

UCLA Radiology

NEWSLETTER OF THE DEPARTMENT OF RADIOLOGICAL SCIENCES

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Chair's Message



Dieter Enzmann, MD Distinguished Professor of Radiology Leo G. Rigler Chair Executive Medical Director, UCLA Health Department of Radiological Sciences David Geffen School of Medicine at UCLA

As many of you know, I am fond of insightful quotes by individuals much smarter than I. This quote by Peter Drucker captures the important strategic work of leadership, especially in times of rapid change. It emphasizes what leadership must correctly do as it observes changes in its environment.

"... the most important work of the executive is to identify the changes that have already happened ... to exploit the changes that have already occurred and to use them as opportunities to identify the 'future that has already happened.'" (The Daily Drucker p.4)

The important message in this quote is the importance of identifying appropriately and responding to "the future that has already happened."

For many of the burgeoning opportunities in radiology, the "future" has leaked into the present and may, in fact, have already been here for quite some time. The important insight is to recognize when new features transition from being an innovation into an early adopter stage activity as defined by the diffusion of innovations sigmoid curve.

The current health care and radiologic environment is almost dizzying in the remarkable concurrent changes taking place, ranging from new technology to headlinegrabbing Al acceleration, to new radiology business models, to market consolidation and to an expanding array of innovative treatment options, especially for cancer patients. In this latter category, immunotherapy is drawing more attention and gaining increased acceptance, not only in the multiplying clinical trials, but in everyday clinical treatments.

Until recently, radiology appeared not to have much of a role in this new direction of cancer treatment. That, however, is changing as new evidence, some of which is still anecdotal, has shown that some forms of electrical and ultrasound ablation therapies of the primary cancer have resulted in regression of nontreated masses or metastases. Without direct treatment of metastatic lesions, image-guided tumor ablation has been demonstrated to cause subsequent decrease in size or involution of anatomically distant lesions. This clearly is a new treatment paradigm radiology cannot afford to ignore. As a result, the Department is forming an interdisciplinary team to investigate what I will loosely term "Image-Guided Immunotherapy" (IgImRx). The Department is literally loaded with talent and focusing on this near-term opportunity that can position us to be a national innovative leader in IgImRx. Constructing a formal clinical and research structure in the Department to execute a strategy of growing IgImRx is a critical step for the Department to achieve a rightful leadership position in this new paradigm of cancer treatment. 限

Radiofrequency ablation shrinks thyroid nodules and relieves symptoms while preserving function

Michael L. Douek, MD Professor of Radiology Chief of Oncology Imaging Associate Medical Director Radiology Director of Santa Monica Hospital Department of Radiological Sciences David Geffen School of Medicine at UCLA



UCLA interventional radiologists have built one of the country's highest-volume programs for treating benign thyroid nodules with radiofrequency ablation (RFA). While the procedure has been used to treat benign thyroid nodules for decades internationally, here in the U.S. the only treatment options until recently have been resective surgery or radioactive iodine for autonomously functioning "hot" thyroid nodules. While these treatments are effective in managing symptoms, many patients will require lifelong treatment for hypothyroidism. With RFA, interventional radiologists are able to shrink thyroid nodules and relieve symptoms without the risks of surgery and while preserving the thyroid gland. The procedure offers the additional benefit of providing excellent cosmetic outcomes, shrinking unattractive nodules and leaving no visible mark at the needle-puncture site.

Large, benign thyroid nodules put pressure on other structures in the neck and can cause difficulty in swallowing, voice changes, cough and pain. They also cause bulging in the neck that patients often find cosmetically problematic.

Thyroid RFA is performed under local anesthesia as an outpatient procedure. Using ultrasound guidance, the needle electrode is positioned within the nodule and electrical current at the tip of the needle produces high temperatures that kill cells in the nodule. The dead cellular material is resorbed by the body over time and the nodule shrinks in size. "What we've seen is that if you select patients correctly — those whose nodules you can treat appropriately and thoroughly --- cosmetically those results have been really good, and the symptomatic results are even better," states Michael L. Douek, MD, professor of radiology and radiology director at UCLA Santa Monica Medical Center. "We routinely see volume reductions on the order of 80% or even better." Dr. Douek observes that while patients usually report rapid symptom relief, visible shrinkage of the nodule occurs gradually over a period of weeks to months. After one month, patients typically see a 20-to-50% reduction in nodule volume, with 80% reduction seen at six months or more. Many nodules shrink by up to 95% years after ablation.





