



YEAR-IN-REVIEW 2024

A DECADE OF GROWTH AND ACHIEVEMENT

Yale Department of Internal Medicine

Department of Internal Medicine faculty, staff, and trainees participate in a variety of programs, clinics, and centers throughout Yale University, Yale School of Medicine, Yale Medicine, and Yale New Haven Health.

For more information, visit
medicine.yale.edu/internal-medicine/

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A Decade of Growth and Achievement

Since taking the helm of the Department of Internal Medicine in 2013, I've witnessed a remarkable decade of advancement. It's with immense pride that I reflect on our collective journey, marked by growth not just in size but also in the depth and breadth of our impact across clinical care, education, research, diversity, inclusion, and belonging.

2023 was marked by an impressive cohort of new clinicians, researchers, educators, and staff, enriching our department alongside a fresh wave of residents and fellows. This period also saw the appointment or advancement of 148 faculty members, including 17 newly minted professors and a distinguished senior research scientist. Our research objectives have been sharpened; we've inaugurated new clinical facilities; introduced cutting-edge educational programs; and embraced new leadership in diversity, equity, and inclusion.

This year-in-review document is a testament to the significant strides we've made across our multifaceted mission and within our 11 subspecialties. It affirms our commitment to alleviating human suffering by developing innovative research programs, educating the next generation of medical leaders, providing outstanding and equitable care, and caring for our people.

Highlights include the introduction of a pioneering mentorship program alongside new initiatives to enhance physician well-being; an annual celebration of our staff's commitment and excellence through the Service Excellence Award; the development of innovative care pathways; national and international recognition of our faculty; and enhanced care for veterans at the VA Connecticut Healthcare System in West Haven.



Looking forward, our commitment to strategic growth and innovation remains unwavering. We will continue to advance our research across all subspecialties, emphasizing such broad themes such as aging, fibrosis, immune metabolism, drug design and development, and addiction medicine, which are best explored through a multidisciplinary approach. We will leverage artificial intelligence to optimize patient care and improve how our clinicians interface with electronic health records. We will continue prioritizing equitable care; ensuring access and quality for all; and collaborating strategically with Yale New Haven Health to amplify our collective impact.

This year's review also celebrates the remarkable individuals within our faculty who have assumed greater educational, clinical, or research responsibilities, reflecting the exceptional talent within the Department of Internal Medicine.

I extend my sincerest thanks to all who have participated in creating this document, and I hope you will spend time exploring it. Your feedback and thoughts are invaluable, and I welcome any questions or insights you wish to share.

Sincerely,

A handwritten signature in black ink that reads "Gary Désir". The signature is written in a cursive, professional style.

Gary V. Désir, MD

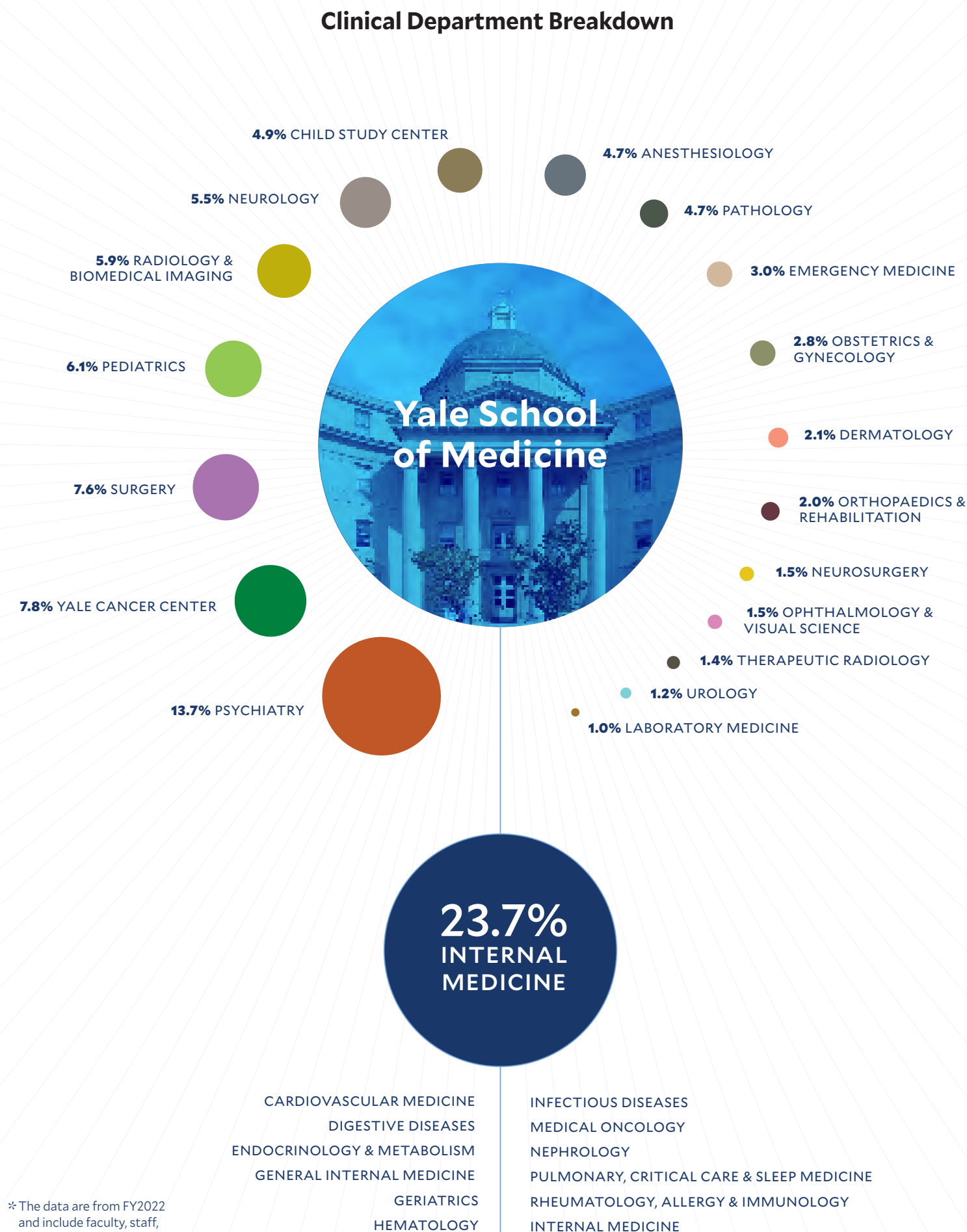
*Paul B. Beeson Professor of Medicine
Vice Provost for Faculty Development and Diversity
Affiliated Faculty, Yale Institute for Global Health
Chair, Internal Medicine, Yale School of Medicine
Chief, Internal Medicine, Yale New Haven Hospital*

The exceptional clinicians, investigators, educators, trainees, and staff in the Department of Internal Medicine at Yale form an internationally renowned department in one of the world's top medical schools.

Embedded in a remarkable basic science environment at Yale, the department's 3,300+ members work in a collaborative culture with numerous opportunities for breakthrough interdisciplinary and translational research.

As the largest department in Yale School of Medicine, the Department of Internal Medicine is made up of 11 academic sections, each with its own administrative structure, the Office of the Chair, and a centralized business office. The department has gained national and international prominence through its clinical, educational, and research activities.

Department Overview



*The data are from FY2022 and include faculty, staff, postdoctoral fellows/associates, postgraduate fellows/associates, residents, and fellows. Percentages rounded to tenths place.

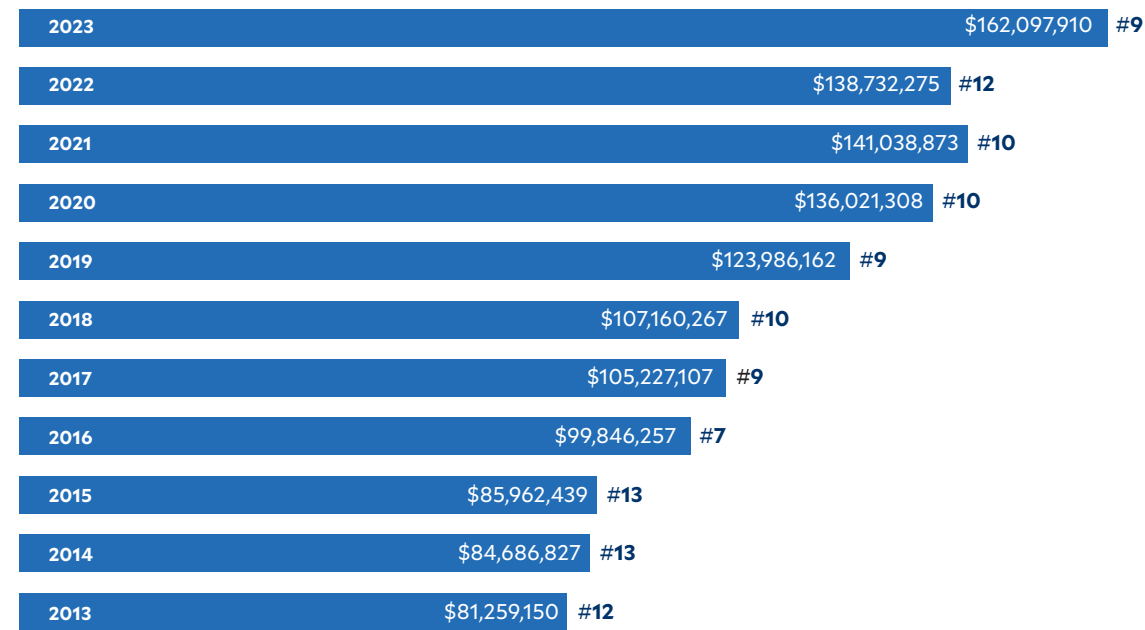
Under Désir's stalwart leadership, the Department of Internal Medicine has grown in size and scope, but its commitment hasn't changed. The department aims to alleviate human suffering and improve health by providing compassionate and equitable care; developing new knowledge; educating and inspiring the next generation of leaders in medicine; and fostering an inclusive, collaborative, and professional culture.

These data are a snapshot of the changes within the department. We will continue to share these data via our website at medicine.yale.edu/internal-medicine.



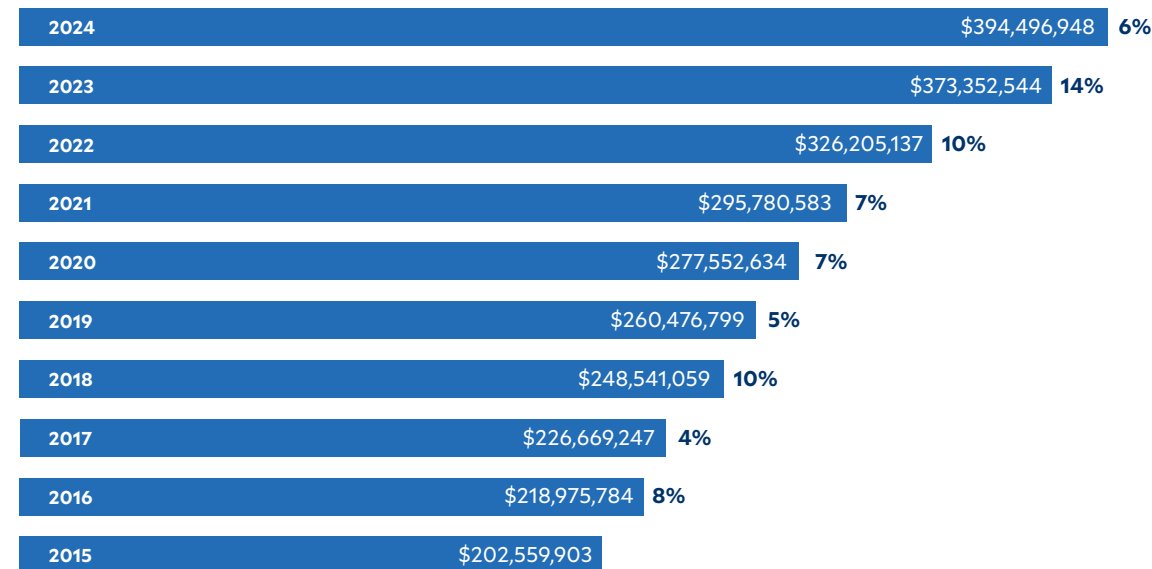
Department NIH Grant Funding

(Blue Ridge's NIH Internal Medicine ranking)



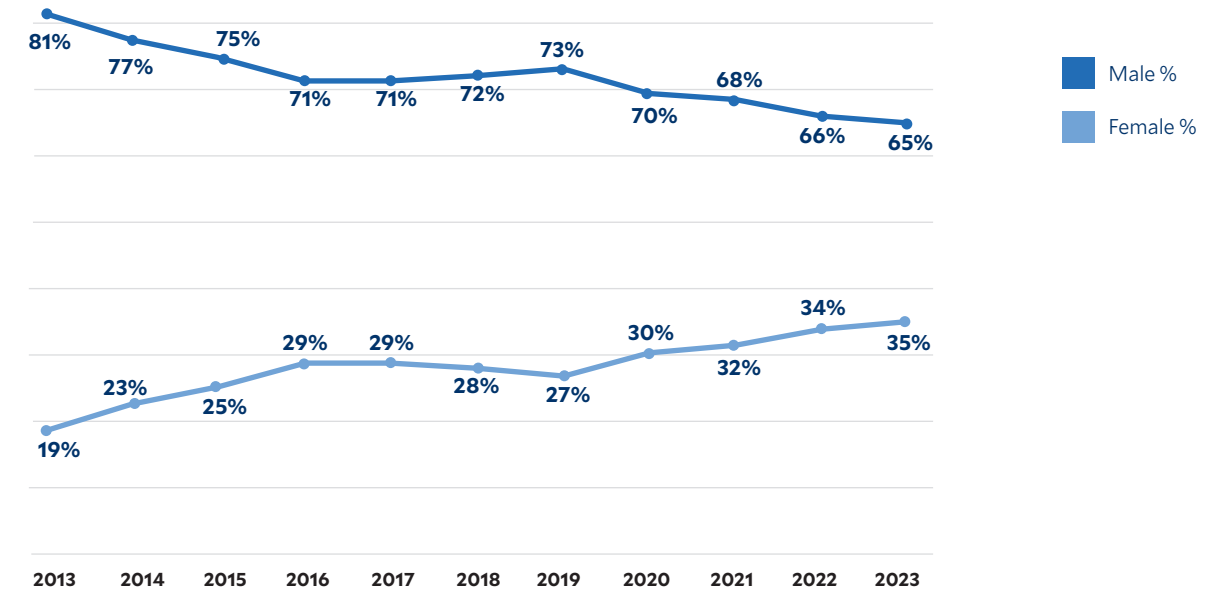
Department Budget Totals

(with year over year percentage increase)

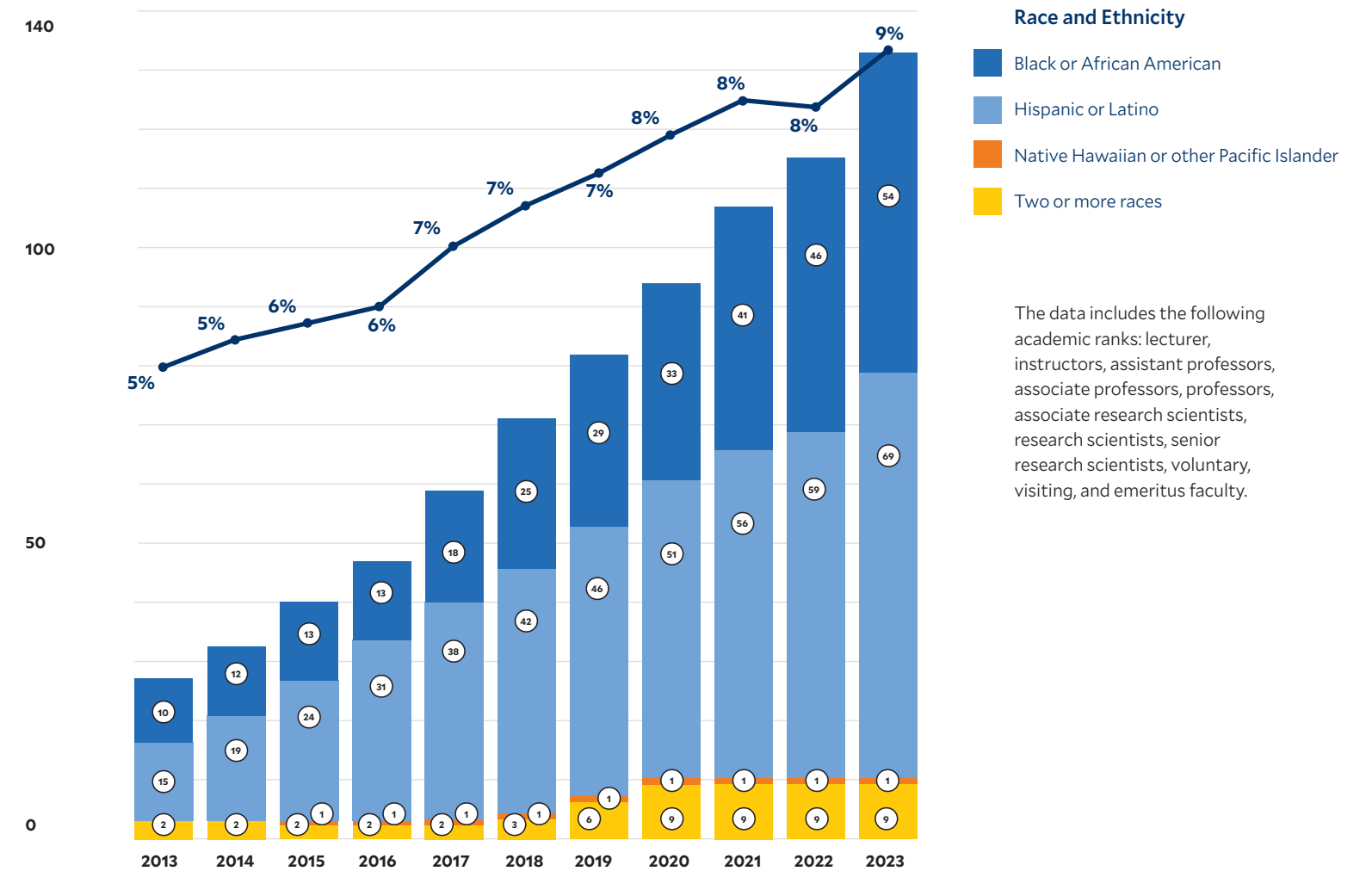


Data from 2013-2014 is not available

Percentage of Male and Female Professors Over 10 Years



URiM Total and % Change Over Time



New Outpatient Raynaud Treatment Saves Fingers and Toes

by Serena Crawford



In a new outpatient treatment at Yale, epoprostenol infusions are safely given to patients whose fingers and toes are damaged by severe Raynaud phenomenon, also known as Raynaud's phenomenon, to prevent amputation. Previously, these patients were sent to the emergency department, where they often waited for days before receiving treatment.

