, this month.

The first human trial for hepatic tumors took place in Barcelona, Spain in 2019. Dr. Ziemlewicz says, "From the trial, we learned a couple of things. We could successfully make these histotripsy treatments in the liver, and they were more accurate and predictable, more continually visible than our current treatments from microwave ablation. This means we could treat right to the edge of structures safely, patients felt little to no pain afterwards, and each patient was treated in a single session. Two out of the eight patients in the trial showed a response from their cancer outside the spot where the physicians treated, which is a rare occurrence in other ablation modalities and an exciting development of histotripsy."

Dr. Ziemlewicz and former UW faculty and current UM surgeon, Clifford Cho, MD, serve as the Principal Investigators of the national trial. Lori Mankowski Gettle, MD, MBA and Meghan Lubner, MD, both experts in locoregional therapies of the liver, are serving as Principal Investigators for the site trial at UW-Madison. Dr. Mankowski Gettle says, "I'm really excited and proud to be a part of an organization that prioritizes patient care and innovation."
Faculty in the Public Eye

Congratulations to the faculty members in the Department of Radiology who have been representing the University of Wisconsin – Madison in high-profile media stories and podcasts. Check out a few highlights from the past year!

- Fred Lee, MD was a guest speaker in a two-part podcast episode of "Back Table" where he discussed percutaneous lung biopsy technique.
- Humberto Rosas, MD was featured in *Madison Magazine's* article, "AyrFlo team hopes to save lives with device that could predict respiratory distress."
- Andrew Ross, MD, MPH and Rebecca Colwell, SMPH medical student, had their RSNA presentation "Racial Inequities in the Use of Diagnostic Imaging: A Systematic Review" covered in RSNA's *Daily Bulletin*, which is the official RSNA Annual Meeting Newspaper. Additionally, Dr. Ross' research on racial disparities in imaging was featured on *Side Effects*, an Indiana NPR affiliate.
- **Tabby Kennedy, MD** was featured in the *RSNA News* article, "Creative Approaches to Education Put Medical Students in the Driver's Seat."
- Anand Narayan, MD was featured in *Radiology*, where he discusses how revised guidelines for lung cancer screening eligibility enhance health disparities for racial minorities.



Image: The cover image for the episode of *Back Table* featuring Fred Lee, MD.

Learning Neuroradiology



Image: The homepage of Tabby Kennedy, MD's website *Learning Neuroradiology* which she uses as an example of flipped classroom approach in her *RSNA News* article.

Grants Overview

Scott Reeder, MD, PhD and Oliver Wieban, PhD received a \$2.5 million grant for their project, "Development of 4D Flow MRI for Risk Stratification of Variceal Bleeding in Cirrhosis," from the NIH.



Laura Eisenmenger, **MD** received a grant for her project, "Eliciting the Role of Vascular Wall Dysfunction in Alzheimer's," from the Wisconsin Alzheimer's Disease Research Center (ADRC).



Guang-Hong Chen, PhD received a \$3.1 million R01 grant for his project, "Hunting for the lost spectral fingerprints in chest CT exams using artificial intelligence (AI)," from the NIH.

Timothy Ziemlewicz, MD received a \$2.5 million R01 grant for his project, "Developing Methods for Precise, Safe, and Target-location Specific Histotripsy of Liver Tumors," from the NIH.



Diego Hernando, PhD received a \$1 million R01 grant for his project, "Diffusion MRI of the Body," from the NIH.

Kenneth Lee, MD, MBA, Alan McMillan, PhD, and Samuel Hurley, PhD were a part of a team that was awarded \$4 million from the NFL to study hamstring injuries.

Alejandro Roldán-Alzate, PhD received a \$680K R01 grant for his project, "MR imaging-based Quantitative Analysis of Bladder Anatomy and Function in BPH/LUTS" from the NIH

Andrew Wentland, MD, PhD received a grant for his project, "Quantitative Magnetic Resonance Urography: Non-Invasive Evaluation of Per-Kidney Urinary Output," from the O'Brien Center.