Before and after ultrasound images. Initial ultrasound image (top) shows a nodule with a volume of 13 mL. Seven months following RFA, the nodule is 96% smaller, with a volume of < 1 mL (bottom). The patient experienced complete resolution of both compressive symptoms and cosmetic concerns. Thyroid RFA is very well-tolerated, with some mild bruising and soreness following the procedure, but no real recovery time needed. It has a very good risk profile, typically with lower rates of complications than surgery, and without causing permanent hypothyroidism.

Treating small thyroid cancers with RFA

Beyond its use in treating benign thyroid nodules, RFA is beginning to be used to treat papillary thyroid microcarcinomas (PTMCs) in patients with low-risk tumors.

There has been a sharp increase in the number of thyroid cancers being diagnosed. It is thought that the rise in cases is due not to more cancers but to better detection. While it was accepted practice for many years to treat all cancerous thyroid nodules with surgical resection, there is now a trend toward active surveillance, monitoring them with ultrasound and delaying surgery until the nodule proves to be biologically active. "We are probably vastly overtreating many indolent cancers that will never spread, never grow, never do anything," states Dr. Douek.

RFA is emerging as an attractive middle ground between active surveillance — which requires that patients be followed with ultrasound exams regularly for life — and surgical treatment that comes with the risks inherent in surgery, including the possibility of rendering patients hypothyroid for life. UCLA interventional radiologists have begun treating carefully selected PTMC patients with RFA and have had good results, though the numbers are still small. Current selection criteria include only small (10mm or less), indolent nodules. "We don't want to treat aggressive tumors with RFA — those that have already spread to nodes or exhibit ultrasound or molecular features that are suggestive of an aggressive variant," explains Dr. Douek.

Dr. Douek notes that while RFA can be an good option for treating small, indolent thyroid cancers, the minimally invasive procedure does not yield a surgical pathologic specimen, as does surgical resection. This means that there is limited ability to characterize tumors or treatment margins, information that might be used to individualize subsequent care for surgical patients. (R)

New immune analysis panel for transgenic pigs may advance cancer IR immunotherapy

Jason Chiang, MD, PhD Assistant Professor of Radiology Department of Radiological Sciences David Geffen School of Medicine at UCLA



Tumors are able to grow and spread within the body to the extent that they are able to evade attack from the body's immune system. Immunotherapy seeks to enhance the body's ability to eliminate tumors on its own with a better ability to identify tumor antigens. "The concept has worked exceptionally well for some blood-borne cancers — such as leukemia and lymphomas — but apart from melanoma and certain subtypes of lung cancer, they have just started to scratch the surface of treating solid tumors," explains interventional radiologist Jason Chiang, MD, PhD, assistant professor of radiology. Dr. Chiang is conducting research to try to extend these excellent outcomes with immunotherapy to patients who suffer from solid tumors. Dr. Chiang's own research focus is on liver cancer, but much of his recent activity can apply to all solid tumors.





Porcine aortic angiogram (left) compared to human aortic angiogram (right).

AAo – aorta, CeA – celiac artery, CHA – common hepatic artery, GDA – gastroduodenal artery, IcA – intercostal artery, LGA – left gastric artery, LHA – left hepatic artery, RHA – right hepatic artery, RGA – right gastric artery, SA – splenic artery, SMA – superior mesenteric artery

Systemic immunotherapy has shown only limited success with solid tumors at least in part because the compact and immunosuppressive nature of these tumors prevents immunotherapy agents from reaching most of the tumor cells. Oncologists are limited in how far they can increase dosage in an effort to more deeply penetrate solid tumors. Too high a dose can spur the immune system to attack normal, healthy tissue in the manner of an autoimmune response. "This is the time for interventional radiologists and interventional oncologists to take a seat at the table and become involved in cancer immunotherapy," states Dr. Chiang. "We can help push immunotherapy to the next level in treating solid tumors using minimally invasive catheters and needles." Using these image-guided techniques, interventional radiologists are able to introduce immunotherapy agents directly into the tumor microenvironment, allowing them to deliver much higher doses than those used in systemic immunotherapy.