When Monique Hinchcliff, MD, MS, associate professor of medicine (rheumatology, allergy and immunology) and director of the Yale Scleroderma Program, first came to Yale, the only way to care for patients with severe, resistant-to-treatment Raynaud phenomenon, also known as Raynaud's phenomenon, whose fingers were turning black was to send them to the emergency department for hospitalization and treatment.

The system wasn't ideal. "We wanted to be able to help these patients receive the care they needed in a relaxed, non-urgent setting, in a way that could be planned ahead of time," Hinchcliff said.

Raynaud is a condition that involves decreased blood flow to certain body parts, usually fingers and toes. Common triggers of the disorder include cold exposure and stress. Raynaud phenomenon—in which the disorder is associated with underlying conditions such as scleroderma or other autoimmune diseases—can be severe, causing tissue damage and even finger loss.

"Patients with scleroderma get tiny vessel disease that can lead to painful ulcers and black fingertips that, if not treated, can cause tremendous disability and, in the most serious cases, result in amputation," Hinchcliff said. "But the medication epoprostenol, administered intravenously, can prevent or treat these ulcers and gangrene by relaxing blood vessels and improving circulation."

The treatment is used as a last resort in patients who have autoimmune disease and acute circulatory problems, that have not responded to standard medical therapy, explains Vaidehi Chowdhary, MD, associate professor of medicine and clinical chief (rheumatology, allergy and immunology).

To avoid sending patients to the emergency department, Hinchcliff developed a process to have them treated in the medical intensive care unit. But during the recent pandemic, the beds were needed for COVID patients. So Hinchcliff set out to find a place where epoprostenol could be given intravenously in an outpatient setting.

There were challenges along the way, Hinchcliff recalls. The medication is FDA-approved to treat patients with pulmonary arterial hypertension at significantly higher doses that come with side effects. Hinchcliff had to educate other physicians about the much

smaller doses—and lower risk—involved in treating Raynaud phenomenon, which is the standard of care in Europe. In addition, administering epoprostenol requires specially ordered pumps that staff would need training to learn how to use.

After developing an EPIC order, creating a sequence of steps, and conducting educational sessions about the treatment, Hinchcliff's efforts have paid off. Epoprostenol is now given by the Saint Raphael Hospital Outpatient Infusion Therapy (HOIT) team. "In April, we had our first patient get her infusions at HOIT, which is currently the only place in the Northeast and the second place in the U.S. to administer this medication in an outpatient setting," Hinchcliff said.

Both Hinchcliff and Chowdhary emphasize the amount of collaboration that went into establishing the process. It was a big ask of the nurses and the pharmacist at HOIT, Chowdhary says, but they rose to the challenge.

Now that the outpatient treatment is in place, Yale researchers are assessing its effectiveness by administering a newly developed patient questionnaire specifically for Raynaud phenomenon and using a handheld digital camera to capture images of patients' finger nailfold capillaries. Patients also undergo hyperspectral imaging—through a special camera lent to Hinchcliff and her team by Bauer Sumpio, MD, PhD, professor of surgery (vascular) and of radiology and biomedical imaging and of medicine (cardiology)—that shows the amount of oxygen in the fingers.

The goal, Hinchcliff says, is to identify which patients benefit most from epoprostenol and to determine the optimal duration of treatment, including how many times to administer infusions each month and for how many months. Also unanswered, Hinchcliff says, is if, once the treatment is successful, it will need to be repeated after a certain amount of time.

Chowdhary hopes it won't be long before they roll the treatment out to other infusion centers. "We can improve access for patients who are in remote parts of Connecticut, especially during the winter, when Raynaud becomes a big problem," she said.

Hinchcliff sees Yale as a model for how epoprostenol can be offered intravenously in an outpatient setting in the US. "I hope that the treatment can be launched throughout the country," she said.

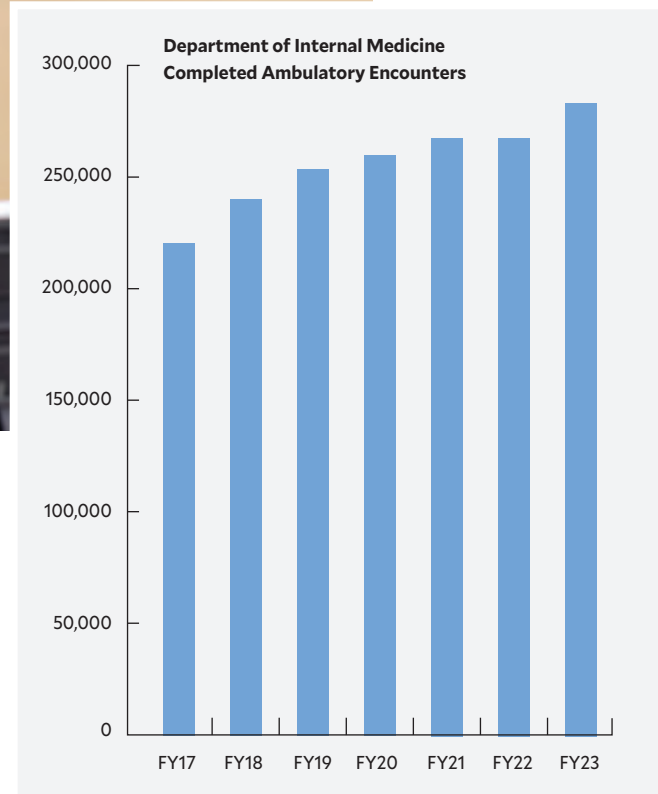


Clinical Affairs

Lynn T. Tanoue, MD, MBA
Vice Chair, Clinical Affairs



Onyema Ogbuagu, MBBCh



Clinical Affairs in the Department of Internal Medicine is experiencing continued growth as the team emerges from the worst years of the COVID-19 pandemic. As the department's clinical volume increases, its internal Clinical Affairs team strives to support clinicians with resources and tools to maximize time with patients by reducing administrative burdens.

Faculty Development

Over the past decade, the Department's New Faculty Orientation has included a series of faculty workshops on Self-Awareness, Emotional Intelligence, Unconscious Bias, Intentional Communication, and Disclosures and Critical Conversations. Collectively known as RISE at Yale (Resilience, Innovation, and Sustainable Excellence at Yale), senior faculty in the department lead these workshops, which were developed in collaboration with external consultants. They reflect the department's commitment to faculty development. The orientation allows new faculty to meet one another and the senior leadership in the department; understand the department's values; and acquire the interpersonal skills needed to begin successful careers at Yale.

Ambulatory Care

Demand for Yale's specialty and primary care expertise continues to increase in ambulatory settings, as reflected in a sustained rise in total annual ambulatory visits. Improving access to care requires innovative approaches, recruitment of more clinical faculty and advanced practice providers, and expansion of ambulatory sites.

Ongoing challenges include the escalating health care needs of an aging population; the ever-increasing complexity of advances in care related to scientific discoveries; space constraints; the ongoing burden of COVID-19; and the effects of health care disparities. Telehealth, launched on a broader scale by necessity during the pandemic, is here to stay, and we continue to pioneer appropriate uses of digital technology in health care.

Inpatient Care

Occupancy rates at Yale New Haven Hospital remain at record-high levels. Occupancy is particularly high during the fall and winter respiratory viral seasons. Patient occupancy on the Internal Medicine services is exceptionally high, typically accounting for more than half of all Yale New Haven Hospital inpatient beds. This complex enterprise requires the collective efforts of Hospitalist Medicine faculty, attendings, trainees, and specialty consultants working with many other services and disciplines to provide state-of-the-art inpatient care.

Clinical Affairs Team

The Clinical Affairs team, led by Jennifer Lacerda, provides personalized live and digital support to the department's clinicians. Over the past several years, the department has expanded the internal billing and coding team to provide information and support to clinicians in streamlining documentation and recording their work accurately. The department's Epic Utilization experts have developed extensive clinician-friendly content to optimize electronic health record (EHR) use. This content is intended to give clinicians more time to interact effectively with patients. Institutional EHR support to achieve that goal is consistently identified as a way to mitigate clinician burnout. The Clinical Affairs team members are available in live, real-time interaction as well as through comprehensive resource materials they have produced that are readily available through the department intranet.

Diversity, Equity and Inclusion

Benjamin Mba, MBBS
Vice Chair, Diversity, Equity and Inclusion

The Department of Internal Medicine strives to create an inviting environment and an institutional culture of inclusivity in which every member's unique characteristics are valued and respected.

Leadership

Benjamin MBA, MBBS, joined the Department of Internal Medicine as vice chair for Diversity, Equity & Inclusion (DEI) in July 2023. He came to Yale from Cook County Hospital and Rush Medical College in Chicago, Illinois. Mba also serves as the Graduate Medical Education Director (GME) of Diversity, Equity & Inclusion for Yale New Haven Hospital (YNHH) and Yale School of Medicine (YSM).

Vandana Khungar, MD, MSc; Aba Black, MD, MHS; and Stephen Huot, MD, PhD, served as interim leaders for the Office of Diversity, Equity & Inclusion in Internal Medicine (ODEIM) since the search for a vice chair began in the spring of 2022.

Mentorship

The Underrepresented in Medicine (URiM) Physician Experience Mentoring Program was launched as a pilot program in September 2023. This initiative matches every URiM resident trainee in the department with a URiM faculty member, and the pairs are slated to meet every eight weeks. Mentees are guided and supported through individual experiences as mentors share their professional experiences and strategies to overcome challenges specific to URiM trainees. The mentors also have direct access to resources and support from the GME Office for their mentees as needed.

Outreach and Diversity

Outreach and recruitment efforts continued through in numerous in-person and virtual recruitment fairs throughout the year. The teams showcased Yale's inclusive, supportive, and equitable climate and its vast array of outstanding medical education and training opportunities.

A group of 20 representatives attended the Latino Medical Student Association conference in person for the first time.

Yale held its first virtual recruitment fair for all three medical schools in Connecticut—Yale School of Medicine, UConn School of Medicine, and the Frank H. Netter MD School of Medicine at Quinnipiac University—with 42 students in attendance. Yale also hosted its second annual Yale-HBCU Virtual Residency Recruitment Fair with over 120 participants from the four HBCU medical schools: Howard,



Meharry, Charles R. Drew, and Morehouse. In addition, Yale hosted its sixth annual recruitment dinner in early 2023 for potential URiM residents, with over 130 virtual attendees.

Gary Désir, MD, and Deborah Dyett Desir, MD, hosted YSM's annual Minority Organization for Retention and Expansion (MORE) event in September. URiM students from across the state are invited to attend along with DEI champions at YSM to learn about MORE and its strategy to increase diversity at YSM, including mentorship and available resources.

The incoming residency class reported that over 25% of the new residents identify as URiM, an increase of 5% over the previous year.

Visiting Student

The department welcomed its second visiting student, Humberto R. Nieves Jiménez, from the Universidad Central del Caribe in Puerto Rico. Nieves Jiménez took a four-week medical elective in rheumatology, where he studied various inflammatory rheumatic diseases at YNHH.

Equity and Inclusion

The Office of Diversity, Equity & Inclusion in Internal Medicine (ODEIM) team began developing an inclusion climate survey for distribution in early 2024. The survey aims to assess experiences of inclusion at the individual, section, and departmental levels. The survey will also capture staff and faculty members' mentorship and sponsorship experiences.

A new series called Equity Begins with Everyone (EBE) Gatherings debuted in September 2023. An outgrowth of the diversity committee meetings, the monthly EBE Gatherings invite faculty and staff to join and present on a topic of their choice related to their experiences, challenges, and aspirations for a more inclusive Department of Medicine. A moderated open session is held after the speakers' presentations. The EBE Gatherings constitute a safe and confidential platform for all.

ODEIM's Program Manager, Cayetana Navarro, along with Jennifer Rawlings and Diana Onco-Ingyadet, is a co-founder of the Indigenous Leaders at Yale (ILY). ILY is the ninth affinity group at the university; it offers a community for everyone who identifies as an Indigenous person, but its programming is open to all.

Looking Ahead

ODEIM is organizing events to create pathways for the next generation of medical providers, including groups historically marginalized in STEM fields. One goal is to identify high school students who are passionate about exploring the field of medicine, and to foster their interests.

In addition, ODEIM is developing an online DEI Productivity Calculator tool that generates a DEI Activity Impact Score to use a DEI-related metric for academic promotion at medical centers nationwide.

Education & Academic Affairs

Vincent Quagliarello, MD
Vice Chair, Education & Academic Affairs

Dana Dunne, MD, MHS
Associate Chair, Education & Academic Affairs

Donna Windish, MD, MPH
Associate Chair, Educational Scholarship

This year saw innovative educational activities led by internal medicine faculty; expanded teaching in the Yale New Haven Hospital firms; new leadership within the Clerkship, Combined Medicine-Pediatrics (Med-Peds) Residency Program, and the Yale Internal Medicine Physician Scientist Training Program (PSTP); and honors for many department educators.

Residency Program Updates

The four internal medicine residency programs celebrated Match Day on March 17, 2023, celebrating 105 incoming matches, 33 international medical graduates, and 21 underrepresented in medicine (URiM) residents.

Graduating residents were honored in July 2023:

- Graduation Festivities Held by Traditional Internal Medicine Residency Program
- Trainees and Faculty Recognized at 2023 Primary Care Residency Graduation
- Internal Medicine Med/Peds Residency Program Celebrates Graduation

Read more news at: medicine.yale.edu/internal-medicine/news



Rosemarie L. Fisher, MD, and Ursula Brewster, MD



Anna Zimmerman, MD, and Angela Kang-Giaino, MD, MPH



Shaili Gupta, MBBS

Samantha Smith, MD, became the new associate program director of the Internal Medicine Med-Peds Residency Program in July 2023. She replaced Jaideep Talwalkar, MD, and was named assistant dean for education at Yale School of Medicine (YSM).

New Leadership

Angela Kang-Giaino, MD, MPH, was named director of the Internal Medicine Clerkship, and Anna Zimmerman, MD, as associate clerkship director in July 2023. Kang-Giaino replaces Dana Dunne, MD, MHS, who was named the inaugural director of the YSM Longitudinal Coaching Program.

The new PSTP leaders were also announced in July 2023. Silvia Vilarinho, MD, PhD, was appointed director; and Andrew Wang, MD, PhD, was named associate director of the program. The PSTP program is the American Board of Internal Medicine (ABIM) Research pathway within the Yale Internal Medicine Traditional Residency Program.

Expansion of Teaching Services

The inpatient teaching firms increased their patient numbers to help manage the patient care volume and expand the range of patient illnesses for trainee education.

Development and Scholarship

YSM New Longitudinal Coaching Program: The program's 18 coaches were announced in June 2023. They will work with medical students to support their professional development and review milestone progress in YSM's nine MD Program competencies. Three coaches are internal medicine faculty: Stephen Baldassarri, MD, MHS; Robert Elder, MD; and Christopher Sankey, MD.

Yale Triple R (Research Resources Repository): A new residency program resource debuted in May 2023 that connects residents with a research mentor and provides one-on-one consultations with attending physicians and peers. The Yale Triple R site is available on the Internal Medicine website. The idea for the initiative came from a collaboration between resident Saeed Soleymanjahi, MD, MPH, and Shaili Gupta, MBBS, associate professor of medicine.

Clinician Educator Distinction Pathway: Open to all internal medicine residency programs, this two-year distinction pathway averages 28 resident participants and is overseen by six advisors: Matthew Zegarek, MD; Thilan Wijesekera, MD, MHS;

Jennifer Ouellet, MD; Christina Johns, MD; Kathleen McAvoy, MD; and Dana Dunne, MD, MHS.

Fellows as Medical Educators (FAME) Certificate Course: The course is now in its seventh year; 20 fellows from internal medicine and other YSM departments are participating in 2023–2024. Seven fellows completed the program in June 2023:

- Matthew Ringer, MD (Infectious Diseases)
- Santhi Singanamala, MD (Infectious Diseases)
- Gregory Rubinfeld, MD (Cardiovascular Medicine)
- Jessica Stempel, MD (Hematology/Oncology)
- Thejal Srikumar, MD (Hematology/Oncology)
- Jessica Zuo, MD (Geriatrics)
- Chimezie Mbachi, MD (Digestive Diseases)

Lindsay Johnston, MD, MEd, and Dana Dunne, MD, MHS, direct the course.

Faculty Development: The third annual Yale-ACGME Faculty Development course on "Improving Faculty Competence in Assessment" was held in March 2023 with participants from the eastern United States. The next course will be offered in fall 2024.

[IM] Educator Series: The department-only series concluded in June 2023 and is now being offered to the entire YSM teaching community as a bimonthly Zoom series renamed YES! (Yale Medical Educator Series.) The new course combines educator skills for clinical teaching. More information and registration are available on the Center for Medical Education website. The series is co-directed by Andrés S. Martin, MD, PhD, and Dana Dunne, MD, MHS.

Advancement of Clinician-Educator Scholarship (ACES) Faculty Development Program: ACES accepted eight participants in its fifth year. Alex Choi, MD; Anika Anam, MD; Amy Ogurick, MD; Mary Clare Higgins-Chen, MPH, MD; Norrissa Haynes, MD, MPH; Cesia Gallegos Kattan, MD, MHS; Jonathan Weber, PA-C; and Nikhil Sikand, MD.

Honors & Awards

Ursula Brewster, MD, won the Rosemarie L. Fisher, MD, Excellence in Graduate Medical Education Awards in 2023.