Michael Brunner, MD, FACR, FSIR was selected as a principal investigator on the newly-funded VA Cooperative "PREMI-UM" (PREventing liver cancer Mortality through Imaging with Ultrasound vs. MRI) study.



Leadership Update

Jason Stephenson Named The UWSMPH Associate Dean for Multicultural Affairs

Congratulations to Associate Professor **Jason Stephenson**, **MD** for being named Associate Dean for Multicultural Affairs for Health Professions Learners in the UW School of Medicine and Public Health. In his new role, Dr. Stephenson will work to enhance diversity, equity, and inclusion efforts for the school's five health professions degree programs and AC-GME-accredited residency and fellowship programs. His new position started August 1, 2021.

Dr. Stephenson joined the Department of Radiology in 2012 as an assistant professor and Director of the Radiology Medical Student Clerkship. Since joining UW, he has been a dedicated teacher, clinician, and mentor. He has authored articles and curricula for students in various health professions, and since the pandemic has helped to create better distance learning experiences for medical students. Dr. Stephenson has received many awards for his work. In 2018, he was awarded a Dean's Teaching Award, and in 2020 he was inducted into the Gold Humanism in Medicine Society and selected to receive the Gold Foundation's Leonard Tow Humanism in Medicine Award.

In addition, Dr. Stephenson is highly involved in numerous organizations within SMPH. Dr. Stephenson is a member of the Centennial Scholars and Centennial Clinicians Program Steering Committee and of the Partnership Education and Research Committee (PERC). He is a mentor for the Building Equitable Access to Mentorship (BEAM) program and is the Integrated Block Leader for the ForWard curriculum course, Mind & Motion. He also chairs the Curriculum and Assessment Subcommittee and is a member of the Equity and Inclusion Committee for the Department of Radiology.



Dr. Stephenson is honored to have this chance to serve the UW community. "I am most excited about the opportunity to provide additional ways to support students in their pursuit to become highly skilled, knowledgeable, and compassionate care providers. The national events of the preceding year have compelled me to seek more active ways to affect positive change in our community and beyond. My goal is to promote growth and stimulate thoughtful discourse on topics of equity, inclusion, and cultures as they relate to our learning environments and in general to our shared institutional values of service, scholarship, science, and social responsibility," says Dr. Stephenson.

Best wishes to Dr. Stephenson in his new role!

Camille Endres Named Chief Administrative Officer of the Department of Radiology

Camille Endres, MBA has joined the School of Medicine and Public Health, Department of Radiology, as Chief Administrative Officer as of July 2021. In this role, Camille will be responsible for the overall administrative activities of the clinical, educational, research and service responsibilities of the University of Wisconsin School of Medicine and Public Health Department of Radiology with unique

linkage to and responsibilities for the UW Medical Foundation physician group practice. This position provides executive leadership for the administrative and financial activities of the Department of Radiology's clinical, education service, research and community outreach missions. The position entails a high level of complexity that mandates a high degree of initiative and personal responsibility. The Chief Administrative Officer serves as a member of the Department of Radiology Executive Leadership, working closely with the Chair, Vice Chairs, and Section Chiefs to lead and direct the administrative activities of a robust academic department. This position will report directly to the Department Chair.

Camille is joining us from Norfolk, Virginia, where she has most recently served as Associate Vice President of Finance of Eastern Virginia Medical School (EVMS) and Assistant Treasurer of EVMS Foundation. However, Camille has roots in Madison and is a Badger at heart. Previous to her current role, she has over 15 years of experience at the University of Wisconsin – Madison, including serving as Assistant Director of Finance for the School of Medicine and Public Health. She earned her associate degree from Madison Area Technical College in Applied Science-Accounting. Then, she went on to earn both her Bachelors of Business Administration and her Master of Business Administration, with an emphasis on Health Systems Leadership, from Edgewood College.

Outside of work, she enjoys spending time with her family and friends, tennis, yoga, stand up paddle boarding, reading, and cooking.