Dr. Chiang has been working with his UCLA colleagues to overcome one of the principal barriers to applying interventional radiology techniques to treating cancer locally with immunotherapy. Pre-clinical cancer research relies heavily on rodent animal models, but mice and rats are suboptimal models for interventional radiologists to use as their very small body size prevents interventional radiologists from performing the kinds of procedures they use in humans. Research efforts at UCLA employing interventional radiology to deliver cancer immunotherapy have focused on using transgenic pigs. These "Oncopigs" are not only similar to humans in body size — imaging and interventional tools routinely use in treating human patients are easily applied to pig research — but have other similarities that may make them superior to mice as models of human cancer. Pigs more closely resemble humans in their metabolic rate and immune system than do rodents, and their anatomy is more similar as well. In terms of liver anatomy, pigs have a celiac axis, a superior mesenteric artery, a gastroduodenal artery and a proper hepatic artery.

A further benefit of the use of pig models is that they reduce the need for the allometric scaling principles that are traditionally used to translate research findings from small animal models to humans. Allometric scaling accounts for differences in size — usually expressed in terms of the ratio of body surface areas — but does not account for differences in things like metabolic



Tumor growth in Oncopig liver over the course of two weeks, prior to microwave ablation treatment — (A) Axial contrast-enhanced CT of sub centimeter hypodense lesion corresponding to tumor growth in the right liver lobe. (B) Axial contrast-enhanced MRI showing peripheral rim enhancement and interval growth of target tumor after two weeks. (C) CT-guided placement of microwave ablation probe into the target tumor.

rate and vascular resistance. Therefore, the more similar the model animal is to humans, the less researchers have to rely on allometric scaling to translate things like drug dosage for use in human trials. "We want to improve the yield of targeted immunotherapy by using pigs as a better model of human cancer," says Dr. Chiang, pointing out that less than 7% of drugs that have been validated in rodent cancer models have been successfully translated to humans.

The transgenic Oncopig has Cre recombinase inducible mutated tumor suppressor and oncogenes TP53 and KRAS, which are found in up to one-half of all human cancers. Tumors can be induced in the Oncopig by injecting adenovirus with Cre recombinase. "The virus can enter any cell in this pig and unlock the overexpression of a gene that promotes tumorigenesis," explains Dr. Chiang.

One important area where pig models have been at a disadvantage to rodent models is in the availability of validated antibodies to allow researchers to characterize the immune response. These antibodies reveal which immune cell populations are being suppressed by tumors and which ones are activated by immunotherapy. Decades of experience in using mouse models has yielded a rich set of validated antibodies for mice, but the analogous set had not been established for pigs. Dr. Chiang and his colleagues have been working with the Flow Cytometry Core of the UCLA Jonsson Comprehensive Cancer Center to build an immune analysis panel for pigs to identify specific pathways that can be targeted with immunotherapy.

The ability to use the Oncopig model for IR immunotherapy enables researchers at UCLA to leverage the Department of Radiology's Translational Research and Imaging Center (TRIC). The TRIC lab has the same imaging and interventional tools used to treat patients available for research, specifically largeanimal research subjects.

Interventional procedures can stimulate an immune response

Delivering high doses of immunotherapy drugs directly into tumor stroma is one unique advantage of using interventional procedures to treat solid tumors. But interventional procedures by their very nature can also release tumor antigens to stimulate an immune response. The immune cycle begins with recognition of a foreign antigen and sensitization of the immune system to that antigen. In the case of cancers, antigen-presenting cells pick up tumor cells and carry them to local lymph nodes, where they can activate naïve T cells to differentiate them into effector and memory T cells, priming them to identify and target the tumor. Once sensitized, the effector T cells can travel through the lymphatic system and attack cells that express that particular tumor antigen, wherever they are found.

"One thing that interventional radiology is really good at is being able to disrupt the local tumor microenvironment and release these tumor antigens," explains Dr. Chiang. This means that even ablative procedures intended to target tumors locally can simultaneously stimulate a systemic immune response that targets tumor cells at the ablation site as well as other places throughout the body. "Many interventional radiologists who treat cancer patients have seen or heard of patients with widespread metastatic disease treated with local ablation or radioembolization at one site for palliative purposes, and then seeing that not only have they treated the one tumor, but start to see all of the other non-targeted tumors melting away. This kind of 'cancer vaccine' is not really seen using traditional systemic immunotherapies," says Dr. Chiang.