Faculty Affairs

Lawrence Young, MD
Vice Chair, Faculty Affairs

Adam Mayerson, MD
Associate Chair, Community & Voluntary Faculty



Jonathan Bogan, MD



E. Jennifer Edelman, MD



Manisha Juthani, MD

Faculty Growth

Over the last five years, ladder track faculty members have grown from 521 to 616. The faculty has steadily increased in the clinician scientist, clinician educator-scholar, and academic clinician tracks. The most significant growth has been in the academic clinician track to expand clinical programs and develop new sites for patient care. The traditional and investigator tracks have remained stable during this period.

Mentoring Program

Yale School of Medicine (YSM) launched the Faculty Development Annual Questionnaire (FDAQ), an instrument to be used by our faculty to support their career development efforts in December 2022. The department uses the FDAQ as a critical component of the mentoring program for all ladder track faculty. The FDAQ was used intensively by department faculty with a 99% completion rate. The information was accessible electronically to mentors and section chiefs, who provided feedback to faculty on their accomplishments and goals. Junior faculty members met with their mentors and section chiefs, while professors met with their section chiefs to discuss their FDAQ and career development.

Track Renaming

YSM renamed the clinical track as the academic clinician track in July 2023. This track gives faculty making outstanding contributions in the clinical and/or educational areas the opportunity to be recognized and to advance within the academic ranks. The clinician educator track was renamed the clinician educator-scholar track to emphasize scholarly contributions.

Faculty Appointments/Promotions

The following faculty members were promoted to or appointed full professor of medicine:

- Fadi Akar, PhD, Investigator Track (Cardiovascular Medicine)
- William Becker, MD, Clinician Scientist Track (General Medicine)
- Gretchen Berland, MD, Academic Clinician Track (General Medicine)
- Jonathan Bogan, MD, Traditional Track (Endocrinology)
- Myron Brand, MD, Academic Clinician Track (Digestive Diseases)
- Jonathan Dranoff, MD, Clinician Educator-Scholar Track (Digestive Diseases)

- E. Jennifer Edelman, MD, Clinician Scientist Track (General Medicine)
- James Freeman, MD, MPH, Clinician Educator-Scholar Track (Cardiovascular Medicine)
- Veda Giri, MD, Clinician Scientist Track (Medical Oncology)
- Daniel Greif, MD, Traditional Track (Cardiovascular Medicine)
- Stephanie Halene, MD, Dr. Med, Clinician Scientist Track (Hematology)
- Manisha Juthani, MD, Clinician Educator-Scholar Track (Infectious Diseases)
- Richard Kibbey, MD, PhD, Traditional Track (Endocrinology)
- Ian Krop, MD, PhD, Clinician Scientist Track (Medical Oncology)
- Lisa Sanders, MD, Clinician Educator-Scholar Track (General Medicine)
- Mireille Serlie, MD, PhD, Investigator Track (Endocrinology)
- Sandra Springer, MD, Clinician Scientist Track (Infectious Diseases)

In addition, 20 faculty members were promoted to or appointed associate professor, 49 to assistant professor, and 17 to instructor. Jiasheng Zhang, MD, was promoted to senior research scientist (cardiovascular medicine) in the research ranks. Six faculty members were promoted to or appointed research scientist, and 24 to associate research scientist.

Two members of the voluntary faculty were promoted this year:

- Philip Goldberg, MD, Associate Clinical Professor (Endocrinology)
- Nancy Kim, MD, PhD, Associate Clinical Professor (General Medicine)
- Robert McLean, MD, Clinical Professor (Rheumatology, Allergy & Immunology)
- John Toksoy, MD, Associate Clinical Professor (General Medicine)

Four faculty members were appointed to professor adjunct in recognition of their contributions to the department's mission:

- Ali Abu-Alfa, MD (Nephrology)
- David Felson, MD, MPH (Rheumatology, Allergy & Immunology)
- Inginia Genao, MD (General Medicine)
- Edoardo Giannini, MD, PhD (Digestive Diseases)

Seventy-one ladder track faculty members were reviewed and reappointed to an additional term at their current rank, including 46 assistant professors, 23 associate professors, and two professors. The FY 2023 A&P Committee reviews all applications for appointment and promotion, and then advises the sections and the senior/tenured faculty on their recommendations. The committee members included Peter Aronson, MD; Lori Bastian, MD, MPH; Gary Désir, MD; David Fiellin, MD; Terri Fried, MD; Rachel Lampert, MD; Richard Marottoli, MD, MPH; Margaret Pisani, MD, MPH; Deborah Proctor, MD; Michal Rose, MD; Albert Shaw, MD, PhD; and Lawrence Young, MD.

Voluntary Faculty Awards

2023 marked the first year for the following honors for the voluntary faculty:

- Distinction in Leadership Award: Lucille Burgo-Black, MD
- Primary Care/General Medicine Award: Amenuve Bekui, MD, MPH
- Distinction in Research: Carolina Borz-Baba, MD
- Specialist Award: Gilead Lancaster, MD
- Inpatient Medicine Award: Jensa Morris, MD

Faculty Affairs Team

Erica Janosko joined the department's faculty affairs team in August 2023. She partnered with Catherine Severino, Mansi Ahuja, and Laura Whitley to coordinate promotion and appointment activities and other faculty affairs issues. The team oversees the academic leave process, faculty recruitment efforts, and retirement and emeritus applications. It provides training for staff and faculty members on all aspects of the department's faculty policies and procedures.

Finance & Administration

Mark A. Holter, CMPE, CPA
Vice Chair, Finance & Administration

Finance

The Department of Internal Medicine accounts for almost a quarter of the clinical departments within the School of Medicine, with an ever-growing base of clinicians, educators, researchers, trainees, and staff members. The operating budget continues to grow yearly, hitting over \$400M for FY23. The operating budget continues to increase by nearly 10% each year. Clinical volume, measured by work relative value units (wRVUs), reached 1.2M+ units.

The finance team, led by Joseph Velasco, associate director, oversees the department's finances.

The annual Blue Ridge Institute for Medical Research (BRIMR) report reviews funding from the National Institutes of Health for medical schools, basic science, and clinical science departments. The Department of Internal Medicine ranks twelfth on its list for 2022.

For FY23, the department had 827 active awards and 644 grant submissions. Julie Jennings, director of research administration, oversees research and grant support.

Administration

Along with tremendous growth within the department's faculty, the support staff continues to add new roles and tasks. The department has 443 staff members working across administrative, finance, clinical support, and research realms, an increase from the previous year.

The following new operations managers within the central business office, led by Sarah Hagans, associate director, administration, were promoted or joined the department this year:

- Keith McGibbon
- Terry Setzer
- Michelle St. Peter

Christine Centola was promoted to academic & administrative affairs associate director in April 2023. Nicole Ouellette became the manager of staff administration in July 2023, and Meghan Gaudioso began working in January 2024.

The communications team led by Julie Parry added two new members in January 2023: Serena Crawford joined the department as a communications officer, and Crystal Gwizdala as an associate communications officer. Amy Anderson and Serena Crawford were promoted within the organization in September 2023.

Staff Engagement

The department hosted an all-staff picnic in July 2023. The celebration was held in Amistad Park with the intention to thank the department staff for a beautiful year. The picnic featured good food and two celebrity guests: Handsome Dan, the Yale bulldog mascot; and Heidi, the Yale Public Safety service dog.

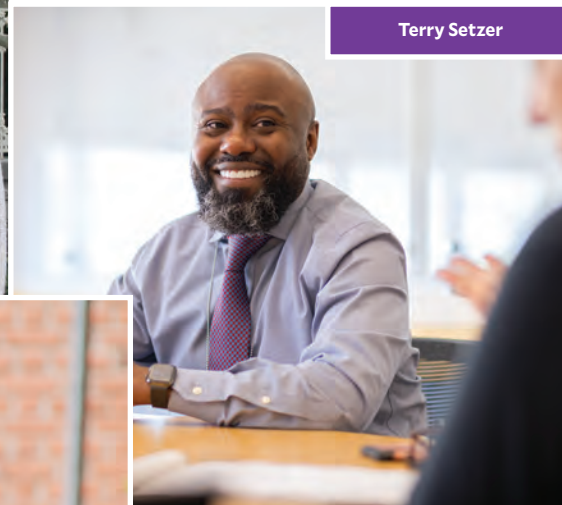
This year, the Administration Workplace Survey Committee has expanded to include staff within the sections and now boasts six members.

Department of Internal Medicine Service Excellence Awards

Anne Marie Berrios, senior administrative assistant, and Sinéad McKernan, electronic health record utilization manager, were chosen to receive the 2023 Department of Internal Medicine Service Excellence Awards. The awards, given annually at the department's spring town hall meeting, acknowledge staff members who exceed performance expectations and promote the department's goals, values, and mission.



Sinéad McKernan



Terry Setzer



Michelle St. Peter



Anne Marie Berrios

Quality & Safety

Aldo Peixoto, MD
Vice Chair, Quality & Safety



The Department of Internal Medicine is committed to providing high-quality care by improving safety measures for patients, faculty, and staff.

Continued Improvement

Over one year, YNHH achieved its stretch goal for congestive heart failure (CHF) 30-day readmissions, with a rate of 19% from October 2022 to September 2023. The department's physicians included Jared Moreines, MD, PhD; Adam Ackerman, MD; Samuel Hahn, MD; and Tariq Ahmad, MD, MPH.

YNHH demonstrates continued improvement in inpatient mortality by identifying patients transitioning from receiving comfort measures to hospice care. L. Scott Sussman, MD, and Jensa Morris, MD, are leaders in comprehensive end-of-life care.

New Initiatives and Pathways

A new initiative has been established following the success of YNHH's Propel project, which aims to discharge patients by 11 a.m. The initiative is called the Right Patient, Right Service, Right Time, Right Bed; its goal is to reduce the time it takes for admitted patients to be assigned to and placed in rooms by 20% by March 2024.

The Department of Internal Medicine is proud of its work in creating and disseminating care signature pathways to advance the quality of care in hospital and ambulatory care sites. The top pathways used during this period that directly involved department faculty in their development were COVID-19, *C. difficile*/diarrhea, alcohol withdrawal, chest pain, opioid use disorder, chronic obstructive pulmonary disease, cellulitis, diabetes, pneumonia, and pulmonary embolism.

An Adult Inpatient Hypertension Care Signature Pathway was developed and launched in July 2023 to treat acute hypertension in hospitalized patients. The pathway addresses the overuse of intravenous medications and the attendant risks of stroke and acute kidney injury. Overtreatment of inpatients with hypertension is a common problem nationwide, and the department is leading this important quality improvement initiative. Department leaders in the work included Antonio Giaimo, MD, and Janjenali Villafior, MD.

Many other pathways have been developed this past year with input from department faculty. Faculty, trainees, and staff members are encouraged to use these pathways consistently in patients' daily care.

The TALK IT OUT Campaign, which allows trainees to discuss or report concerns and incidents to leadership, also encourages a safe environment. The campaign was spearheaded by Lloyd Friedman, MD; Rebecca Slotkin, MD; and Andrea Asnes, MD, MSW, to give trainees additional resources to address a situation appropriately. Individuals may use the GME confidential phone line or bring concerns directly to program directors or attendings.

A verbal abuse section was added to the Care Signature Pathway developed by Daniel Heacock, PA-C, to address verbal issues that might arise in the workplace. The principles noted in the TALK IT OUT campaign were used with advice from YNHH's Workplace Violence Committee. The Workplace Verbal Aggression/Abuse and Violence: Adult Ambulatory/ED/Inpatient Pathway provides a roadmap for individuals who find themselves in an uncomfortable situation that includes in-

appropriate remarks or behaviors from colleagues, patients, and/or families.

The Partners in Care Program was launched in January 2021 to improve collaboration between nurses, physicians, and staff members. The program is under continued development to encourage positive interactions, employee recognition, and camaraderie in each hospital unit's safe and friendly environment. First established by Lloyd Friedman, MD, and Debora Lindewall-Matto on 5-5, the project was subsequently overseen by Jessica DeMaio and now Laurie Devin. It is implemented on a trial basis from 9-7 and will soon be extended to the medicine floors.

Morbidity and Mortality Conferences

The Quality and Safety team set up a framework and deployed morbidity and mortality conferences across the department's 11 sections. The conferences are considered open forums to discuss issues, errors, and adverse events to learn safely while improving the care provided by the department.

The housestaff morbidity and mortality conference was optimized over the last year. VA Chief Resident in Quality and Patient Safety (CRQS) Samantha Magier, MD, MEng, obtained survey data and modified the conference format to continue offering residents anonymity in discussing such issues openly.

Research

Barbara Kazmierczak, MD, PhD
Vice Chair, Basic Research

In 2022, research leadership outlined goals to expand departmental research initiatives through select priority areas. The work to refine the priorities and build out program structures continues.

In September 2023, the translational Geroscience initiative was officially launched with lectures from a visiting professor, Luigi Ferrucci, MD, PhD. This initiative seeks to bring together diverse physician investigators and scientists in areas relevant to aging, including infectious diseases, pulmonary medicine, rheumatology, and other subspecialties. For more information on translational geroscience, please refer to page 22.

Other priority areas identified by the department included bioinformatics and metabolism. These two initiatives were centralized across Yale School of Medicine. The new Department of Biomedical Informatics & Data Science and the Yale Center for Molecular and Systems Metabolism have affiliated faculty within internal medicine. Planning is ongoing within other focus areas, including coordination and alignment for department researchers in fibrosis, addiction medicine, and emerging pathogens.

Harriet Kluger, MD
Vice Chair, Collaborative Research



Andrew Wang, MD, PhD

Robert Soufer, MD
Vice Chair, Clinical Research

- Rohan Khera, MD: Young Physician-Scientist Award
- Elise Liu, MD, PhD: 2023 Emerging-Generation Award
- Andrew Wang, MD, PhD: new member

Janeway Society

The Janeway Society was developed to create infrastructure and oversight for career development and to shorten the time to independence at Yale. The department has 55 members of the Janeway Society, with nine new members elected between September 2022 and September 2023:

- Diana Athonvarangkul, MD, PhD
- Michael Chiorazzi, MD, PhD
- Eugenia Chock, MD, MPH
- Allison Gaffey, MD
- Sang Taek Kim, MD
- Mengfei Liu, MD
- Edward Manning, MD
- Minhee Sung, MD
- Louise Wang, MD, MSCE

Yale Physician-Scientist Development Awards

The Office of Physician-Scientist and Scientist Development provides grants to junior physician-scientists to conduct mentored research that will facilitate the development of independent research programs through the Yale Physician-Scientist Development Awards program.

The Department of Medicine had numerous award winners for 2022 and 2023:

- Irene Chernova, MD, PhD
- Eugenia Chock, MD, MPH
- Genta Ishikawa, MD, MPH
- Snigdha Jain, MD, MHS
- Lisa Korn, MD, PhD
- Elise Liu, MD, PhD
- John Stendahl, MD, PhD

The Program in Translational Biomedicine accepted its first PhD students this academic year. Led by Megan King, PhD, and Richard Kibbey, MD, PhD, the program aims to train students who wish to study human disease through the lens of fundamental mechanisms. Faculty members from across YSM, including department members David Braun, MD, PhD; Lloyd Cantley, MD; Fred Gorelick, MD; Stephanie Halene, MD, Dr Med; Erica Herzog, MD, PhD; Monique Hinchcliff, MD; Madhav Menon, MBBS, MD; Ruth Montgomery, PhD; Gerald Shulman, MD, PhD; Stefan Somlo, MD; Daniel Vatner, MD, PhD; and Lawrence Young, MD; mentor PhD students in applying cutting-edge research techniques to solve clinical problems.

New Research Centers

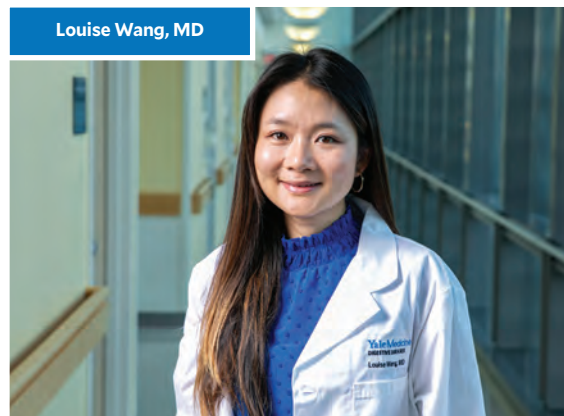
In March 2023, Yale School of Medicine announced the establishment of the Yale Obesity Research Center (Y-Weight), led by Ania Jastreboff, MD, PhD. The new center's mission is to improve the lives of individuals living with obesity through cutting-edge research, leading to the development and application of novel therapies and targeting such obesity-related diseases as type 2 diabetes, cardiovascular disease, and certain types of cancer.

Research Honors & Awards

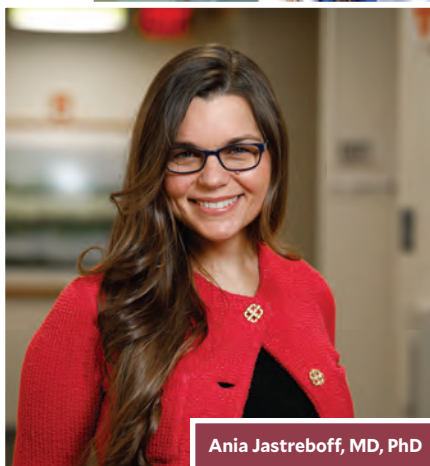
American Society for Clinical Investigation

Over the past year, the American Society for Clinical Investigation (ASCI) recognized the following faculty members for their accomplishments:

- David A. Braun, MD, PhD: Young Physician-Scientist Award
- Benjamin Goldman-Israelow, MD, PhD: Young Physician-Scientist Award
- Ya-Chi Ho, MD, PhD: new member



Louise Wang, MD



Ania Jastreboff, MD, PhD



Benjamin Goldman-Israelow, MD, PhD

Veterans Affairs

Daniel Federman, MD
Vice Chair, Veterans Affairs

The Department of Internal Medicine has 77 faculty members who care for patients in numerous clinics, lead educational initiatives, and perform research as part of the VA Connecticut Healthcare System.

ALLERGY AND IMMUNOLOGY Christina Price, MD

The section addresses drug allergies along with the management of immune deficiency in immunoglobulin infusions and allergen immunotherapy. The section specializes in clinical research in adults with immune deficiency. Christina Price, MD, delivers patient care services through e-consults, telehealth, and in-person consultations.