RSNA Recap

Summary & Awards



The Radiological Society of North America (RSNA) made its anticipated return to in-person for the 2021 Annual Meeting, including a first-ever Virtual Meeting option. Attendees could travel to Chicago, IL, or participate remotely in the meeting, held November 27 – December 2, 2021. Delivering dynamic, high-quality presentations in a hybrid format is no easy feat, but the UW-Madison Department of Radiology faculty were up to the challenge!

Our faculty delivered talks and moderated sessions on a range of innovative topics (see page 8 for a full list). Additionally, two of our faculty members led programming efforts for the meeting, including **Tabby Kennedy**, **MD** as the Committee Chair for the Head and Neck Programming and **Guang-Hong Chen**, **PhD** as the Committee Chair for the Physics Programming.

We were honored to have several educational exhibits and abstracts receive awards. Exhibits "MR Imaging of Perianal Fistula," from authors Meghan Lubner, MD; David Kim, MD, FACR; and Perry Pickhardt, MD, and "O-RADS MRI Risk Stratification System: Pearls & Pitfalls," from Elizabeth Sadowski, MD, received Cum Laude. Three exhibits were also awarded Certificates of Merit. This includes "Three Diagnoses You Need to Be About to Make," by Jennifer Pitts, MD; Kirkland Davis, MD, FACR; and Kenneth Lee, MD, MBA, "Ultrasound-Guided Musculoskeletal Intervention of the Ankle and Foot" by Isaiah Tan, MD; Lindsay Stratchko, DO; Kenneth Lee, MD, MBA; and Andrew Ross, MD, MPH, and "Advancements in Vascular Ultrasound" by Lori Mankowski Gettle, MD, MBA. Lastly, "Multi-contrast Chest X-ray Imaging System" by Ran Zhang, PhD received the Top Digital X-Ray Abstract from the AuntMinnie.com Roadies.

Several faculty were also recognized by the RSNA for their outstanding educational contributions to their fields of study. David Bluemke, MD, PhD, MsB; Lori Mankowski Gettle, MD, MBA; Jeffrey Kanne, MD, FACR; and Scott Reeder, MD, PhD each received the 2021 RSNA Honored Educator Award.

While the meeting may be over, attendees can still access Virtual Meeting content until April 30th, 2022. We look forward to seeing everyone again for RSNA 2022!

Faculty Presentations

Sunday, November 28

Jessica Robbins, MD: "Unprofessionalism in the Workplace"

David Bluemke, MD, PhD, MsB: "Science Session with Keynote: Cardiac (Clinical Trials in Cardiac Imaging)"

Kirkland Davis, MD, FACR: "Knee MRI: How I Do It: 3 Meniscus Tears You Don't Want to Miss"

David Kim, MD, FACR: "Gastrointestinal - Colorectal Cancer (Moderator)" Michael Tuite, MD, FACR: "Shoulder Imaging: How I Do It"

Monday, November 29

Guang-Hong Chen, PhD: "Deep Learning in CT Imaging"

Tabby Kennedy, MD: "Essentials in Trauma Imaging: Shedding Light onthe Dark Side of Neuroradiology"

Cristopher Meyer, MD, FACR: "Thoracic Imaging Practice - Polling Session"

Steve Cho, MD: "Best of Clinical Trials at RSNA 2021: Live Discussant for The Impact Of 18F-DCFPyL PET/CT On the Management of Patients with Recurrent Prostate Cancer: Results of a Prospective, Multicenter Trial"

Tuesday, November 30

Tim Szczykutowicz, PhD: "How CT Protocols Affect Technologist Repeat Rates, Throughput, and Image Quality"

Jessica Robbins, MD: "Dealing with Unconscious Bias in your Career"

Wednesday, December 1

Donna G. Blankenbaker, MD, FACR: "Hip Consensus & Controversies Session"

Scott Reeder, MD, PhD: "Hot Topics Session: Fat Quantification" & "Practical Tips for Building a Research Career"

Greg Avey, MD: "Case-based Review: Head and Neck Imaging"

Tim Szczykutowicz, PhD: "RSNA Innovation Theater Session "Protocol Ecosystem"

Anand Narayan, MD: "Nationwide Estimates of CT Colonography Utilization: Cross-sectional Survey Results from the 2019 National Health Interview Survey"

Elizabeth Sadowski, MD: "Classic Versus Non-classic Isolated Adnexal Lesions: Risk Of Ovarian Cancer In 878 Women"

Kenneth Lee, MD, MBA: "Platelet-Rich Plasma: Has it reached prime time?" & "Artificial intelligence in MSK: will it dominate?"