Dr. Chiang is interested in further exploiting this mechanism to produce a more durable response. "We know that there is an inflammatory response to ablation and embolization, but we also know that it's temporary," explains Dr. Chiang. "Our goal is to identify these pathways and augment them. This may involve combining ablation or embolization with existing immunotherapies — including checkpoint inhibitors that are currently being used to treat blood-borne cancers and melanoma — or potentially combining them with CAR-T (chimeric antigen receptor T-cell) or NK (natural killer) cell therapy to generate a more durable anti-tumor response." (B)

Artery embolization offers novel approach to treating lateral epicondylitis





Lateral epicondylitis, or tennis elbow, is an overuse injury to the elbow that causes pain or pain with movement. It is due to inflammation at the outside of the elbow where extensor carpi radialis brevis (ECRB) muscles and tendons attach to the lateral epicondyle of the humerus. In addition to tennis, pickleball and other racket sports, lateral epicondylitis is associated with occupations — including carpentry and plumbing — that involve repetitive use of the forearm muscles.



Angiographic images show the abnormal vascularization (left) and the post-procedural return to a normal circulatory pattern (right) of a patient who has undergone elbow artery embolization. The center image shows the catheter in position to deliver the embolizing agent. The small circles at the left of each image are radio-opaque markers applied to the patient's skin to mark the location where they report pain.

The condition most often resolves with rest, non-steroidal antiinflammatories and sometimes physical therapy. When these fail to provide relief, steroid injections may be recommended. Until recently, there was little that could be done for patients whose pain persisted despite these conservative treatments. A surgical procedure to remove the affected tissue and re-attach the muscle to the elbow is infrequently deemed to be a worthwhile option. "There are few durable and successful treatments for people with tennis elbow other than to stop participating in the sport or the activity triggering the inflammation," says Siddharth Padia, MD, professor of radiology and director of interventional radiology at UCLA Santa Monica Medical Center.

Elbow artery embolization is currently emerging as a highly effective treatment for patients whose symptoms are not resolved by more conservative therapies. "Artery embolization is an entirely different and novel approach to treating patients with joint pain," states Dr. Padia.

The inflammation characteristic of tennis elbow is associated with abnormal vascularization in the area of the elbow where patients experience pain. Additional blood vessels form off of one of the three arteries that supply the lateral portion of the elbow. This abnormal vascularization is thought to promote the inflammation causing the joint pain. Elbow artery embolization is a minimally invasive procedure that restores normal circulation and offers excellent relief from pain symptoms.

"The procedure is an extension of genicular artery embolization for knee osteoarthritis," explains Dr. Padia. "We've been successful in treating the osteoarthritic knee — which also has an underlying inflammatory condition — using embolization. We have now started a program for treating tennis elbow with embolization, and so far it has met with great success."

Artery embolization is done in the hospital as an outpatient procedure. Working through a pinhole in the wrist, an interventional radiologist advances a very small catheter into the elbow artery where abnormal vascularization is seen on imaging studies, and where the patient has reported experiencing pain. A small volume of embolizing agent is infused into the targeted blood vessels, slowing blood flow to the area and returning circulation to its normal pattern. The catheter is removed and the insertion site is covered with a small bandage. The entire procedure takes less than 30 minutes and the patient is discharged about an hour after the catheter is removed.

Other than numbing the insertion point at the wrist, the procedure can be done without anesthesia, as it is entirely painless. Patients can be given a small amount of sedation if that is their preference. The procedure typically produces some bruising in the elbow area, but risks are minimal.

UCLA is one of very few centers in the U.S. offering elbow artery embolization. Little data has been published on the procedure, but a study in Japan showed that it eliminated pain symptoms for at least two years. UCLA is currently enrolling patients in an independently funded clinical study, which is open for enrollment as of press time for this newsletter. For more information, or to inquire about enrolling in the clinical study, please contact Dr. Padia at <u>spadia@mednet.ucla.edu</u> or call the clinic at 310-481-7545.

We are deeply grateful for the support we receive from individuals like Kay Pick, who share a commitment to advancing research, education and patient care.



Kay K. Pick Trust Estate Gift

We are thrilled to share the news of a remarkable estate gift generously bestowed upon the Iris Cantor Breast Imaging Center by the Kay K. Pick Trust. This generous contribution will help ensure that the Breast Imaging Center remains at the forefront of women's health and breast imaging services, providing the center with access to state-of-the-art imaging technologies and highly skilled health care professionals dedicated to providing the highest level of patient care.

This impactful gift also serves as a powerful reminder of the importance and influence of gift planning and estate gifts. By considering philanthropy in estate plans, individuals have

the power to make a profound difference beyond their lifetimes. We are deeply grateful for the support we receive from individuals like Kay Pick, who share a commitment to advancing research, education and patient care. We are honored to be a part of this legacy and grateful for the support of all those involved in executing this gift.