CARDIOVASCULAR MEDICINE Steven Pfau, MD

The VA Connecticut Cardiology Section comprises 11 full-time and 10 part-time faculty members; 12 advanced practice providers; and seven full-time fellowship trainees. It serves veterans in Connecticut, eastern New York, western Massachusetts, and Rhode Island. VA Connecticut is one of two centers for tertiary cardiac and cardiovascular surgery in New England.

The clinical programs have continued to expand their regional presence through innovative remote clinical care. In the last year, we have added remote support to Springfield and Northampton, Massachusetts, as well as the existing locations of Castle Point, New York, and Manchester, New Hampshire. Yale faculty provide expertise in cardiac electrophysiology, peripheral vascular disease, and interpretation of echocardiograms to these locations through video visits and image file transfer—thus saving patients and providers both time and travel expenses, and improving regional efficiency in tertiary cardiac care.

Locally, our clinical program has added left atrial appendage occlusion (LAO) for patients with atrial fibrillation intolerant of anticoagulation with the first implant of a Watchman device in April 2023. Through close collaboration with the Yale LAO program, VA patients benefit from the expertise of Yale faculty and the efficiency of having the procedure performed on the West Haven VA campus.

Mehran Sadeghi, MD, was recognized in January 2023 with a Senior Clinician Scientist Investigator Award by the VA Office of Research and Development. This award identifies Sadeghi as an outstand-



Mehran Sadeghi, MD

ing clinician-scientist with a long history of VA-based research that continues to provide high-quality clinical care to veterans. Sadeghi is exemplary of VA-based cardiology faculty who continue to contribute to clinical and basic sciences; he has over 35 peer-reviewed publications in such areas as clinical vascular medicine, vascular biology, transplant medicine, coronary physiology, and cardiac CT imaging in the past year.

ENDOCRINOLOGY Varman Samuel, MD, PhD

VACHS endocrinology is staffed by six faculty (with a total of 2.5 FTE) who provide endocrine care for veterans in outpatient clinics in West Haven and Newington, and supervise endocrine fellows in their longitudinal clinic. Two faculty members, Varman Samuel, MD, PhD, and Daniel F. Vatner, MD, PhD, have their own independent labs. Two faculty members, Ana Luisa Perdigoto, MD, PhD, and Diana Athonvarangkul, MD, PhD, are young investigators.

Two clinical faculty members, Lisa Parikh, MD, and Grace Lee, MD, bring clinical expertise in endocrine subspecialties (e.g., obesity medicine, transgender care, bone and thyroid diseases) to ensure outstanding care for veterans and a comprehensive educational experience for trainees. Together, they have 16 publications from 2021 to 2022. Samuel is currently the section chief for this section and has his laboratory at VACHS. He is currently serving on the VA's Clinical Practice Guidelines Committee for Diabetes.

The section recruited Athonvarangkul this year to replace Barbara Gulanski, MD, MPH, who retired from the VACHS after more than 20 years of dedicated service and leadership. Parikh and Vatner have continued to expand their clinical expertise to develop specific roles in obesity medicine and clinical lipidology. With sup-

port from the VA, it would be feasible to expand these roles within the Clinical Resource Hub to make VACHS a regional center for these endocrine subspecialties.

GASTROENTEROLOGY / LIVER Tamar Taddei, MD

The VA Section of Digestive Diseases is led by Tamar Taddei, MD, section chief. Simona Jakab, MD, serves as associate chief of hepatology, and Petr Protiva, MD, MPH, as associate chief of gastroenterology. Gyan Prakash (Avi) Ketwaroo, MD, MSc, is the director of endoscopy. The section continues to win national recognition by participating in the National GI and Hepatology Program Office Field Advisory subcommittees, including the section chiefs (Taddei), endoscopy (Ketwaroo), cirrhosis (Jakab), and liver cancer (Taddei) subcommittees. Petr Protiva, MD, MPH, in partnership with a dedicated primary care service, leads VACHS's colorectal cancer screening initiatives, and serves as the local site PI for two VA national colorectal cancer screening trials. Amy Ogurick, MD, continues leading quality improvement initiatives to improve fellowship training and the ambulatory GI practice while developing her career as a 2023 Department of Medicine Advancement of Clinician-Educator Scholarship (ACES) recipient.

Gyanprakash Ketwaroo, MD, MSc, has furthered endoscopy education by developing a hands-on training series for attendings and fellows. Joseph Lim, MD, served as course director for the annual VA Liver Update, broadcast widely to VACHS and the VA New England Healthcare System (VISN 1). Jonathan Dranoff, MD; Guadalupe Garcia-Tsao, MD; Matthew McConnell, MD; Jakab; and Taddei continue to expand hepatology and liver



Tamar Taddei, MD

cancer outreach to the VISN 1 and beyond, providing specialty care to Massachusetts, New Hampshire, Rhode Island, Vermont, and Oklahoma.

The section welcomed Basile Njei, MD, MPH, PhD, in January 2023, and Anahita Rabiee, MD, MHS, in August 2023. Njei received a highly competitive VA ORD Diversity, Equity, and Inclusion supplement for his work under the mentorship of Amy Justice, MD, PhD. He also received an early-career investigator award in health care disparities from the American Association for the Study of Liver Diseases (AASLD). He was selected to attend the joint AASLD-European Society for the Study of the Liver (EASL) Masterclass, a two-day intensive training session designed for future leaders in academic hepatology.

Anahita Rabiee, MD, MHS, received the VA HSR&D Small Award Initiative For Impact Funding (SWIFT) to study disparities in alcohol-associated hepatitis, as well as an industry-sponsored grant to study the utility of albumin coadministration with diuretics for fluid retention in cirrhosis with Garcia-Tsao. Louise Wang, MD, MSCE, presented her VA CDA-funded research on polygenic risk scores in pancreatic cancer at the annual American Association for Cancer Research meeting in 2023. Fred Gorelick, MD; Wajahat Mehal, MD, DPhil; and Jonathan Dranoff, MD, continue to lead and serve NIH and VA study sections in addition to their busy research projects.

Members of the section have leadership roles in the AASLD and the American Gastroenterological Association (AGA), the field's two premier specialty societies. Loren Laine, MD, chief of Yale Section of Digestive Diseases, serves as chair of Digestive Disease Week, which is the premier digestive diseases meeting in the world. Taddei assumed a three-year term as governing board member and treasurer of the American Association for the Study of Liver Diseases in January 2023. Susan Zapatka, APRN, was elected associate lead of the AASLD Clinical Practice Special Interest Group (SIG); and Neeraja Kannan, DNP, was elected associate lead of the AASLD Liver Cancer SIG. Garcia-Tsao received the prestigious 2023 International Mentor Award from the Asociación Latinoamericana para el Estudio del Hígado (ALEH). Section members published over 85 papers in the past year.

GENERAL MEDICINE
William Becker, MD

The section of general medicine, led by William Becker, MD, has 26 primary care physicians.

The Health Professions Education, Evaluation, and Research (HPEER) fellowship is in its second year and is co-directed by



Daniel Federman, MD

Rebecca Brienza, MD, MPH. HPEER is an interprofessional fellowship focused on educational and curricular design and implementation for substance use disorder.

The Center of Excellence nurse practitioner residency received full accreditation in March 2023.

The mailed fecal immunochemical test (FIT) program, led by Jin Xu, MD, increased VACHS' average colon cancer screening rate by more than 10% compared to the averages across other Veterans Integrated Services Networks (VISNs).

Amy Schwartz, MD, co-chaired the Patient Aligned Care Team (PACT) Implementation Roadmap Committee for the Office of Primary Care. This committee has published practical tools (including a gap analysis tool and an activity tracker) for use nationally across all primary care sites to optimize the primary care delivery system. The group has provided a detailed assessment tool for local leadership, and a thorough description of best practice implementation strategies.

Daniel Federman, MD, presented at the Department of Internal Medicine's Medical Grand Rounds on "My Journey in Pain Management: What a Long, Strange Trip It's Been" in September 2022. In addition, Federman delivered a presentation on the advances in wound healing and self-induced skin lesions at two national meetings.

From September 2022 to September 2023, the section produced ten publications on topics ranging from antibody titers to vaccine rates and post-discharge outcomes.

HEMATOLOGY / MEDICAL ONCOLOGY
Michal Rose, MD

Eight faculty members care for patients with cancer and hematologic disorders at VACHS. The section has a robust clinical trials program and is a popular rotation for fellows and residents. Talib Dosani, MD, was given the David S. Fischer, MD Annual Teaching Award for 2023.

The Schwartz Rounds, initiated in 2020

by Edward Perry Jr., MD, average over 100 attendees per quarterly session, with most participants rating the experience as excellent in post-session surveys. In May 2023, Perry collaborated with Jeffrey Kravetz, MD, and Amy Schwartz, MD, to initiate the Primary Care Schwartz Rounds, focusing on topics of interest to primary care providers.

The VACHS Hematology/Medical Oncology clinical trials program is active within the National Clinical Trials Network (NCTN) of the National Cancer Institute (NCI). VACHS continues to be the top enrolling site nationwide for NCTN studies.

- A081801 (CHEMO-IO): 5/205 sites
- A151804 (ir-AE): 5/43 sites
- LungMAP: 6/412 sites
- NHLBI-MDS: 14/170 sites
- S2013 (I-CHECKIT): 5/183 sites

Michal Rose, MD, serves as the lead oncologist to the VISN 1 clinical trials network and the SWOG Storefront (a consortium of five VA medical centers across New England), recognized as a top-accruing institution at the SWOG Fall meeting in Chicago in October 2023.

VACHS continues to be a hub for the Lung Precision Oncology Program (LPOP), a partnership between the National Oncology Program Office and the Office of Research and Development to optimize lung cancer care. The primary co-investigators are Hilary Cain, MD, and Michal Rose, MD. The lung cancer clinical trials portfolio was expanded through this grant, and the team mentored other New England VAs as they built their clinical trial programs. Rose was invited to present best practices from this program at the annual LPOP meeting in Boston in September 2023.

Herta Chao, MD, PhD, renewed her VA Merit grant in 2023 and continues to be PI on an R01 and R01 supplement to study the cognitive effects of androgen deprivation therapy. She also chairs an NCI Cancer-Related Cognitive Impairment workgroup focusing on the cognitive assessment of cancer patients undergoing treatment.

Alexander Pine, MD, PhD, represents Yale on the NCCN Guideline Panel on Cancer-Associated Venous Thromboembolism Diseases, and Rose represents Yale on the NCCN Chronic Myeloid Leukemia Panel. Talib Dosani, MD, is a VA clinical pathways development team member for hematologic malignancies for the Veterans Affairs National Oncology Program.

HOSPITAL MEDICINE
Elizabeth Marhoffer, MD

Elizabeth Marhoffer, MD, leads the Section of Hospital Medicine as interim section chief. She took over the role from Craig



Craig Gunderson, MD

Gunderson, MD, as acting chief in 2023. Other section members stepped into new leadership roles at Yale School of Medicine and VACHS between September 2022 and September 2023.

Benjamin Cherry, MD, was named director of the Internal Medicine sub-internship to support the educational mission. Shailesh Gupta, MBBS, joined the Internal Medicine Traditional Residency Program as associate program director, and was named director of Diversity, Equity, and Inclusivity of Graduate Medical Education at VACHS. Naseema Merchant, MBBS, became site director of the Chief Residency Program in Quality Improvement and Patient Safety; associate director for Quality Improvement, Patient Safety & Leadership; and site director for the Internal Medicine Clerkship. Benjamin Rodwin, MD, was named associate program director of the Internal Medicine Traditional Residency Program and director of Trainee Quality Improvement and Patient Safety, VACHS Office of Education.

In addition to Marhoffer, other faculty members were named to new administrative positions at VACHS. John Chang, MD, was named chair of the Flow Committee, VACHS. Craig Gunderson, MD, became deputy executive director of the National Hospital Medicine Program for the Veterans Health Administration. Shailesh Gupta, MBBS, was appointed vice chair of Diversity, Equity, and Inclusion at VACHS. Naseema Merchant, MBBS, became physician lead for the High Reliability Organization in the Department of Medicine at VACHS.

Ben Carey, MD; Chang; Gunderson; Gupta; Jürgen Holleck, MD; and Merchant gave 31 regional and national talks, and the section published 27 peer-reviewed papers. Gupta won the Yale Education grant. Holleck's SWIFT grant was extended for his research, "Risk of Serious Adverse Gastrointestinal Events Associated with the Use of Potassium Binders for the Treatment of Hyperkalemia in Hospitalized Patients."

INFECTIOUS DISEASES
Richard Sutton, MD, PhD

Richard Sutton, MD, PhD, resumed duties as chief of infectious diseases in January 2023 after Louise-Marie Demby, MD, MBA, retired. Sutton attends the inpatient ID service and has an active, well-funded research laboratory at Yale that investigates aspects of HIV cure. He presented work at the Cold Spring Harbor's Retroviruses meeting on his HIV Rev dimerization assay in May 2023. Sutton serves on the WHVA R&D committee and the IBC at Yale, which reviews biosafety protocols at VACHS. Sutton also serves on Yale's internal medicine residency selection committee.

Joseph Vinetz, MD, contributes to VA internal medicine clinical care by performing inpatient ID consults, internal medicine hospital team attending, outpatient HIV clinic mentoring, and outpatient travel medicine consulting/precepting. He is now an Institutional Animal Care and Use Committee (IACUC) member. He is working to establish such VA-based research programs as nationwide pneumococcal serotype study and bacterial immunopathogenesis (with Gary Désir, MD). Vinetz also contributes to VA teaching by co-directing the internal medicine residency journal club.

Sandra Springer, MD, helped to write legislation and testified in the Connecticut state legislature to legalize mobile retail pharmacies; the bill was signed into law by Governor Ned Lamont on July 1, 2023. Through Springer's NIDA DP1, she built and rolled out the mobile pharmacy clinic in Waterbury, Conn. Springer and her team were awarded the Vizient Pharmacy Vision Award for Excellence in Public Policy for this work. She was accepted into the Johns Hopkins Carey Business School Innovations for Substance Use Disorders (IASUD) NIDA-funded program in August 2023. Springer was appointed a standing member of the National Academies of Sciences, Engineering, and Medicine's Committee on the Framework for the Consideration of Chronic Conditions in Women in January 2023. Over this year, Springer also presented 16 accepted abstracts at national and international infectious disease and addiction medicine conference, and published ten articles in peer-reviewed journals.

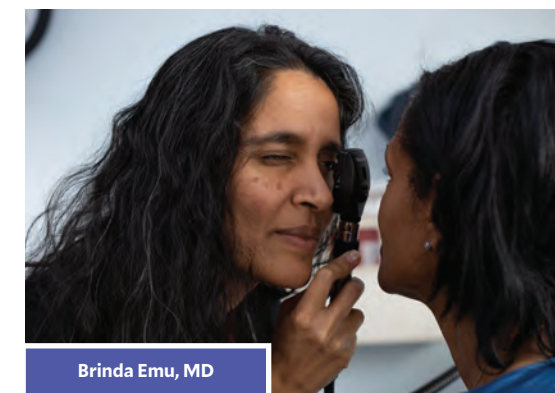
Rupak Datta, MD, PhD, MPH, was elected to serve on the Society for Healthcare Epidemiology of America (SHEA) research committee from 2023 to 2026. His research has focused on antimicrobial stewardship in the VA's home-based primary care program; his recent publications include "Antimicrobial resistance in *Escherichia coli* and *Klebsiella pneumoniae* urine isolates from a national sample of home-based primary care patients with dementia" in *Infection Control & Hospital Epidemiology* (May 2023). He contributes

to the VACHS Antimicrobial Stewardship program, Hospital Epidemiology & Infection Prevention program, and the Outpatient Parenteral Antimicrobial Therapy clinic.

Andrew Chou, MD, MSc, joined VACHS as the associate hospital epidemiologist in September 2022 and transferred his VA Clinical Research and Development project (VA CSR&D IK2 CX001981, titled "Using Big Data to Identify & Prevent Transmission of Carbapenem-Resistant Enterobacteriaceae within VHA"). Over the past year, he has published five peer-reviewed articles and made seven presentations.

Sheela Sheno, MD, MPH, continued her scholarly work to improve HIV and tuberculosis care in the United States and internationally. She continues to serve as associate director of the Office of Global Health, where she co-leads the Global Health & Equity Distinction Pathway and helps coordinate the Global Health Scholars Program for residents and fellows. She is a core faculty member of the Connecticut AIDS Education & Training Center and co-directs the Global AIDS Research Faculty Network at Yale. Sheno presented at the International AIDS Society annual meeting in 2023, the International Union Against Tuberculosis & Lung Disease, and the Infectious Diseases Society of America (IDSA). She published two research articles, one review article, two perspective articles, and one textbook chapter. Sheno began to serve as co-chair of the Infectious Disease Diversity, Equity, and Anti-racism group at Yale School of Medicine; the vice chair of the Infectious Diseases Society of America Grants for Emerging Researchers program; and the vice chair of the HIV Section of the International Union Against Tuberculosis & Lung Disease, all in 2023.

Brinda Emu, MD, is an infectious diseases physician-scientist who continues to focus on the pathogenesis of HIV-associated malignancies. She founded and directs a multidisciplinary clinic focused on the care of patients with HIV and cancer, with integrated care from specialists in infectious diseases and oncology. She serves on the VACS (VA Cohort Study)



Brinda Emu, MD

Translational and Cancer Core. She was also the infectious diseases representative on the VA COVID-19 Treatment Guidelines Committee.

KIDNEY MEDICINE
Susan T. Crowley, MD, MBA

In addition to her national duties as the Executive Director of Kidney Medicine for the Veterans Health Administration, Susan T. Crowley, MD, MBA, leads the Section of Kidney Medicine, which consists of seven Yale academic clinicians, educators, and scientists. She serves on the steering committee for the VA Cooperative Studies Program (CSP) Dialysis Platform (DiaP) Trial and its inaugural study, VA CSP # 2026, Beta-Blocker Dialyzability on Car-



Susan T. Crowley, MD, MBA

diovascular Outcomes (BRAVO).

David Geller, MD, PhD, is the medical director of dialysis at VACHS; the lead dialysis medical director for VA New England; the director of VACHS's Hypertension Clinic; and the co-director of Yale School of Medicine's core curriculum course on homeostasis. In addition to Geller's many clinical and educational duties, he is the site PI of the VA study titled "Incremental hemodialysis in veterans," a multicenter national trial comparing the effects of conventional versus graduated dialysis on patient outcomes for incident hemodialysis patients.