Thursday, December 2

Meghan Lubner, MD: "Deep Learning-enabled Single-kV Deluxe Functionalities"

Tim Szczykutowicz, PhD: "Chasing the Holy Grail: Reducing Radiation Dose and Improving Image Quality" & "Protocol Optimization for Low Dose CT (Moderator)"

Kenneth Lee, MD, MBA: "Musculoskeletal - Image-guided Interventions (Moderator)"

Richard Bruce, MD: "Scientific Session with Keynote- Radiology Informatics (Moderator)"

Guang Hong Chen, PhD: "RSNA/AAPM Symposium: Together We Can Make a Difference"

David Kim, MD: "CT Colonography: Practical Tips for Optimizing Your CT Colonography Exams"

Lori Mankowski Gettle, MD, MBA: "PI-RADS Hands-On Workshop at RSNA"

Elizabeth Sadowski: "Endometrial and Cervical Cancer Imaging"

Perry Pickhardt, MD, FACR: "Artificial intelligence applications in body composition"

Jeffrey Kanne, MD: "Practice Updates in Chest Imaging: Guidelines and Research - COVID-19 - Imaging Guidelines"

Community Engagement

Hope Project: Update



Health Occupations and Professions Exploration

Eight years ago, the Department of Radiology became the first donor to the HOPE (Health Occupations and Professions Exploration) Project, an initiative to provide career pathways education and guidance to students seeking careers in healthcare. In 2013, the project started with 120 students, and today, over 400 students participate annually. Since 2013, the HOPE Summer Internship program has had over 500 interns and is the first to recruit high school interns in the UW Health system.

The program's growth includes new opportunities to serve more age groups. The HOPE Project now offers programs for middle school students, including field trips, internships, and career exploration events. It has also expanded its programming to high school students, now offering apprenticeships that allow students to earn college credit. College students also can participate in HOPE's offerings through various mentorship, internship, scholarship, and apprenticeship programs. Lastly, adults can participate through an apprenticeship (Medical Assistant, Nursing Assistant, Phlebotomy, Pharmacy Tech, maintenance, skilled work), short-term work experience, and scholarships. The apprenticeship programs' participants have been 87% people of color and 100% meeting one or more underrepresented demographics. Ninety-one percent of participants report that their apprenticeship is their first educational experience after high school.

Bridgett Willey, PhD, HOPE Project Founder said, "We're addressing exploratory opportunities; we're increasing diversity, equity and inclusion in health care; and we're addressing workforce needs. I'm really happy to say we can do all of those now with this set of programs."

Learn more about getting involved with the HOPE Project today: https://hopemadisonwi.org/get-involved/



Tim Szczykutowicz Organizes Virtual Fieldtrip with Urban League of Madison



Tim Szczykutowicz, PhD recently organized a virtual fieldtrip for over 30 seventh and eighth graders, mostly from Wright Middle School, for Project REACH of the Urban League of Madison. Project REACH aims to help students begin to develop their post-secondary and career goals in middle school so that they enter high school prepared for a rigorous pre-college curriculum. The virtual fieldtrip focused on teaching radiology, medical physics, and biomedical engineering. The curriculum was taught in four one-hour blocks.

Block 1: "Radiology Imaging Machine" – Professor Tim Szczykutowicz, PhD (Radiology)

Block 2: "Radiation Therapy Treatment Planning" – Sydney Anna Jupitz (Medical Physics) Block 3: "Gene Editing with Cas9 and CRISPR" – Namita Khajanchi (Biomedical Engineering)

Block 4: "Find the Cancer Exercise" – Lindsay Stratchko, DO (Radiology)

Dr. Szczykutowicz said, "I got involved with the efforts of Mr. Brown and Urban League of Madison over the last school year via virtual tutoring of Wright Middle School kids. When Mr. Brown said he could use sites to provide field trips, I jumped at the chance to expose these young scholars to projects in Radiology, Medical Physics, and Biomedical Engineering. I wanted to get a lot of different perspectives from the UW side to show these students what a career in STEM looks like in healthcare."