If you would like to learn more about estate giving, UCLA's gift planning professionals are happy to provide you and your legal and financial advisors with personalized information about making an estate gift. Conversations with the university's gift planning team are always confidential and never imply obligation.

Shenise Gilyard, MD, Selected Among Inaugural Bruin Scholars Program Awardees



UCLA vascular and interventional radiology fellow Shenise Gilyard, MD, has been selected to be among the inaugural Bruin Scholars Program cohort.

Launched by the Office of Justice, Equity, Diversity and Inclusion (JEDI) at the David Geffen School of Medicine and Dean's Office, the Bruin Scholars Program promises mentorship and funding for trainees transitioning to faculty positions.

Dr. Gilyard's work will target health care disparities in the population served at Martin Luther King, Jr. Community Hospital. One area she's interested in improving is the quality of life for patients with sickle cell disease through interventional radiology care and hematology.

"Having programs like the Bruin Scholar Program is important because it allows people committed to serving historically ignored populations to focus on the diseases that disproportionately affect those who have been overlooked," Dr. Gilyard says.

The Office for Justice, Equity, Diversity and Inclusion created the Bruin Scholars Program to retain promising DGSOM residents and fellows and support their growth as successful junior faculty members by developing their academic interest and building leadership abilities. Those selected as Bruin Scholars show a deep commitment to justice, equity, diversity, inclusion, anti-racism or service to underserved populations. The program was built to ensure UCLA's ability to retain select trainees who are committed to the DGSOM/UCLA Health System mission and values, and to nurture their success as junior faculty members.

The award assists scholars longitudinally, building leadership experience through projects that help elevate health equity, diversity and inclusion. Bruin Scholars are guaranteed admission to the JEDI Academic Mentor Council and work with senior faculty mentors on professional development. This program covers 14 topics, including effective communication, building grant-writing skills, financial wellbeing in academia and work-life balance.

The JEDI office provides \$75,000 to each scholar and the department provides \$25,000 for a total of \$100k per academic year for at least a two years. The award is used at the discretion of the Bruin Scholar to pursue their scholarly project.

Residents and fellows who are transitioning from trainee to faculty can be nominated for the Bruin Scholars Program by their department chair and program director. (1)

Dr. Gilyard's work will target health care disparities in the population served at Martin Luther King, Jr. Community Hospital.

UCLA Radiology Alumni Connections

Chief Residents 2022-2023

This year's chief residents have piloted a Wellness Event series that promotes collaboration among residents. The chiefs have worked to organize bimonthly events at local establishments to get together and share a meal. The goal is for residents to get to know each other outside of work. With the increase in remote and hybrid worksites, the Wellness Event series provides residents opportunities to gather in person in more casual settings.



(Left to Right: Puja Shahrouki, Natalie Cain, Tiffany Yu, Tyler Callese - Chief Residents 22-23)

Natalie Cain, MD, MPH

Natalie is from the greatest city on Earth (Chicago). Prior to starting residency at UCLA, she lived in Miami for nine years, enjoying the tropical lifestyle from college to internship year. It was then that she realized she could never return to the greatest and coldest city on Earth. Before starting medical school at the University of Miami, she lived in Ecuador for one year, carrying out epidemiologic research on Chagas disease. She also learned how to salsa dance and ate the best coastal ceviche anyone could ask for (sorry, Peruvian-cuisine lovers)! Currently, her life revolves around her two cats, blossom and buttercup, and her yoga mat (preferably oceanside). She is very excited to work alongside Tiffany, Puja and Tyler, and to have the opportunity to be an advocate for her peers. She hopes to continue to improve the already excellent residency program in order to keep up with today's evolving world. Her goals as chief are to provide a healthy outlet for mindfulness and work-life balance among her co-residents through safe social gatherings, beach outings, resident and faculty happy hours and group wellness activities. Happy residents, happy program director!

Tyler Callese, MD

Tyler is from Chicago. He attended Middlebury College, where he rowed on the crew team and studied biochemistry and economics. He attended medical school at Wake Forest School of Medicine, where he was active in research and medical education. He completed his surgery internship at UCLA and is currently an integrated interventional radiology resident. Tyler lives in Hermosa Beach with his wife, Olivia, who is an OB/GYN, and their two boxers, Bruce and Tallulah. Tyler is an avid skier, taking every opportunity possible to head to the mountains. He is a cyclist, triathlete and a lifelong beginner surfer. Tyler is honored to have the opportunity to serve as chief resident and to continue to promote the clinical and learning environment at UCLA.