Robert Safirstein, MD, is the PI of pre-clinical protocols investigating the molecular aspects of cisplatin and ischemia/reperfusion-induced acute and chronic renal disease. He is also the PI of protocols investigating renalase protein's role in acute and chronic renal failure models. Safirstein was designated co-PI with Fred Gorelick, MD, on the mechanism of pancreatitis accompanying chronic kidney disease. His clinical activities include supervising fellows in their in-service rotations and seeing patients weekly in an outpatient clinic in Newington. He also sees patients in weekly telehealth clinics in Oklahoma. He is the site director of the

West Haven telehealth program that provides care for veterans with kidney disease in underserved areas across the United States.

Namrata Krishnan, MBBS, is the site program director of the nephrology fellowship programs for Yale and the University of Connecticut. She is involved in medical education and curriculum development at the local and national levels in collaboration with the National Kidney Foundation. She is heavily engaged in clinical care at the VA in inpatient and outpatient settings, serving as the director of the post-transplant renal clinic and the renal clinic at VA Newington. She serves on various local VA committees, including the VA national kidney-palliative care committee.

William Chang, MD, PhD, is a clinical nephrology attending physician in the inpatient setting and the outpatient clinical resource hub telenephrology program. His research focuses on vascular and kidney tissue engineering to model disease and develop new therapeutic approaches. Chang is a principal investigator and a project lead at Yale School of Medicine for research programs funded by the American Diabetes Association and the Department of Defense.

John Chang, MD, is involved in clinical care in various settings, including hypertension (HTN) clinics at VACHS and Yale, and a remote telehealth renal clinic in New Hampshire. Chang is the site PI of the Empagliflozin for Worsening Heart Failure Study, a multicenter study investigating the acute effects of empagliflozin (Jardiance), an antidiabetic drug, as an adjuvant to loop diuretics on the parameters of diuretic efficacy.

Justin Belcher, MD, PhD, is the site director of telenephrology at VACHS and provides telenephrology care for multiple VA centers in Oklahoma. He is the renal site PI of the HOPE trial, a study of chronic pain management strategies for hemo-



David Geller, MD, PhD

dialysis patients. He is actively involved in education, providing didactic lectures for fellows, residents, medical students, PA students, and surgical staff as part of a formal lecture series, reports, and clinical services. Belcher sees patients in inpatient services, in face-to-face outpatient clinics, and via telemedicine at multiple community-based outpatient clinics (CBOCs) across Connecticut. He is actively involved in research surrounding acute kidney injury (AKI) in patients with cirrhosis via the HRS-HARMONY consortium, which he co-founded.

OCCUPATIONAL MEDICINE
Efia James, MD, MPH

In 2023, Efia James, MD, MPH, assumed the role of chief of the VA Occupational Health Service, succeeding Brian Linde, MD, MPH, who took on the role of director of Occupational Health Services at the VA Palo Alto Medical Center in California. In addition to her new position as service chief, James serves as the VA VISN 1 Employee and Occupational Health lead physician and a member of the VHA Employee Occupational Health Change Advisory Board.

As part of the Honoring Our Promise to Address Comprehensive Toxics (PACT) Act of 2022, Richard Smith, MD, led the implementation at VA Connecticut as the lead environmental health clinician. He assembled a team of clinicians and administrative staff dedicated to providing consultative services to veterans seeking additional evaluation for toxic exposures during military service. The team's members offered veterans valuable insights into the risks of developing medical conditions related to military service exposures and disability benefits.

The VA Occupational Health Service (OHS) introduced the Military Toxic Exposure Elective for Traditional Internal Medicine Residents at the VA in July 2023. This elective aims to familiarize residents with environmental medicine by using a comprehensive approach that includes web-based learning, patient-centered assessment activities, and experience conducting veteran environmental health evaluations. Residents who complete this elective earn Level 1 Military Environmental Exposures Certification from the American College of Preventive Medicine (ACPM), in collaboration with the VA Health Outcomes Military Exposures (HOME) and War Related Illness and Injury Study Center (WRIISC).



Efia James, MD, MPH

PULMONARY, CRITICAL CARE AND SLEEP MEDICINE
Hilary Cain, MD

The Pulmonary, Critical Care, and Sleep Medicine (PCCSM) section at VACHS continues to excel in clinical care delivery and further the VA and YSM research missions.

Hilary Cain, MD, section chief of VA PCCSM, continues to serve as co-lead PI for the VA Connecticut arm of the national Lung Precision Oncology Program (LPOP) with Michal Rose, MD, hematology/oncology VA chief. The LPOP goal is to create an excellent lung cancer diagnosis and management system.

The current Lung Cancer Screening (LCS) program at VACT has implemented a new software provider by the VA National Lung Cancer Program Office, and has hired new nurse navigators led by Kathryn Lerz, APRN. Three thousand three hundred veterans have been enrolled in the VACT LCS program in the past two years, and VACHS has achieved remarkable adherence to follow-up screening of 84%—far higher than the civilian sector norm. The team was honored to be invited to deliver a "Best Practice" presentation at the Annual LPOP meeting in September 2023. Our efforts have resulted in 60% of lung cancers being diagnosed as stage 1 diseases where a cure can be achieved.

Kathleen Akgün, MD, associate section chief for VA PCCSM and VA medical ICU director, was appointed co-director of the Cooperative Studies Program (CSP) Network of Dedicated Enrollment Sites (NODES) Program. In October 2023, she was the recipient of the Yale Department of Internal Medicine 2nd Century of Women at Yale: Emerging Leaders in Internal Medicine Award. She continues as a core lead for Emerging Areas of Health Services Research in the Pain Research, Informatics, Multimorbidities and Education (PRIME) Center.

She collaborates closely with Amy Justice, MD, PhD, (Section of General Medi-

cine), the Veterans Aging Cohort Study, and Shelli Feder, PhD, APRN, (Yale School of Nursing). Akgün serves as a member of several national and international committees, including the American College of Chest Physicians Palliative and End-of-Life Section; the American Thoracic Society (ATS) Behavioral Science and Health Services Research Assembly Programming Committee; the ATS Health Policy Committee; and the American Board of Internal Medicine Hospice and Palliative Medicine Item-Writing Task Force. She continues to mentor learners and fortify relationships with clinical and research leaders to advocate for equitable and accessible pulmonary and ICU care for patients.

Edward Manning, MD, PhD, continues his work investigating remodeling of the pulmonary vasculature and its role in the decline of cardiac and lung function that occurs in healthy aging through the support of his Fred Wright VISN1 (VA) Career Development Award. He is investigating ways to slow or reverse these declines in pre clinical trials. He also received an expansion award from the Additional Ventures Single Ventricle Research Fund mechanism with co-PI Jay Humphrey, PhD, to further investigate maladaptive remodeling of the cardiopulmonary system due to chronic hypoxia in children born with single ventricle defects.

Lauren Cohn, MD, is the director of Biologics and Advanced Therapeutics in Airway Diseases. In this capacity, she educates residents, fellows, and faculty throughout the VA about new therapeutic approaches to asthma through lectures, FTF, and e-consults. In the past year, the number of e-consults requesting assistance with biological therapies has increased. Cohn continues to direct the Newington Pulmonary Clinic, where the patient load and clinical faculty have expanded.

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RHEUMATOLOGY
Evelyn Hsieh, MD, PhD

Section Chief Evelyn Hsieh, MD, PhD, and Lisa Suter, MD, have continued to be recognized nationally to serve as chairpersons of committees and subcommittees of the American College of Rheumatology (ACR): Suter as co-chair of the Quality Measures subcommittee, and Hsieh as the founding chair of the Global Engagement committee and co-convenor of the ACR Global Rheumatology Summit. Suter is also a member of the American Academy of Orthopedic Surgeons Patient-Reported Outcomes Task Force.

Hsieh was invited to lead an international collaborative review titled "Global Perspective on the Impact of the COVID-19 Pandemic on Rheumatology and Health Equity," published in *Arthritis Care & Research* in January 2024. She continues to lead NIH-sponsored research focused on osteoporosis and fractures among veterans with HIV. She co-chairs the Veterans Aging Cohort Study Rheumatology, Endocrine, and Geriatrics Syndromes Core with Julie Womack, PhD, from the Yale School of Nursing.

Joshua Bilsborrow, MD, MHS, received the Teacher of the Year award from the 2023 graduating class of rheumatology fellows from the Yale Section of Rheumatology, Allergy & Immunology, and carried out an educational and workshop series for Rwandan internal medicine residents to increase their knowledge of rheumatology and stimulate interest in pursuing further training in the specialty.

David Podell, MD, PhD, joined the VA Connecticut rheumatology team, and was inducted as a Fellow of the Royal College of Physicians during a ceremony in London in December 2022.



Evelyn Hsieh, MD, PhD

New Yale Initiative Looks Beyond Life Span to Increase Years of Health

A Yale School of Medicine initiative studies the biology of aging to extend the healthy life span of individuals.

by Serena Crawford

Aging is a major risk factor for most chronic conditions, evidence shows, yet much of current research focuses on specific diseases. The new translational geroscience initiative at Yale School of Medicine (YSM) seeks to change that approach by studying the effects of aging on various ailments.

Yale School of Medicine has a long legacy in studying aging, but with this new initiative, we are bolstering our ability to delineate basic mechanisms of healthy and accelerated aging," said Nancy J. Brown, MD, the Jean and David W. Wallace Dean of the Yale School of Medicine and the C.N.H. Long Professor of Internal Medicine.

The mechanisms underlying the aging process often also drive the development and progression of chronic conditions, explains Thomas Gill, MD, the Humana Foundation Professor of Medicine (Geriatrics) and professor of epi-

demiology, Yale School of Public Health, and of investigative medicine at YSM, who leads the Yale Claude D. Pepper Older Americans Independence Center.

"Elucidating these mechanisms will allow us to develop new gerotherapeutic agents with the goal of delaying or preventing the onset of these diseases; and in turn improving the health span—as opposed to the life span—of individuals," he said.

There is a growing worldwide interest in geroscience, said Vishwa Deep Dixit, DVM, PhD, the Waldemar Von Zedtwitz Professor of Pathology and professor of

immunobiology, who is director of the Yale Center for Research on Aging (Y-Age). "It has become much clearer that the process of aging is not just some amorphous concept but a very tractable biological problem that we can study to provide new insights into tackling a variety of diseases," he said.

"Even if we cure a patient's heart disease, for example, the process of aging would continue, and the patient would just trade heart disease for another chronic condition, such as kidney disease, Alzheimer's, or cancer," Dixit added. "The idea is that instead of tackling one disease at a time, we tackle aging itself to alter the course of multiple diseases simultaneously."

The new initiative stretches across campus to bring together diverse physician investigators and scientists in such areas relevant to aging, as infectious diseases, pulmonary medicine, rheumatology, cardiology, ophthalmology, hematology, endocrinology, and other sections and departments across YSM, according to Gill.

"Almost everyone has a stake in this field because aging underlies the chronic conditions that are part and parcel of all those disciplines," he said.

By helping to facilitate brainstorming sessions, develop joint grant proposals, and support scientific collaborations across disciplines, the initiative will provide a platform for faculty, trainees, and others to advance geroscience, Dixit said.

"This initiative will help to break down silos, where people across the university are working on their

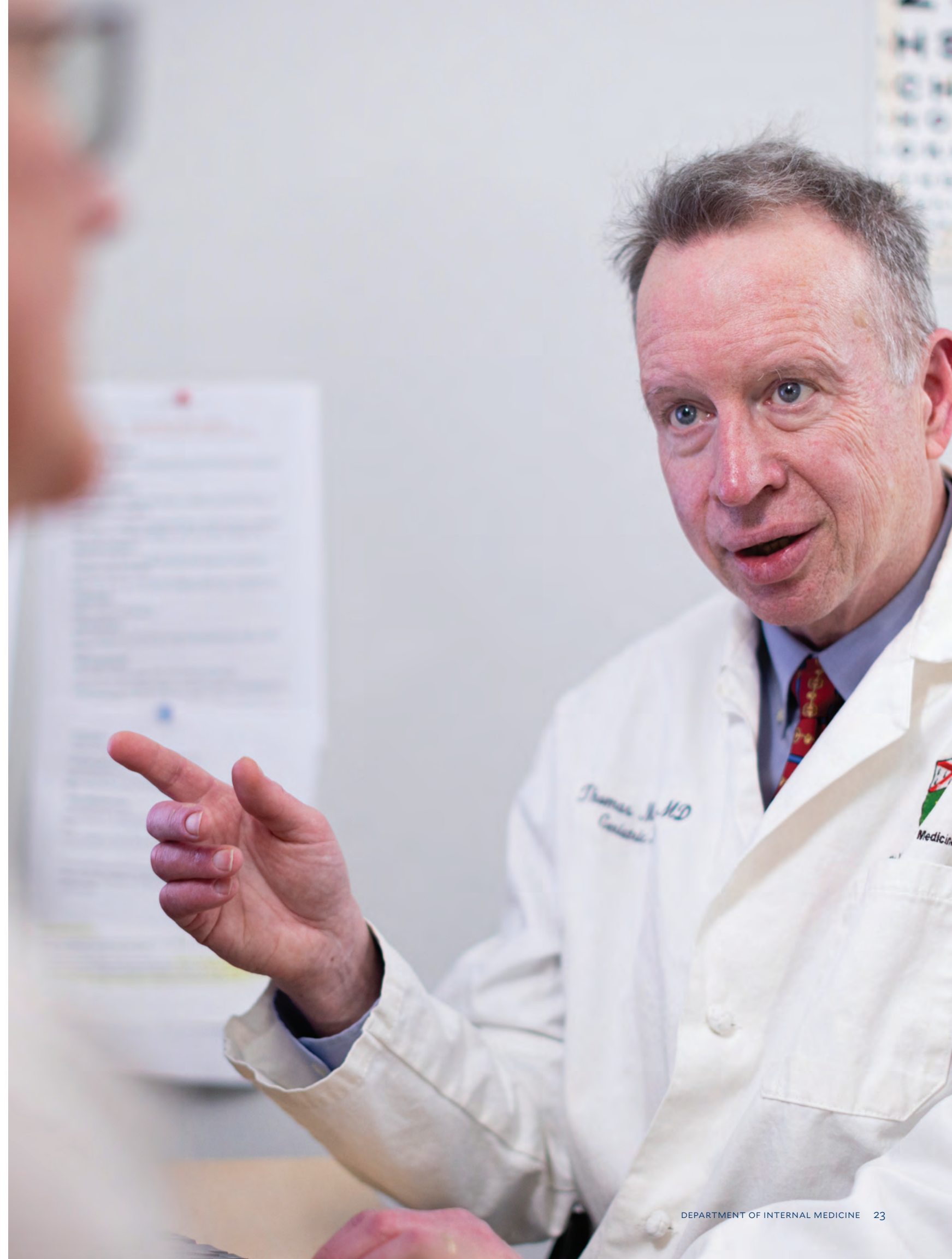
own particular topic, so that we can collectively apply our knowledge," he said.

As part of the initiative, Yale welcomed its first geroscience visiting professor, Luigi Ferrucci, MD, PhD, scientific director at the National Institute on Aging, who came to Yale on September 6–7 to give the talk "Geroscience: Why and How?" and to meet with faculty, trainees, and leadership across YSM. In addition, the initiative sponsors a geroscience pilot grant program through the support of the Department of Internal Medicine, with new matching funds from the Department of Pathology and YSM.

With two well-established aging centers at Yale and the new initiative in place, Gill hopes that researchers will better recognize the importance of aging across various disciplines and expand new discoveries that slow the aging process, allowing people to maintain their independence and their health. He also hopes that YSM will be central to future studies in the field.

"Yale has the infrastructure and the expertise to take a leading role in planning and executing future multicenter trials of gerotherapeutic agents," he said. "We have the potential to become one of the most prominent and visible centers in translational geroscience research."

Dixit agrees. "It's exciting because once we attain new knowledge and new breakthroughs, we can develop therapies that will have an impact across the globe," he said.



Section Updates

The Department of Internal Medicine consists of the Office of the Chair; a centralized business office; and 11 academic sections, each with its own administrative structure. Over the past five decades, these sections have gained national and international prominence through their clinical, educational, and research activities.



Eric J. Velazquez, MD, Section Chief
Daniel Price, MD, Vice Chief, Ambulatory
Nihar Desai, MD, MPH, Vice Chief, Clinical Operations

The cardiovascular section is home to nearly 300 clinician-investigators, physician-scientists, and staff who make meaningful contributions across patient care, research, and educational domains. In the past five years, the section brought on 57 new full-time ladder track faculty to build upon our expertise and create new capabilities. Our faculty have come together through retreats and engagement efforts to advance the 2024 strategic imperatives: section growth and reputation; financial performance and mission responsibility; faculty alignment and engagement; leadership development; and research and clinical excellence integration.

Clinical Care

This committed faculty team is working to broaden clinical programs and expand access to new programs and populations through our ongoing affiliation with Yale New Haven Health. As one example, the section recently expanded its Cardio-Rheumatology Program to provide personalized cardiovascular risk assessment and treatment for patients with autoimmune diseases, including rheumatoid arthritis, systemic lupus, scleroderma, psoriatic arthritis, and vasculitis. In addition, the section has expanded its capacity for cardio-obstetrics to manage and treat cardiovascular disease in pregnant patients.

The section clinical faculty participated in 6,000 inpatient encounters and more than 110,000 ambulatory sessions for the department across a rich network of inpatient services at Yale New Haven Hospital, Greenwich Hospital, Bridgeport Hospital, Lawrence Hospital, Memorial and Westery Hospitals, and ambulatory centers.

Research

The section continues its commitment to outstanding research across the entire translational research continuum from basic science to population health. The section's current research portfolio includes dozens of active grant awards supported by nearly \$245M in total funding, including more than \$64M in new funding during the past year from the Patient-Centered Outcomes Research Institute, National Institutes of Health, and American Heart Association (AHA), among others. This year, seven section faculty received career development awards.