Meet the New Faculty



Sandip Biswal, MD is a Visiting Professor in the Musculoskeletal Imaging and Intervention section, on a year-long sabbatical from Stanford University. His interests include finding new ways to help patients with pain management and finding applications of the PET radiotracer that UW developed.





Mitchell Daun, MD is a Clinical Assistant Professor in the Community and Musculoskeletal Imaging and Intervention Radiology sections after completing his musculoskeletal imaging fellowship here at UW. His interests include resident and fellow education and quality improvement.



Edward Lawrence, MD, PhD is an Instructor (CHS) in the Abdominal Imaging and Intervention section after completing his residency and Abdominal Imaging Fellowship here at UW. His interests include using imaging to understand habitats of tumors and how to optimize using AI.



Alison Gegios, MD is an Assistant Professor (CHS) in the Breast Imaging and Intervention section. Dr. Gegios completed medical school and her Breast Imaging Fellowship here at UW. Her interests include medical education & research.



Eric Monroe, MD is an Associate Professor (CHS) in the Pediatric Radiology section specializing in Pediatric Interventional Radiology. Dr. Monroe joins us from Seattle Children's Hospital. His interests include hypertension & liver interventions.

VIEW OPEN POSITIONS

Prashant Nagpal, MD, FSCCT is an Associate Professor (CHS) and Chief of the Cardiovascular Imaging section. He joins us from the University of Iowa Hospital and Clinics. His interests include imaging protocol optimization and education.



John Swietlik. MD is a Clinical Assistant Professor in the Interventional Radiology section. He recently completed his Interventional Residency here at UW. His interests include improving access and efficiency of veteran care in interventional radiology.



Anand Narayan, MD is an Associate Professor (CHS) in the Breast Imaging section and the Vice Chair of Health Equity. He joins us from Massachusetts General Hospital. His interests include reducing breast cancer disparities, including increasing prevention screenings.



John Symanski, MD is an Assistant Professor (CHS) in the Musculoskeletal Imaging and Intervention section. He joins us from the Medical College of Wisconsin. His interests include 3D educational models and MSK ultrasound.



Giuseppe Toia, MD, MS is an Assistant Professor (CHS) in the Abdominal Imaging and Intervention section. He joins us from the University of Washington. His interests include liver and pancreas pathology and CT workflow and optimization.



Andrew Wentland, MD, PhD is an Assistant Professor in the Abdominal Imaging and Intervention section after completing his Abdominal Imaging Fellowship here at UW. His interests include AI applications in abdominal imaging.

Education Spotlight



Allison Grayev Receives Dean's Teaching Award

Allison Grayev, MD was selected as one of the 2021 Dean's Teaching Award recipients. This award recognizes excellence and innovation in medical education. The recipients awarded have demonstrated a creative approach to medical education, high teaching effectiveness, and sustained dedication to improving student learning. Dr. Grayev was presented with the award during a virtual award ceremony on Medical Education Day.

Dr. Grayev is humbled to have won this prestigious award. "Winning this award is a recognition of the support received from the anatomy team and my colleagues in radiology, allowing me to design and implement new radiology content both during the ForWard curriculum roll out and a pandemic. I hope to impart the importance of radiology to all medical students with the goal of creating future clinicians that understand and respect our role in patient care," she says.

One of Grayev's contributions to the Department's focus on education is teaching anatomy to Phase 1 medical students (pictured to the right). The department is happy to report that radiology is taught at each phase of the new ForWard curriculum. Learn more about the ForWard curriculum in the the graphic on the left.



Honors & Awards



Fred Lee, MD won the 2021 Hector F. DeLuca Scientific Achievement Award at the Wisconsin Biohealth Awards.