Puja Shahrouki, MD

Puja was born and raised in Gothenburg, Sweden. He attended University of Gothenburg for medical school, where he was awarded the Swedish Society of Medicine's Best Medical Thesis Award and an Anders Wall Scholarship for Sweden's Young Scientist of the Year. After graduating, Puja spent a year working on cardiovascular imaging research at UCLA. Following a transitional year internship at MetroWest Medical Center, a teaching hospital of Tufts, Puja returned to UCLA as a diagnostic radiology resident. Following residency, he plans to pursue a fellowship in neuroradiology. Puja is deeply honored to accept his role as chief resident, and looks forward to working with Natalie, Tiffany, and Tyler as co-chiefs. As chief, he hopes to support resident education and facilitate resident participation in research.

Tiffany Yu, MD

Tiffany was born and raised in the greater Washington, DC metropolitan area. She studied finance at University of Maryland, and then worked as a management consultant for (too many) years before deciding to change careers to pursue medicine. She completed a one-year career-changer post-baccalaureate premedical program at Johns Hopkins, and then attended the University of Maryland School of Medicine, where she was inducted into the Alpha Omega Alpha and Gold Humanism honor societies. After living within a 50-mile radius of DC her entire life, she decided to see what the craze over Southern California was all about, and is so grateful that UCLA gave her the opportunity to train as a radiology resident. She and her husband love living in LA and she is looking forward to spending her last year of residency as chief resident. Tiffany is humbled to have been chosen as chief resident and will try very hard to keep up with her amazing co-chiefs and support the residents the best that she can. After residency, she is looking forward to completing her last year of training as a breast imaging fellow.

Recent Radiology Events



UCLA radiology residents and fellows enjoying a Wellness Social Hour at Rocco's.



Resident Wellness dinner at Wolfsglenn in Westwood.



Trainee holiday dinner hosted in Carnesale Commons on the UCLA campus.

Fellows 2022-2023

Abdominal Imaging

David Ban, MD Tucker Burr, MD Madhvi Deol, MD Adam Kinzel, MD Raj Mehta, MD Tyler Sevco, MD

Breast Imaging

Jaspreet Batra, MD Aileen Chang, MD Jessica Moon, MD Steven R. Plimpton, MD, MS Janis Yee, MD

Cardiothoracic Imaging

Soheil Kooraki, MD Amir Ali Rahsepar, MD

Interventional Neuroradiology

Charles Beaman, MD, PhD David Kimball, MD Jose Morales, MD

Interventional Radiology

Shenise Gilyard, MD Sipan Mathevosian, MD

Musculoskeletal Imaging

Jeremy Middleton, MD Jonathan Barclay, MD Fadi Nemeh, MD

Neuroradiology

Stephen Cai, MD Ross Frederick, MD Raffi Ourfalian, DO Tam Vu, DO

Oncology Imaging

Karen Mendez, MD

Stay in Touch!

Residents: Diagnostic Radiology Class of 2026

Michelle Bondero, MD David Geffen School of Medicine at UCLA

Daniella Boros, MD University of Arizona College of Medicine

Irvin Calderon, MD University of California, Riverside School of Medicine

Kathryn Champ, MD University of Maryland School of Medicine

Julia Gerras, MD Wayne State University School of Medicine

Annie Huang, MD Northwestern University Feinberg School of Medicine

Logan Hubbard, MD University of California, Irvine School of Medicine

Keon Mahmoudi, MD Icahn School of Medicine at Mount Sinai

Alan Shan, MD Johns Hopkins University School of Medicine

Justin Sun, MD Temple University School of Medicine

Ethan Zaccagnino, MD University of California, San Francisco School of Medicine

Amy Zhang, MD Yale University School of Medicine

Residents: Interventional Radiology Class of 2027

Jason Ni, MD Pennsylvania State University College of Medicine

Hiro Sparks, MD David Geffen School of Medicine at UCLA

Ashley Yearwood, MD St. George's University

If you have changed your contact information recently, please let us know so we can keep in touch! Are you the recipient of a recent award or distinction? If so, we would like to know about it and post it on our newsletter/alumni web page. Contact Anna White at <u>avwhite@mednet.ucla.edu</u> or visit us at: <u>radiology.ucla.edu/alumni</u>



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Gemma Badini Senior Director of Development, UCLA Health Sciences 310-405-4583 GBadini@mednet.ucla.edu or go to: <u>uclahealth.org/radiology/giving</u>



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SUMMER 2023

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