Faculty members presented groundbreaking clinical research at prestigious conferences, including the American College of Cardiology Scientific Session and the AHA annual conference. Research highlights include the following:



Yale Cardiovascular Medicine Fellowship Program leadership



Eric J. Velazquez, MD and other leadership



Rachel Lampert, MD

- John K. Forrest, MD, presented the three-year results from the Evolut Low-Risk Trial, an ongoing study of the safety and effectiveness of Medtronic's supra-annular, self-expanding transcatheter aortic valve replacement systems in low-risk aortic stenosis patients.
- Rachel Lampert, MD, discussed the primary results of the prospective multinational lifestyle and exercise in the LIVE-HCM study.
- Eric J. Velazquez, MD, shared the results of the TRANSFORM-HF study. This five-year comparative effectiveness study examined the effects of torsemide versus furosemide for patients with heart failure.
- Nihar Desai, MD, MPH; Tariq Ahmad, MD, MPH; and F. Perry Wilson, MD, presented results from the PROMPT-LIPID study of 2,500 patients from 100 outpatient providers within Yale New Haven Health.

The section's future focus is on further expanding our computational biology, informatics research, and implementation science.

Education

The cardiovascular section has a broad educational footprint and robust fellowship programs, which provide the rigorous academic and clinical environment necessary to build a career in academic cardiology.

To continue to improve the training environment, the Section of Cardiovascular Medicine appointed Nikhil Sikand, MD; Cesia Gallegos Kattan, MD, MHS; and Antonio Giaimo, MD, as assistant program directors of the Yale Cardiovascular Medicine Fellowship Program. They join associate program director Parul Gandhi, MD, and program director Edward J. Miller, MD, PhD, (pictured above) in leading the core cardiology fellowship program.

The section currently supports 47 clinical fellows across eight programs, including three T32 programs supporting four current fellows.

Fellows from the section received awards for their excellence in medicine this year. Evangelos Oikonomou, MD, DPhil, was recently awarded a competitive post-

doctoral fellowship by the National Heart, Lung, and Blood Institute, where he will support the design of point-of-care screening programs for hypertrophic cardiomyopathy. Jiun-Ruey Hu, MD, MPH, was voted Consultant of the Year by residents and interns of the Department of Emergency Medicine at Yale School of Medicine.

As part of its ongoing commitment to educating the next generation of cardiology researchers, the section held its first-ever Summer Study Symposium for undergraduate and high school students. Faculty and trainees discussed their programs, personal journeys through science training, and advancements in cardiovascular research.

Loren Laine, MD, Section Chief
Thiruvengadam Muniraj, MD, Clinical Chief (Endoscopy)

Hamita Sachar, MD, Clinical Chief (Gastroenterology)
Joseph Lim, MD, Clinical Chief (Hepatology)

New Digestive Health Center

Yale's new Digestive Health Center in North Haven, a hub offering advanced care for gastrointestinal (GI) and liver disorders, welcomed its first patients on January 31, 2023. Located at 8 Devine Street, the facility serves as a home for the Center for Weight Management, the Center for Nutrition and Wellness, the Fatty Liver Disease Program, the Gastrointestinal Motility Program, the Inflammatory Bowel Disease Program, General Gastroenterology, and the GI and Pancreatic Cancer Prevention Program.

The center cooperates with Yale School of Medicine, Yale Medicine, and Yale New Haven Health. It also features facilities supporting clinical research for patients as well as the Irving and Alice Brown Teaching Kitchen—an excellent new resource to facilitate healthful eating and cooking education.

The GI and Pancreatic Cancer Prevention Program, which opened in the summer of 2023, includes the Lynch Syndrome and Polyposis and Hereditary Gastric Cancer clinics, directed by Xavier Llor, MD, PhD, and the Pancreatic Cancer Early Detection Clinic, directed by James Farrell, MBChB. The program provides patients with in-person and telehealth options for personal cancer risk assessment and testing to inform medical decisions. In addition to serving as a home for cancer prevention within digestive diseases, the program allows patients to participate in research to advance knowledge about their conditions.



Xavier Llor, MD, PhD



Simona Jakab, MD



Nadeen Hussain, MD, and Hamita Sachar, MD

The Liver Home

The Liver Home is a new outpatient program that offers multidisciplinary care for individuals with cirrhosis to improve such outcomes as transplant candidacy and survival—and decrease the number of emergency room visits and hospitalizations. Overseen by Simona Jakab, MD, the program provides comprehensive patient-centered access to medical and behavioral health care, social work services, addiction medicine, and nutrition.

Improving Lives Through Research

Tamar Taddei, MD, is co-chairing the largest clinical trial related to liver cancer screening in history. The VA Cooperative Studies Program (CSP) study, known as PREMIUM—PREventing liver cancer Mortality through Imaging with Ultrasound vs. MRI—aims to determine whether screening for liver cancer with abbreviated magnetic resonance imaging is more

effective in detecting the disease in early stages than is ultrasound—the current standard of care in screening.

Michael Schilsky, MD, is conducting a clinical trial that offers patients with Wilson disease a groundbreaking treatment for the rare genetic condition. In this condition, excessive amounts of copper accumulate in the body, particularly in the liver and brain. Schilsky's clinical trial uses gene therapy to genetically modify the liver to produce a protein that removes copper from the body. The novel treatment has the potential to help patients all over the world.

The section has eight new junior faculty members who have received federally funded career development awards to support their research over the last three years.

The Yale Liver Center, now in its 39th year of existence, remains the crown jewel of the section's research. Investigators from 24 sections/departments across Yale School of Medicine are broadly involved. The Liver Center remains NIH-funded—one of only three NIDDK-sponsored liver centers in the United States.

Honors and Awards

Guadalupe Garcia-Tsao, MD, received the 2023 International Mentor Award from the Asociación Latinoamericana para el Estudio del Hígado (ALEH). Garcia-Tsao's research focuses on cirrhosis, portal hypertension, and the complications of these conditions.

Priya Jamidar, MBChB, received the Lifetime Achievement Award from the Connecticut Association of Physicians of Indian Origin. Jamidar has vital clinical and research interests in bile duct cancers, pancreatic cancer, large bile duct stones, and the endoscopy of acute recurrent and chronic pancreatitis.

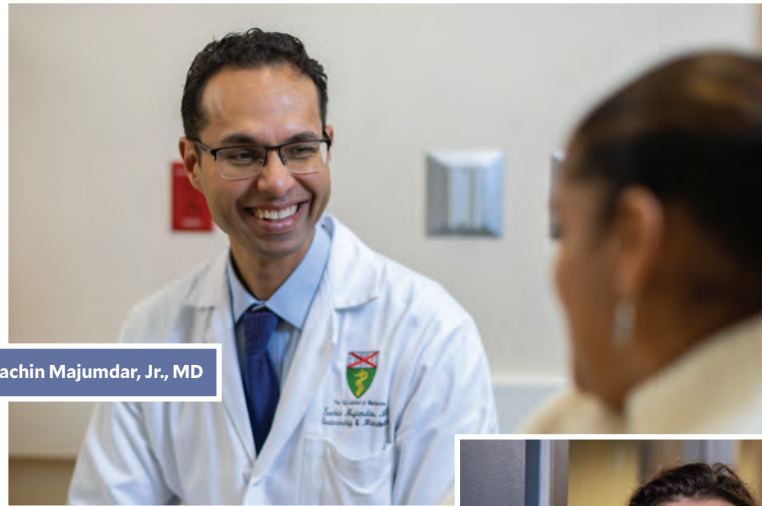
Joseph Lim, MD, was selected as editor-in-chief of *Clinical Liver Disease*, an open-access multimedia journal of the American Association for the Study of Liver Diseases (AASLD). Lim conducts patient-oriented research evaluating clinical outcomes in chronic liver disease; he also runs an active clinical trials program examining novel investigational agents for viral hepatitis and nonalcoholic steatohepatitis.

Thiruvengadam Muniraj, MD, was appointed associate editor of *Gastrointestinal Endoscopy*, the official journal of the American Society for Gastrointestinal Endoscopy (ASGE). An advanced endoscopist, Muniraj investigates pancreatic diseases and interventional endoscopy.

Michael Nathanson, MD, PhD, received the 2022 Distinguished Service Award from the American Association for the Study of Liver Diseases. Nathanson is the director of the Yale Liver Center and the Center for Cellular and Molecular Imaging (CCMI) at Yale School of Medicine.

Silvia Vilarinho, MD, PhD, was appointed director of the Internal Medicine Physician Scientist Training Program. She also received the 2023 Leah Lowenstein Award at the 2023 Yale School of Medicine commencement ceremony. Vilarinho uses genetics and genomics to study liver diseases of unknown origin.

John Wysolmerski, MD, Section Chief
Silvio Inzucchi, MD, Clinical Chief



Sachin Majumdar, Jr., MD



Ania Jastreboff, MD, PhD



Mireille Serlie, MD, PhD



Richard Kibbey, MD, PhD

Yale Obesity Research Center

YSM Dean Nancy J. Brown, MD, announced the establishment of the Yale Obesity Research Center in March 2023. Led by Ania Jastreboff, MD, PhD, the center aims to improve the lives of persons with obesity through cutting-edge research that facilitates the development and application of novel therapies. The center's research targets such obesity-related diseases as type 2 diabetes, cardiovascular disease, and certain types of cancer.

Program for Mitochondrial Biology and Intermediary Metabolism

Launched by Richard Kibbey, MD, PhD, in January 2023, the Program for Mitochondrial Biology and Intermediary Metabolism brings together investigators of all aspects of metabolism to research the fundamental mechanisms of mitochondrial metabolism and chemical biology. The cross-cutting program aims to improve collaboration, provide education, promote publications, offer innovative technologies, and obtain funding.

Karl Insogna Retires From Clinical Duties

Karl Insogna, MD, touched many lives through his laboratory and clinical practice throughout his 40-year career. He is credited with advances in treating several skeletal diseases, including osteoporosis and X-linked hypophosphatemia. On July 1, 2023, Insogna became the Ensign Professor Emeritus of Medicine (Endocrinology) and officially hung up his stethoscope.

New Faculty

The section welcomed Carolina Gonzalez-Lopez, MD, as an instructor of medicine in October 2023. She was previously a Yale clinical fellow in endocrinology. Sachin Majumdar Jr., MD, also joined the section in 2023 as the director of the Smilow Endocrine Neoplasia Program.

Research

A Phase III clinical trial showed that preserving insulin-producing beta cells is just one of the benefits of teplizumab, a monoclonal antibody. Led by Kevan Herold, MD, the trial also suggested improvements in other clinical parameters, including reduced reliance on insulin medications, higher-grade hypoglycemia, glucose time in range, and overall quality of life.

A study led by Mireille Serlie, MD, PhD, found that while detecting nutrients in the stomach induces brain activity changes in lean people, such brain responses are diminished mainly in people with obesity. These differences in brain activity may help explain why some people have difficulty losing weight and maintaining weight loss.

Kasia Lipska, MD, MHS, and researchers demonstrated a systematic approach to weighing the pros and cons of adjusting

for social risk factors to measure clinician quality. The approach led to a consensus to adjust this measure for three social risk factors: low Agency for Healthcare Research and Quality Socioeconomic Status Index; low physician-specialist density; and Medicare-Medicaid dual eligibility.

A team led by Gerald I. Shulman, MD, PhD, identified a new process that shows promise in delaying the development of liver fibrosis in patients with nonalcoholic steatohepatitis or nonalcoholic fatty liver disease.

Silvio Inzucchi, MD, led a subgroup analysis of the Dapagliflozin Evaluation to Improve the Lives of Patients with Preserved Ejection Fraction Heart Failure (DELIVER) trial, showing that in patients with heart failure with mildly reduced or preserved ejection fraction, oral dapagliflozin (Farxiga) improved outcomes in those with normoglycaemia, prediabetes, and type 2 diabetes.

Honors and Awards

Diana Athonvarangkul, MD, PhD, received a 2023 Young Investigator Award from the American Society for Bone and Mineral Research, and a KL2 Scholar Award from the Yale Center for Clinical Investigation (YCCI).

Ania Jastreboff, MD, PhD, received the Clinician of the Year Award from The Obesity Society. Jastreboff leads research into the rapidly changing landscape of anti-obesity pharmacotherapy.

Ana Luisa Perdigoto, MD, PhD, received a K08 Career Development Award from the National Cancer Institute for her study "Elucidating Mechanisms of Checkpoint Inhibitor-induced Diabetes."

Rachel Jamison Perry, PhD, received the Endocrinology and Metabolism Section's New Investigator Award from the American Physiological Society (APS). Perry researches the links between obesity, metabolism, and cancer.

Elizabeth Sanchez Rangel, MD, received a K23 award from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) to support her work to determine whether improving glycemic control in poorly controlled type 2 diabetic subjects will restore glucose brain transport kinetics. She will use classic metabolic studies methodology and state-of-the-art brain nuclear magnetic resonance spectroscopy techniques to obtain her data.

Gerald I. Shulman, MD, PhD, received the 2023 European Association for the Study of Diabetes-Lilly Centennial Anniversary Prize. The award recognizes individual researchers who have made landmark achievements in the pathogenesis of diabetes. Shulman also received renewed funding from the NIDDK to support the Yale Center for Metabolic Phenotyping in Live Models of Obesity and Diabetes (Yale MPMOD).

In Memoriam

Robert S. Sherwin, MD, died on March 31, 2023, at age 80. He was a world-renowned endocrinologist and diabetes researcher who oversaw the growth of clinical and translational research at Yale, and a mentor known for his kindness, warmth, patience, and generosity.

Rosa Hendler, MD, a physician-scientist who worked closely with Sherwin throughout her career, passed away on October 22, 2023.

Patrick G. O'Connor, MD, MPH, Section Chief
Matthew Ellman, MD, Clinical Chief



Jennifer Miller, PhD



Lisa Sanders, MD



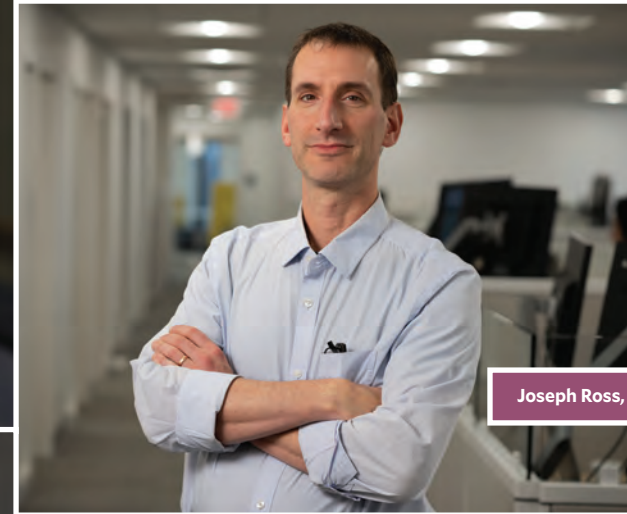
Melissa Weimer, DO, MCR



Ilana Richman, MD, MHS, and Cary Gross, MD



Reshma Ramachandran, MD



Joseph Ross, MD, MHS

Yale General Internal Medicine (GIM) includes over 150 full-time faculty members who are nationally recognized leaders in their respective fields and committed to the core missions of research, education, patient care, and community service.

Clinical Care

GIM physicians view medical care from the perspective of the general internist. In some cases, they also provide comprehensive specialty care in inpatient and outpatient settings across the state.

Clinical programs in the section include four primary care clinics, along with specialized programs in such areas as occupational health and addiction medicine. GIM faculty also oversee primary inpatient services at Yale New Haven Hospital (YNHH) and the VA Connecticut Healthcare System (VACHS). With Erica Heiman, MD, joining the faculty, Yale Internal Medicine Associates expanded its on-site, integrated primary care to include addiction medicine, along with obesity medicine and behavioral health.

The Yale Multidisciplinary Long COVID Clinic opened at the Yale Center for Infectious Diseases in late 2023. Directed by Lisa Sanders, MD, the clinic includes a team of specialists and provides unique care for those recovering from COVID-19 who have ongoing issues and complications. The program draws on the expertise of cardiologists, neurologists, pulmonologists,

rheumatologists, psychiatrists, and other specialists, and offers on-site physical therapy and social work services.

The section's Program in Addiction Medicine continues to break new ground in patient care, and is a national model for expanding addiction treatment within general medical settings. For example, in late May, Melissa Weimer, DO, MCR, and clinical fellow Anne Dowton, MD, dispensed the first three-day take-home supply of methadone to treat opioid use disorder on the Yale Addiction Medicine Consult Service (YAMCS) at YNHH.

Research

GIM faculty members continue to be at the forefront of research with over 500 papers published in prominent journals. Many also hold editorial positions with the leading academic medical journals.

The Yale-Mayo Clinic FDA Center of Excellence in Regulatory Science and Innovation (CERSI) received up to \$50M for five years from the Food and Drug Administration. The successful renewal was led by Joseph Ross, MD, MHS. Ross co-leads the work with Molly Jeffery, PhD, at the Mayo Clinic. The two leaders harmonize research, education, and training efforts across the two institutions and with the FDA.

A new study by Ilana Richman, MD, MHS, and Cary Gross, MD, emphasizes the importance of assessing potential risks associated with screening mammography among older women.

Notable Research Grants

The Yale Cancer Outcomes, Public Policy, and Effectiveness Research (COPPER) Center, directed by Gross, received four new R01 grants exploring cancer equity, workforce diversity, and the adoption and effectiveness of new cancer risk stratification tools.

William Becker, MD, received \$4.6M for his HEAL Initiative grant titled, "Multilevel Interventions to Reduce Harm and Improve Quality of Life for Patients on Long Term Opioid Therapy—Yale Resource Center (MIRHIQL-YRC)."

Sarwat Chaudhry, MD, received two NIH R01 grants focused on developing research career intention in MD students from racial and ethnic backgrounds underrepresented in medicine (URiM).

Jennifer Miller, PhD, was awarded a grant from the FDA to study clinician and patient trust in AI-enabled medicine. Her research will focus on AI-enabled software for monitoring or diagnosing patients in cardiac care.

Education

GIM Grand Rounds are presented weekly to faculty and community-based clinicians. Co-led by Lisa Puglisi, MD, and Matthew Ellman, MD, the rounds host a variety of speakers from across the YSM to educate general internists while fostering dialogue and building community. Over the past year, more than 45 speakers covered a wide array of topics, including long COVID, monkeypox, menopause management, care for adults with different abilities, anti-obesity pharmacotherapy, Hospital at Home, integrative therapeutics, advanced pain interventions, and buprenorphine treatment in primary care.

Angela Kang-Giaino, MD, MPH, was named director of the Internal Medicine Clerkship, and Anna Zimmerman, MD, was appointed associate clerkship director.