Amy Fowler, MD, PhD was inducted as a new Fellow of the Society of Breast Imaging.



Caroline Kerr, a Medical Science Training Program (MSTP) student and mentee of Jamey Weichert, PhD, scored a perfect 10 on her F30 grant.

Joseph Lang, MD; Anthony Kuner, MD; Tabby Kennedy, MD won gold for their educational exhibit, Horner Syndrome and the Oculosympathetic Pathway: A Case Based Review at the American Society of Head & Neck Radiology (ASHNR) Annual Meeting.

Howard Rowley, MD was selected as a Fellow of the American College of Radiology (ACR).





Anand Narayan, MD was selected as Vice Chair of the American College of Radiology's Patient and Family Outreach Committee. He was also selected as Assistant Editor on the Editorial Board of the American Journal of Roentgenology.

Jason Stephenson, MD, Maria Daniela Martin, MD, Mai A. Elezaby, MD, Anand Narayan, MD, Erica M. Knavel Koepsel, MD, Minnie Kieler, MD, Ivan M. Rosado-Mendez, PhD, & Reinier Hernandez, PhD were selected as "BEAM (Building Equitable Access to Mentorship" mentors by the University of Wisconsin School of Medicine and Public Health.

Department of Radiology Residency Program was selected as a Semifinalist for the Best Radiologist Training Program award from Aunt Minnie.

Guang-Hong Chen, PhD was granted a patent for his project, System and method for multi-architecture computed tomography pipeline.



Andrew Ross, MD, MPH was featured on Side Effects, an NPR affiliate, to discuss his research on racial disparities in healthcare.



Tim Szczykutowicz, PhD was selected to serve on an American Association of Physicists in Medicine (AAPM) taskforce that created a new policy on cumulative effective dose.



Erica Knavel Koepsel, MD

was named a Centennial

Scholar by the University

Medicine and Public Health.

of Wisconsin School of





Paul Laeseke, MD, PhD was granted a patent for his project, System and method for motion-adjusted device guidance using vascular roadmaps.

Three former Cai Research Group members – Carolina A. Ferreira, Shreya Goel, Hyung-Jun Im – were selected as "Ones to Watch" in 2021 by the Society of Nuclear Medicine and Molecular Imaging (SNMMI).

David Kim, MD was selected as a Semifinalist for the Most Effective Radiology Educator award from Aunt Minnie.

Steve Cho, MD was selected as Associate Co-Chair of Scientific Abstracts in the Society of Nuclear Medicine and Molecular Imaging (SNMMI) Sci-



entific Program Committee Leadership.

Jessica Robbins, MD and Tim Szczykutowicz, PhD received the Editor's Recognition Award with Special Distinction from the Radiological Society of North America (RSNA).



Tabby Kennedy, MD received the inaugural Outstanding Contributions in Neuroradiology Education Award from the American Society of Neuroradiology.

Weibo Cai, PhD was invited to serve on the American Institute for Medical and Biological Engineering (AIMBE) Imaging II Review Committee to help select the 2022 Class of the College of Fellows.

Tim Szczykutowicz, PhD was granted a patent for his project, X-ray Imaging Device Providing Enhanced Spatial Resolution by Energy Encoding.

Lonie Salkowski, MD, MS, PhD, FACR was awarded a **British Medical Association** Book Award for her textbook. Weir & Abrahams' Imaging Atlas of Human Anatomy, 6th Edition.

Mark Schiebler, MD, John Garrett, PhD, Scott Reeder, MD, PhD, Guang-Hong Chen, PhD, and Ran Zhang, **PhD** were recently commended for their publication, "On the role of artificial intelligence in medical imaging of COVID-19."

Jamey Weichert, PhD received a patent for his project, Phospholipid ether analogs for imaging and targeted treatment of pediatric solid tumors.

Guang-Hong Chen, PhD, Jamey Weichert, PhD, and Fred Lee, MD were selected as recipients of The Academy for Radiology & Biomedical Imaging Research's 2021 Distinguished Investigator Award.

Alumni Spotlights

Amanda Smolock, MD, PhD



Amanda Smolock, MD, PhD completed her residency training in the UW-Madison Diagnostic Radiology Residency Program from 2013 – 2017. After her residency, she completed a fellowship in interventional radiology at Penn Medicine. She then worked as an interventional radiologist at Jefferson University Hospital for a short time before taking her current job at the Medical College of Wisconsin

where she is in a research focused faculty position in the Division of Vascular and Interventional Radiology with 40% dedicated time for research.

Q: What are your areas of interest?

A: My main interest is interventional oncology and specifically tumor ablation. I currently have a seed grant through the RSNA R&E Foundation to study the novel ablation modality histotripsy in veins. I led the preclinical studies of a commercial histotripsy device for liver ablation at UW that laid the basis for the first in human studies completed in Spain and the current clinical trial underway in the US for FDA approval of this device for liver tumor ablation. Q: In reflection, how would you say your training at UW-Madison helped you in your career?

A: Among the many faculty who trained and mentored me throughout residency, I had the good fortune to have Dr. Fred Lee as my primary mentor. This relationship grew my interest in tumor ablation and allowed me to develop my clinical and research experience in this field. The impact his mentorship has had on my career trajectory cannot be overstated. In addition to being an amazing physician, researcher, and inventor, he is a wonderful human being who I can proudly call my friend. Just like Dr. Lee, there are so many wonderful faculty in the radiology department at UW who are both some of the most intelligent and nicest people you will ever meet. I am grateful I had the opportunity to train at UW.

Q: What advice would you share with prospective and current trainees at UW-Madison?

A: UW Radiology is filled with amazing faculty who are recognized national and international experts. Soak up the opportunity to learn from them.

Brian Chan, MD



Brian Chan, MD completed his residency training in the UW-Madison Diagnostic Radiology Residency Program from 2013-2017 & his fellowship in the Musculoskeletal Imaging and Intervention section from 2017-2018. After his fellowship, he moved to Salt Lake City, UT and is now in his fourth year as a member of the MSK section within the University of Utah Department of Radiology.

Q: What are your areas of interest?

A: My primary interest is in resident education. I was recognized as the radiology department's Teacher of the Year for 2020-2021, despite feeling like I still have a lot of room for improvement as an educator. I recently matriculated at the University of Utah in the Master of Education in Health Professions program to better understand how adults assimilate unfamiliar knowledge and how I can tailor my teaching methods to meet residents' learning goals. My clinical interests are in MRI quality, MSK ultrasound, CT-guided procedures, and sarcoma, which have unexpectedly intersected in the form of an industry grant from Samsung on comparing MRI and US for post-treatment surveillance of low-grade extremity sarcomas (on which another former UW alum, Hailey Allen, is the principal investigator). *Q: In reflection, how would you say your training at UW-Madi*-

son helped you in your career?

A: As an incredibly indecisive person (which many UW fellowship directors can confirm), I feel very fortunate that I received such great training across all specialties. Throughout both residency and fellowship, I was given the tools to succeed in any subspecialty and any practice setting. I also learned the importance of mentorship in helping me achieve my goals, and even now as an attending I continue to receive career advice from my former colleagues at UW. I try to provide the same level of support to my trainees that was and still is so beneficial for my professional and personal development.

Q: What advice would you share with prospective and current trainees at UW-Madison?

A: Four years of radiology residency seems like a lot of time. It's not. Study every day, read as many exams as you can, and take advantage of every opportunity to learn something from your attendings. When you're stumped in practice, you'll wish you showed up for those anxiety-inducing case conferences and paid more attention during marathon post-call staff outs.

> Want to share your alumni news? Email: radnews@uwhealth.org

Donations in Action

Endowments

SACKETT PROFESSORSHIP FUND IN RADIOLOGY

This professorship was established in honor of Dr. Joseph F. Sackett, former chairman of the Department. Currently, Dr. Howard Rowley is the Sackett Endowed Professor, and he used the funds to make improvements to the neuroradiology reading room.