The SEICHE Center for Health and Justice and the World Health Organization (WHO) launched an initiative to educate correctional health care workers on providing care for inmates with chronic conditions. Led by Lisa Puglisi, MD, and Emily Wang, MD, the program focuses on the care of such noncommunicable diseases as high blood pressure or diabetes and infectious diseases like hepatitis C.

The Health Professions Students' Creative Medical Writing & Art Contest gathered for the first in-person event since 2019. The contest is organized by YSM's Program for Humanities in Medicine, led by Anna Reisman, MD, for students across Yale's health profession schools and programs to submit entries in poetry, prose, and art.

The Generalist Firm was renamed "The Whitman Firm" in honor of Laura Whitman, MD, a longtime faculty member of the section who served as medical director of the Primary Care Center. Whitman passed away in January 2023. This renaming of the firm was part of a department-wide celebration of Whitman's life, which was capped by a Medical Grand Rounds presentation in her honor in late 2023.

Awards, Recognition, and Distinctions

Nancy Angoff, MD, MPH, MEd; John "Jack" Hughes, MD; and Walter Kernan, MD, retired after decades of service.

E. Jennifer Edelman, MD, MHS, is an MPI on a National Institute on Drug Abuse (NIDA) R61 grant titled "Promoting Retention in Opioid Treatment among Women Experiencing Intimate Partner Violence: A Novel Stepped Care Model Targeting PTSD."

Peter Ellis, MD, MPH; Matthew Ellman, MD; Katherine McKenzie, MD; Patrick O'Connor, MD, MPH; and Carrie Redlich, MD, MPH, were featured in *Connecticut Magazine's* 2023 "Top Doctors" list.

David Fiellin, MD, was named editor of the *Journal of Addiction Medicine*.

Benjamin Gallagher, MD, received the New Haven Primary Care Consortium Teacher of the Year Award.

Alexandria Garino, PhD, PA-C, was appointed Associate Dean for PA Education.

Shaili Gupta, MBBS, received the Asghar Rastegar, MD Teacher of the Year award at the VA Connecticut Healthcare System.

Amy Justice, MD, PhD, was recognized as a Best Female Scientist by Research.com.

Susan Kashaf, MD, MPH, received the Hughes Award for Ambulatory Education.

Benjamin Mba, MBBS, was appointed Vice Chair for Diversity, Equity and Inclusion, and Graduate Medical Education Director for Diversity, Equity and Inclusion & Associate Designated Institutional Official for YNHH.

Jorge Moreno, MD, was selected by the National Hispanic Medical Association (NHMA) as a 2023 Leadership Fellow in recognition of his outstanding accomplishments and proven dedication to the Hispanic community.

Reshma Ramachandran, MD, MHS, was named by *Endpoints News* as one of 20 under 40 "next-generation" biotech leaders.

Deborah Rhodes, MD, was appointed Enterprise Chief Quality Officer, Yale Medicine Northeast Medical Group (NEMG).

David Rosenthal, MD, was elected a fellow of the Aspen Institute Health Innovators Fellowship.

Joseph Ross, MD, MHS, was named deputy editor of *JAMA*.

Christopher Sankey, MD, and Anisha Advani, MD, were awarded the 2023 Northeast Group of Education Affairs Innovation in Medical Education Award for their project "A Novel Impatient Rotation in Hospital Medicine."

Emily Wang, MD, MAS, received a MacArthur award and was named to the 2023 STATUS List of leaders in health, medicine, and the life sciences.

Geriatrics



Mary Tinetti, MD



Brienne Miner, MD, MHS



Jennifer Ouellet, MD

Geriatrics

The overarching mission of Yale Geriatrics is to improve the health and health care of all older adults through research, education, and clinical care. Older adults differ widely in health conditions, priorities, and life contexts. A fundamental principle underlying Yale Geriatrics' research, educational, and clinical activities is that understanding this heterogeneity should drive all research, training, and care involving older adults. Yale Geriatrics aims to ensure that older adults, regardless of where they reside, receive health care informed by gerontologic discoveries and provided by health professionals trained in geriatric principles.

Honoring its mission, the Section of Geriatrics continues to be a powerhouse of excellence committed to research and mentorship.

Small Section, Big Impact

Geriatrics is home to remarkable programs and initiatives that underscore its profound influence on the national level. Yale's Section of Geriatrics research remains at the forefront of innovation, transforming the present practice of geriatric medicine and health care.

Continuing its historic influence, the Yale Claude D. Pepper Older Americans Independence Center has secured its sixth consecutive renewal of funding from the National Institute on Aging (NIA). The center is one of only two nationwide programs to receive continuous NIA support since it was first funded in 1992, marking more than 30 years of excellence in geriatrics and aging research. The latest round of funding, more than \$6.5 million over five years, substantiates the center's innovative work. Focused on investigating complex geriatric conditions with multiple causes or outcomes, the center aims to contribute to scientific knowledge, ad-

vance clinical decision-making science, and nurture new investigators dedicated to aging research.

Under the leadership of Mary Tinetti, MD, Patient Priorities Care (PPC) has been awarded a renewal grant of nearly \$3 million from the John A. Hartford Foundation (JAHF). The grant supports expanding this evidence-based health care decision-making approach into nationwide health systems. PPC seeks to improve care for older adults with multiple chronic conditions by centering care around patient-defined health priorities and specific outcome goals. PPC is aligned with age-friendly health care systems by addressing the Matters Most 'M' of the 4Ms (mobility, mentation, medication, and what matters most).

A new translational geroscience initiative, spearheaded by Thomas Gill, MD; Nancy J. Brown, MD; and Vishwa Deep Dixit, DVM, PhD, is shifting the focus from

specific diseases to the effects of aging on various ailments. This initiative aims to delineate the basic mechanisms of healthy and accelerated aging, aiming to develop therapeutic agents that can delay or prevent chronic diseases in older adults. Translational geroscience extends across the Yale campus to bring together diverse physician investigators and scientists in such areas that are relevant to aging as infectious diseases, pulmonary medicine, rheumatology, cardiology, ophthalmology, hematology, endocrinology, and other sections and departments across Yale School of Medicine. Read more about geroscience on page 22.

Advancing Future Leaders

The section proudly supports its early-stage investigators and junior faculty members. Their achievements exemplify the dedication and influential work of the next generation of geriatrics leaders.

Santiago Clocchiatti-Tuozzo, MD, a post-doctoral fellow, has been honored with two awards from the American Heart Association for excellence in neurology and cerebrovascular disease research: The Bernard J. Tyson Career Development Award and the Stroke Underrepresented Racial and Ethnic Groups Travel Grant. His research investigates the association between suboptimal sleep duration and clinically silent brain injury in middle-aged adults.

Brienne Miner, MD, MHS, has been named a Tideswell Emerging Leader in Aging to develop new programs and systematic change related to diversity, equity, and inclusion within the Section of Geriatrics and beyond. Through her research, Miner aims to design interventions for sleep deficiency in older persons.

Emily Mroz, PhD, a postdoctoral fellow, has been honored with the Edie Stark-Shirley Scott Early Achievement Award from the Association for Death Education and Counseling (ADEC) for her distinguished activity in scholarship, service, research, clinical practice, and social action. The award is presented annually to a woman in the initial years of a career in thanatology—the study of death, dying, and bereavement.

Jennifer Ouellet, MD, has received the Outstanding Junior Clinician Educator of the Year Award from the American Geriatrics Society, recognizing her significant impact on didactic teaching, mentoring, career advice, and the development of educational programs within geriatrics. Ouellet instructs internal medicine residents through an ambulatory curriculum she developed based on the Age-Friendly Health System 4Ms Framework (Mentation, Medications, Mobility, and What Matters Most), anchored by the AGS Geriatrics 5Ms, which includes multi-complexity as the fifth M.

Stephanie Halene, MD, Dr Med, Section Chief



Cece Calhoun, MD, MPHS, MBA



George Goshua, MD, MSc



Anish Sharda, MD, MPH



Ash Alpert, MD, MFA

Research

The Section of Hematology gave over 40 poster presentations and 18 oral abstract presentations at the 65th American Society of Hematology (ASH) annual meeting in December 2023. For a listing of papers published by the section, visit <https://medicine.yale.edu/internal-medicine/hematology/research/>.

A research team led by Ash Alpert, MD, MFA, conducted focus groups to gain insights into participants' experiences when physicians learn the participants are transgender. During clinical interactions, the group members also examined participants' decisions regarding sharing, modifying, or withholding health information.

The researchers made recommendations to improve the safety of encounters for transgender people in medical settings.

Cece Calhoun, MD, MPHS, MBA, was part of a team that developed the Bias Time Out, a six-step checklist that helps health care providers identify bias and take measures to address it. The goal is to lessen the adverse consequences of unconscious bias, improve patient care, and combat structural and institutional forms of discrimination. The researchers noted that the Bias Time Out can be adapted to any industry.

A study led by George Goshua, MD, MSc, discovered that while gene therapy, estimated at \$2.45 million per patient in base case analysis, did not meet conventional standards for cost-effectiveness, it could meet distributional cost-effectiveness standards for people with sickle cell

disease (SCD) in the United States. Once approved, the team concluded that gene therapy could be an equity-enhancing therapeutic strategy for SCD patients.

Amer Zeidan, MBBS, conducted a Phase III study evaluating the efficacy of imetelstat, a first-in-class telomerase inhibitor, in patients with red blood cell transfusion-dependent lower-risk myelodysplastic syndrome (LR-MDS). The results demonstrated significant and clinically meaningful efficacy, representing a potential breakthrough in treating anemic LR-MDS.

Clinical Care

In August 2023, Smilow Cancer Hospital opened a dedicated inpatient sickle cell disease (SCD) unit to accommodate patients with SCD as well as other hematology and oncology patients needing inpatient care. This 13-bed expansion enables the hospital to provide continuity of care for patients with SCD by a specialized team. Cece Calhoun, MD, MPHS, MBA, is the medical director of the hospital's Sickle Cell Program, which strives to ease the suffering of patients and improve the care of people living with this rare inherited blood disorder.

In August 2023, the Smilow Classical Hematology team opened a new Center for Excellence in Orange, Connecticut.

Education

Kelsey Martin, MD, is working to integrate emerging data on women's health and the interplay of sex, gender, and health into Yale School of Medicine's curriculum. In alignment with the school's health equity thread, the goal is to inform students that biological sex and the social experience of gender influence health outcomes.

Recognitions

Giulia Biancon, PhD, was awarded the Italian Scientists and Scholars in North America Foundation (ISSNAF) Paola Campese Award for Research in Hematologic Malignancies. Biancon also received an ASH 2023 Scholar Award.

Sabrina Browning, MD, has been invited to participate on the steering committee of the Amyloidosis Research Consortium (ARC) to address best practices, referral networks, and coordinated care models for patients.

Cece Calhoun, MD, MPHS, MBA, was invited to serve as faculty at the American Society of Hematology Clinical Research Training Institute (CRTI) in Latin America in São Paulo, Brazil.

George Goshua, MD, MSc, was invited to join the *Annals of Internal Medicine* editorial board for three years. He also received a Frederick A. DeLuca Foundation Career Development Award and was a finalist for the NOMIS & Science Young Explorer Award.

Francesca Montanari, MD, was selected to attend the 2023 Early Career Women Faculty Leadership Development Seminar hosted by the Association of American Medical Colleges (AAMC).

Markus Müschen, MD, PhD, was elected a Connecticut Academy of Science and Engineering (CASE) member.

Anish Sharda, MD, MPH, is the 2023 recipient of the JH Milestone Fund grant, which supports early-stage investigators seeking to improve their understanding of bleeding, thrombosis, or thrombolysis.

Jessica Stempel, MD, received the Robert E. Leet and Clara Guthrie Patterson Trust Mentored Research Award and an ASH Minority Hematology Fellow Award.

Layla Van Doren, MD, MBA, was named the 2023 Bernard G. Forget Scholar. Van Doren also received an education research grant from the Yale Department of Internal Medicine to study the educational needs of providers caring for patients with sickle cell disease.

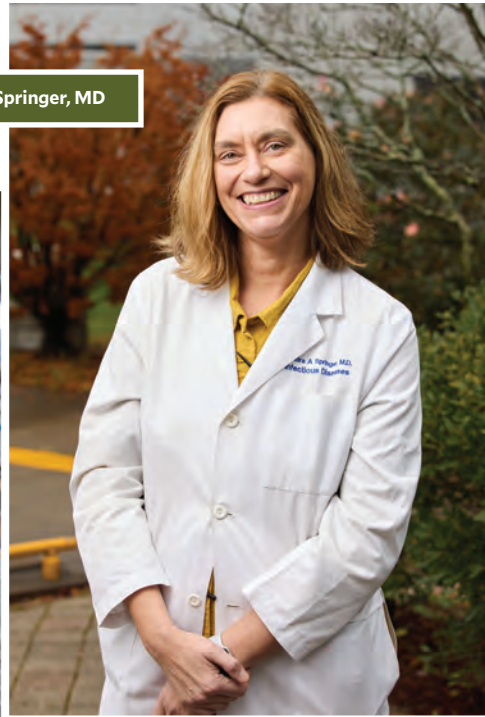
New Faculty

The section welcomed new faculty members **Ash Alpert, MD, MFA**; **Eric Chang, MD**; **Justine Ryu, MD**; and **Layla Van Doren, MD, MBA**.

Erol Fikrig, MD, Section Chief
Vincent Quagliarello, MD, Clinical Chief



Benjamin Goldman-Israelow, MD, PhD,
and Nayeli Molina Acevedo



Sandra Springer, MD



Frederick Altice, MD



Lydia Aoun-Barakat, MD

New Yale Center for Infectious Diseases

Construction has been completed for the new Yale Center for Infectious Diseases at 200 Orchard Street in New Haven. The facility opened as a collaborative project between Yale School of Medicine and Yale New Haven Health on October 30, 2023. Lydia Aoun-Barakat, MD, serves as director, and oversees the center's planning, implementation, and clinical operation.

The new facility will improve access to comprehensive patient-centered care, and lead to growth and efficiencies by consolidating the services from four clinics in one location. Services at the new center include HIV care and prevention; general infectious disease consultation; transplant infectious disease evaluation; and travel-related infectious disease issues.

Research and Initiatives

Sandra Springer, MD, led an initiative to open Connecticut's first legal mobile retail pharmacy. The mobile care system includes a retail pharmacy and a clinic on wheels designed to provide care to people where they are, improving accessibility for patients with HIV, hepatitis C, and substance use disorders.

Onyema Ogbuagu, MBCh, was the principal investigator of a trial that assessed the safety and efficacy of the new HIV medication lenacapavir (Sunlenca). Based on the data from Ogbuagu's study, the FDA approved the medication in December 2022 for multidrug-resistant HIV.

Maudry Laurent-Rolle, MD, PhD, conducted research showing that the protein CMPK2 restricts Zika virus replication by inhibiting viral translation. The protein also inhibits the replication of such other flaviviruses, as dengue, yellow fever, and Kunjin virus (KUNV). Her findings provide a basis for the development of new therapeutics.

Infection Prevention

The Yale infection prevention team works to reduce rates of catheter-associated urinary tract infections, central line-associated bloodstream infections, ventilator-associated pneumonia, and surgical site infections, among others. The team also monitors infection rates in the hospital and compliance with such precautions as hand hygiene and equipment sterilization—in addition to undertaking research and providing consultation services for quality improvement.

Richard Martinello, MD, oversees infection prevention for Yale New Haven Health System (YNHHS); and Scott Roberts, MD, handles adult services. They work closely with infection preventionists across all YNHHS locations.

Diversity, Equity, and Inclusion

The Infectious Diseases Diversity, Equity, and Antiracism (ID2EA) consortium aims to address systemic racism and promote diversity and equity within the infectious disease section at Yale and beyond via interactive learning sessions. The group's goal is to leverage collective expertise to transform the culture of the section. Topics in the ID2EA training curriculum include medical experimentation, geographic racism, medical mistrust, COVID-19 and the Latino/a/e population, transgender experiences within the medical system, and the gender tax.

Supporting Older Patients with HIV in Ukraine

The Section of Infectious Diseases received two grants from the National Institutes of Health for research to aid older Ukrainians with HIV. Led by Yulia Rozanova, PhD, the projects will help patients diagnosed with HIV at an older age make informed decisions about HIV disclosure, and assist older adults with HIV in receiving further HIV care and treatment after war-related disruptions. Co-investigators on the grants include Frederick Altice, MD, and Sheela Shenoi, MD, MPH.



Maudry Laurent-Rolle, MD, PhD



Dana Dunne, MD, MHS

Honors and Awards

Dana Dunne, MD, MHS, led the development of a new Yale learning initiative, Clinical Learning Environment Optimizing Uptake Training (CLOUT), one of six recipients of the Josiah Macy Jr. Foundation Catalyst Awards for Transformation in Graduate Medical Education. CLOUT will bring chief residents together to participate in a longitudinal curriculum to learn skills for de-escalating emotionally charged patient and family encounters, and to respond immediately to trainees who have been subjected to verbal abuse by patients.

Benjamin Goldman-Israelow, MD, PhD, was selected for a 2023 American Society for Clinical Investigation (ASCI) Council Young Physician-Scientist Award. Goldman-Israelow is focused on developing a novel vaccine strategy called "prime and spike," which uses a nasal vaccine against COVID-19 to "jump-start" the respiratory system's immune response to the virus.

Matthew Grant, MD, was selected by the Physician Associate Program Class of 2022 to receive the Outstanding Didactic Course Award. Grant is interested in invasive fungal infections and medical device infections.

Ya-Chi Ho, MD, PhD, was elected a new American Society for Clinical Investigation member. Ho investigates mechanisms of HIV persistence in the blood and tissue using virology, immunology, molecular biology, genomics, bioinformatics, and translational approaches.



Jacquelyne Gaddy, MD, MSc



David Braun, MD, PhD



Elizabeth Prsic, MD



Anne Chiang, MD, PhD

Clinical Care

In July 2023, faculty within the Section of Medical Oncology launched a medical oncology consult initiative. The new program is based on four cancer types: Genitourinary/Melanoma; Thoracic/Head & Neck; Gastrointestinal/Sarcoma; and Breast, with the goal of improving the quality of inpatient care for patients with cancer along with the faculty experience through a focused subspecialty inpatient practice. This is a shift from the previous generalist model. After six months, the team noted an increase in the consult volume of oncologists and in early discharge.