JOHN H. JUHL PROFESSORSHIP FUND

This professorship was established to encourage the continuance of Dr. John H. Juhl's spirit in teaching, passion in research, and excellence in medical care. Currently, Dr. Thomas Grist is our Juhl Endowed Professor, and he used the funds to expand our research, clinical, and education efforts of the Department.

ANDREW B. CRUMMY PROFESSORSHIP FUND IN RADIOLOGY

Established in honor of Dr. Andrew B. Crummy, this fund supports the Department of Radiology in its teaching, research, and public service roles. Currently, Dr. Orhan Ozkan is our Crummy Endowed Professor, and he used the funds to recruit a research assistant.



Howard Rowley, MD Sackett Professorship Fund in Radiology



Thomas Grist, MD John H. Juhl Professorship Fund



Orhan Ozkan, MD Andrew B. Crummy Professorship Fund in Radiology

Funds

ZACHARY CLARK RESIDENT RESEARCH FUND

In memory of Dr. Zachary Clark, January 25, 1986 - March 6, 2017, this endowment will support research performed by the University of Wisconsin School of Medicine and Public Health Radiology residents and ACGME accredited fellows and will give priority to those doing research on neuroradiology projects.

RADIOLOGY CENTENNIAL/ WOMEN'S IMAGING FUND

This fund was originally established by Dr. Joseph F. Sackett for the purpose of aiding the department in teaching, research and public service roles. The fund supports women's imaging teaching programs and professional development, as well as general imaging programs.

JUHL SOCIETY FUND

Established in the spirit of discovery and innovation, personified by Dr. John H. Juhl, the goal of the Juhl Society is to promote the development of information technologies to enhance the quality and value of radiology practice in both academic and community settings.

Funds (Continued)

RADIOLOGY MEDICAL EDUCATION FUND

The Medical Education Fund is established to support advances in radiology training for learners at all levels to include medical students, residents, fellows, and associated disciplines. The fund is intended to supply infrastructure needs for education-related projects such as software purchases to include but not limited to scheduling, radiology report analysis, teaching file development, and creation of enduring learning materials. This fund may also be used for pilot projects in education and purchase time via salary support for IT/database development and statistics.

RADIOLOGY SENSE OF COMMUNITY FUND

The purpose of this fund is to support the greatest needs to the Department of Radiology as determined by the Chair of Radiology. In addition to supporting the greatest needs of the department, uses can include, but are not limited to, receptions, journal clubs, entertainment and/or costs associated with meals and refreshments, and staff educational opportunities. This includes functions related to retirements (excluding retirement gifts), welcome receptions, farewell dinners, faculty and/or staff team-building retreats, and other items and occasions that the chair considers to be team- or morale-building in nature or that allow the Department of Radiology to function as a productive community.

How to Give

Gifts to the University of Wisconsin School of Medicine and Public Health (UWSMPH) Department of Radiology are accepted by the University of Wisconsin Foundation, the official fundraising and gift-receiving organization for the University of Wisconsin-Madison.

Your generosity supports UWSMPH Radiology's mission to advance human health through research and innovation in imaging and image-guided therapies, to provide outstanding clinical care and imaging services to residents throughout Wisconsin, to educate medical students, graduate students, postdoctoral fellows, and technicians in accordance with the highest professional standards, and to promote life-long learning opportunities for radiology professionals.

Your donations sustain UWSMPH Radiology's leadership in the areas of health-related education and research, patient care, and community outreach. Gifts of any size can make a difference. Small amounts will accumulate over time to create substantial resources for the school.

MAKE A GIFT

POINTS OF PRIDE

The Department of Radiology 2021 Year in Review



CLINICAL OPERATIONS		FACULTY DEVELOPMENT	
578K diagnostic scans read		10 faculty promoted	12 newly hired faculty
21K procedures completed		COMMUNICATIONS	
EDUCATION		631 new Twitter followers in 2021	
AUNT MINNIE SEMIFINALIST for Best Residency Program		2.7 K	381K total impressions
416 hours of resident teaching conferences		total Twitter followers	
14 medical students applying into Radiology	13 students in summer research mentoring program	@UWiscRadiologyor radiology.wisc.edu	

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Department of Radiology

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