Directed by Veda Giri, MD, and Nancy Borstelmann, PhD, MPH, LCSW, Yale Cancer Center and Smilow Cancer Hospital's Early Onset Cancer Program focuses on individuals with cancer diagnosed between the ages of 18 and 49. The program has far-reaching goals to address patients' psychosocial needs, develop novel clinical care models, enhance clinical trials, expand research, and raise community awareness about early-onset cancers. Giri received a grant from Bakes for Breast Cancer to fund the Program to Address Psychosocial Support, Clinical Outcomes, and Genomic Insights for Patients With Early-Onset Cancers.

Patricia LoRusso, DO, directed a new initiative to improve minority enrollment in Yale's early-phase cancer trials by bringing the trials to Smilow Cancer Hospital locations in urban communities beyond New Haven. The goal is to make participation easier and less intimidating for historically underrepresented populations who might not otherwise have access. This initiative is known as the hybrid decentralization program.

Research

Funding from the National Cancer Institute and the Department of Defense will support new projects in the laboratory of David Braun, MD, PhD, to investigate the immune microenvironment of renal cell carcinoma. Harriett Kluger, MD, is a co-investigator for one of the grants.

A study co-authored by Barbara Burtness, MD, identified a novel subclass of HPV+ head and neck squamous cell carcinoma, and demonstrated that treatment could be tailored according to tumor type. The study was published in the *Proceedings of the National Academy of Sciences*.

A team led by Michael Chiorazzi, MD, PhD, developed a new technique that will enable researchers to study individual differences in cancer progression and treatment response. The research team described the technique in the *Journal for ImmunoTherapy of Cancer*.

Roy S. Herbst, MD, PhD, led a study comparing AI-powered digital scoring with traditional manual scoring of the PD-L1 immune biomarker to determine whether a new immunotherapy treatment, atezolizumab, could benefit patients with advanced non-small cell lung

cancer. He presented findings at the World Conference on Lung Cancer in Singapore in September 2023.

Another study led by Herbst showed improved rates of survival and reduced risk of recurrence in patients with non-small cell lung cancer (NSCLC) taking osimertinib (Tagrisso), a targeted therapy, following surgery. The study, presented as a plenary presentation at the American Society of Clinical Oncology meeting in June 2023 and published in the *New England Journal of Medicine*, focused on patients with NSCLC with a mutation in the epidermal growth factor receptor gene.

Herbst was senior author of a study that suggested the new immunomedicine NC318, alone and in combination with the targeted immunotherapy pembrolizumab, improved response rates and clinical outcomes for some patients with non-small cell lung cancer. The researchers presented their findings at the International Association for the Study of Lung Cancer World Conference on Lung Cancer in September 2023.

A new phase III study with Ian Krop, MD, PhD, as senior author demonstrated the efficacy of trastuzumab deruxtecan (Enhertu) in patients with HER2-positive

presented their findings at the San Antonio Breast Cancer Symposium.

A study led by Tara Sanft, MD, found that a targeted diet and exercise intervention could improve outcomes for women undergoing chemotherapy for breast cancer. The study was published in the *Journal of Clinical Oncology*.

Education

Yale's Review of Advances in Oncology provided hematologists, medical oncologists, and oncology nurses with Yale's perspective on current data and information presented at the American Society of Clinical Oncology Annual Meeting 2023. The event took place in September 2023 in New Haven.

New Faculty

The section welcomed the following new faculty members:

- Matthew Austin, MD
- Michael Chiorazzi, MD, PhD
- Veda Giri, MD
- Adriana Matutino Kahn, MD
- Daniel O'Neil, MD, MPH
- David Schoenfeld, MD, PhD
- Yifei Zhang, MD
- Yu Zhang, MD, PhD

Recognitions

Aarti Bhatia, MD, MPH, was named clinical research team leader of the Head and Neck Disease-Aligned Research Team for Yale Cancer Center and Smilow Cancer Hospital.

David Braun, MD, PhD, was awarded an American Society for Clinical Investigation Young Physician-Scientist Award.

Barbara Burtness, MD, was awarded the Yale Cancer Center Award for Leadership in Diversity, Equity, and Inclusion (DEI) in honor of her leadership as interim associate Cancer Center director for DEI. Burtness was named chief translational research officer for Yale Cancer Center and Smilow Cancer Hospital, and associate director of translational research for YCC.

Michael Cecchini, MD, was appointed to the Colon Task Force of the National Cancer Institute Gastrointestinal Cancer Steering Committee for a two-year term as an early career investigator.

Anne Chiang, MD, PhD, was named associate Cancer Center director for clinical initiatives.

Jacquelyne Gaddy, MD, MSc, was named Deputy Director of the Diversity Enhancement Program in Oncology at Smilow Cancer Hospital in March 2023.

Veda Giri, MD, and Lajos Pusztai, MD, DPhil, were named Fellows of the American Society of Clinical Oncology (ASCO).

Sarah Goldberg, MD, MPH, was awarded the Yale Cancer Center Award for Teaching Excellence.

Roy S. Herbst, MD, PhD, was presented with an award of appreciation by the SWOG Cancer Research Network.

Patricia M. LoRusso, DO, PhD, was elected president-elect of the American Association for Cancer Research for 2023-2024.

Mandar Deepak Muzumdar, MD, received a 2023 Damon Runyon-Rachleff Innovation Award and a 2022 Innovation and Collaboration Program grant from the Lustgarten Foundation.

Elizabeth Prsic, MD, received a Women Faculty Forum grant to identify and reduce barriers to breast milk expression among medical trainees.

Eric Winer, MD, who served as the 2022-2023 ASCO president, presented the opening address at the 2023 ASCO annual meeting in June 2023.

Stefan Somlo, MD, Section Chief
Aldo Peixoto, MD, Clinical Chief



Peter S. Aronson, MD

Stefan Somlo, MD



Leyuan (Larry) Xu, PhD and Xiaoxu (Phylis) Li, PhD

Research

Investigators in the section explore a variety of topics from renal physiology and nephrology to patient-oriented investigation.

Several studies to note:

A study led by Stefan Somlo, MD, and Sorin Fedeles, PhD, MBA, demonstrated that the activation of the transcription factor XBP1 in vivo can improve the residual function of a mutant form of the PC1, protein thereby decreasing the severity of autosomal dominant polycystic kidney disease (ADPKD) in animal models.

Researchers identified a biomarker called CXCL9 that may help diagnose acute interstitial nephritis (AIN). Led by Dennis Moledina, MD, PhD, the study concludes that the CXCL9 test could allow faster treatment for AIN patients and prevent permanent kidney damage.

A randomized clinical trial led by F. Perry Wilson, MD, MSCE, demonstrated that automated electronic alerts in the hospital electronic health record could improve outcomes for patients with acute kidney injury (AKI).

Research led by Leyuan Xu, PhD, provided insights into the role of immune cells in kidney injury and fibrosis. The research contributes to a better understanding of the mechanisms underlying unresolved kidney injury and fibrosis, paving the way

for the development of novel therapeutic strategies to prevent or treat these conditions.

Yale is one of several institutions participating in Caring for OutPatiEnts after Acute Kidney Injury (COPE-AKI), a study aimed at finding new approaches to managing AKI, with Wilson as principal investigator and Moledina as co-investigator.

A study is underway titled “Assessment of Biomarker-Guided Calcineurin Inhibitor (CNI) Substitution Kidney Transplantation,” in which patients can administer abatacept, a self-injecting medicine, at home. Richard Formica, MD, is the investigator and William Asch, MD, PhD, is co-investigator.

From September 2022 through September 2023, the section secured nearly \$21.5M in funding.

The U.S. Department of Defense (DOD) awarded \$4.7M over a four-year period to Madhav Menon, MBBS, MD, and Wilson, to study Focal Segmental Glomerulosclerosis (FSGS).

Other projects funded:

- Menon received \$2.6M from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) for Role of AMP-kinase pathway in the regulation of Minimal change disease-to-FSGS transition.
- Shuta Ishibe, MD, received \$2.1M from NIDDK for Role of LRP1 in Podocyte Biology.
- Lloyd Cantley, MD, received \$1.8M from

NIDDK for Macrophage Function in Kidney Repair.

- Xu received \$1.8M from NIDDK for Targeting immune dysfunction during transition from AKI to CKD.
- Menon received \$1.7M from DOD for Role of Immune Cell-Podocyte Cross Talk in the Pathogenesis of APOL1-FSGS and Proteinuric Kidney Disease.

Clinical Care

Yale Nephrology has a number of comprehensive clinical programs for various diseases and disorders involving the kidney. Faculty provide care to patients across the state at 20 outpatient sites and three inpatient sites.

The Yale Onco-Nephrology program, a new clinical and research program, was established in October 2022. Anushree C. Shirali, MD, is the director of the program, which is a joint endeavor with Yale New Haven Hospital (YNHH). While the main focus is on patients with kidney-related complications as a result of cancer or treatment of cancer, clinical research is also part of the long-term plan.

In early 2023, Yale School of Medicine (YSM) and Yale Medicine were named a Center of Excellence (COE) by the Polycystic Kidney Disease (PKD) Foundation, along with 27 other clinical organizations nationwide. The center offers patients the

opportunity to receive care from experts who can help skillfully manage the illness.

Yale continues to be one of the top providers for kidney transplants in New England with a 96 percent survival rate one-year post transplant, while also exceeding national benchmarks in preemptive transplant listings. Yale New Haven Transplantation Center (YNHTC) lists 50 percent of its patients preemptively—prior to initiating dialysis—over double the 20 percent national average. Black patients also exceeded the national average on the preemptive waitlist. The team, led by Anna Qian, MD, was awarded the Yale International Physician-Scientist Resident and Fellow Research Award from the Yale School of Medicine Office of Physician-Scientist and Scientist Development (OPSSD). The award will help Qian pursue a fellowship at Yale Nephrology.

Education

The section is dedicated to training aspiring nephrologists. With four nephrology fellowship tracks, each has its own robust training and educational opportunities.

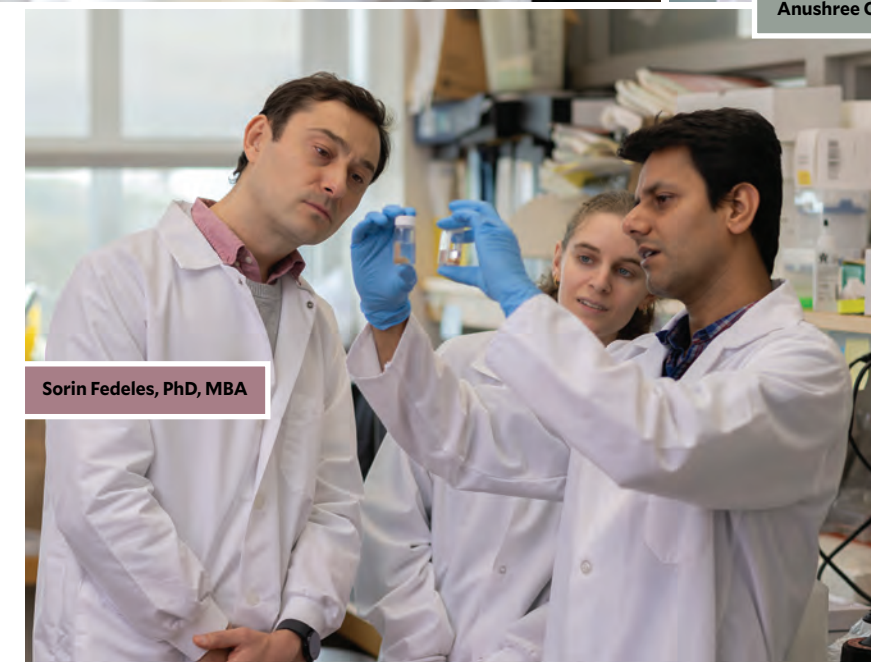
In July, the first fellow who matched in the three-year nephrology and critical care fellowship began training. The new track offers formal nephrology training with subspecialty training in critical care medicine, and once completed, the person will be board-eligible for both.

Anna Qian, MD, was awarded the Yale International Physician-Scientist Resident and Fellow Research Award from the Yale School of Medicine Office of Physician-Scientist and Scientist Development (OPSSD). The award will help Qian pursue a fellowship at Yale Nephrology.

William Chang, MD, PhD



Anushree C. Shirali, MD



Sorin Fedeles, PhD, MBA

Awards and Recognition

Peter S. Aronson, MD, received the Fund for Physician-Scientist Mentorship Annual Award presented by YSM’s Janeway Society Retreat announced in May 2023.

William Asch, MD, PhD, was elected Chair of American Society of Transplantation’s education committee.

Ursula Brewster, MD, won the 2023 Rosemarie L. Fisher, MD, Excellence in Graduate Medical Education (GME) Award.

Lloyd Cantley, MD, gave the Robert Schrier Endowed Lectureship at the 2022 American Society of Nephrology meeting.

William Chang, MD, PhD, was a recipient of Kidney Innovation Accelerator (KidneyX) Summit’s Artificial Kidney Prize Phase 2 for research on engineering bio-artificial kidneys.

Irene Chernova, MD, PhD, was selected as the recipient of the department’s 2023 Iva Dostanic, MD, PhD, Physician-Scientist Trainee Award.



Richard Formica, MD, was named vice president/president-elect of the United Network for Organ Sharing (UNOS) Organ Procurement and Transplantation Network (OPTN) in June 2023.

Sherry Mansour, MD, received the American Heart Association (AHA) Second Century Implementation Science Award.

Madhav Menon, MBBS, MD, received the American Transplant Congress’ Young Investigator Award.

F. Perry Wilson, MD, published a book, *How Medicine Works and When It Doesn’t: Learning Who to Trust to Get and Stay Healthy*.

Naftali Kaminski, MD, Section Chief
Jonathan Siner, MD, Clinical Chief

Margaret Pisani, MD, MPH



Clemente Britto-Leon, MD



Lynn Tanoue, MD, MBA



Kathleen McAvoy, MD



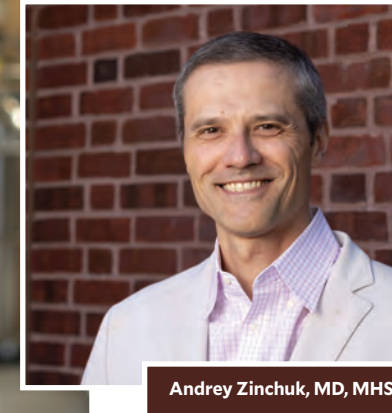
Farida Ahangari, MD



Vivian Asare, MD



Andrey Zinchuk, MD, MHS



Yale's Section of Pulmonary, Critical Care, and Sleep Medicine (Yale-PCCSM) is a leader in compassionate and effective patient care; cutting-edge research; and rigorous training of future leaders. With over 70 faculty members and five fellowship programs, the section continues its remarkable growth, productivity, and impact.

Research

Research is flourishing at Yale-PCCSM—members have written and co-authored over 180 papers each year during the last four years; secured over \$14 million in research funding, including six early-stage R01 awards; and made exciting and influential discoveries.

Yale-PCCSM's researchers made their marks in nearly every field of respiratory medicine. Jose Gomez Villalobos, MD, and his team applied deep learning methods to study the readmission of asthma and COPD patients. Andrey Zinchuk, MD, MHS, led a study that discovered that a patient's chronotype—whether they rise early or late—may affect how well they adhere to proper CPAP use—with those who prefer to wake up earlier more likely than late risers to use their devices longer. Farida Ahangari, MD, led a team within the Kaminski lab that designed and tested interventions that inhibit a family of microRNA precursors called miR-33 to improve the metabolic functions of lung macrophages and reverse pulmonary fibrosis. Phillip Joseph, MD, and Danielle Antin-Ozerkis, MD, identified physiological parameters that predict pulmonary hypertension in interstitial lung disease with high sensitivity and specificity.

Snigdha Jain, MD, MHS, evaluated changes in restricting symptoms among

adults aged 70 or older during the six-month period following a critical illness. Jain's mentor, Lauren Ferrante, MD, MHS, is studying the unmet needs [B1] of older adults to promote functional recovery after critical illness. Wonnie Ryu, MD, MPH, and his team discovered that high blood levels of mitochondrial DNA are associated with fatigue in patients with sarcoidosis. Through her research, Kathleen Akgün, MD, found that persons living with HIV on antiretroviral therapy experience higher rates of delirium when they use alcohol together with neurocognitively active medications compared with uninfected patients.

Geoffrey Chupp, MD, found that while individuals with COPD were at a higher risk of severe COVID-19 during the first two waves of the pandemic, those with asthma had better health outcomes than the general population. Meanwhile, Xiting Yan, PhD, developed a new method for identifying genes that change in single-cell RNA sequencing data; and Min-Jong Kang, MD, PhD, MPH, discovered that programmed death-1 homolog (PD-1H) is a novel immune regulator of pulmonary fibrosis.

To see all papers published by Yale-PCCSM members this year, go to <https://medicine.yale.edu/internal-medicine/pulmonary/research/publications>.

Fellowship and Training

The section trains outstanding physicians and non-MD researchers to be leaders in academic pulmonary, critical care, and sleep medicine. With the addition of a new fellowship in pulmonary vascular disease, Yale-PCCSM had 31 fellows in 2023: 20 in pulmonary and critical care medicine; five in critical care medicine; four in sleep medicine; one in interventional pulmonary; and one in pulmonary vascular disease. Four researchers who completed their postdoctoral training secured tenure-track faculty positions in basic science departments, which demonstrates the rigor, productivity, and success of research training at Yale-PCCSM.

Clinical Care

Yale-PCCSM continues to provide outstanding innovative care. The medical intensive care units continue to upgrade the quality as well as the safety of care.

The interventional pulmonary team at Yale-PCCSM was the first in Connecticut to perform a robotic-assisted bronchoscopy with novel shape-sensing technol-

ogy that allows team members to visualize and biopsy remote parts of the lung which were previously inaccessible. The team performed 193 procedures in the program's first year. This team also offers endobronchial valve treatment and many other procedures for patients with COPD.

The pulmonary vascular disease program continued to expand; and in collaboration with specialists in cardiothoracic surgery and cardiology, its members offered novel interventions for patients with pulmonary vascular disease, including pulmonary thromboendarterectomy. These clinicians were recently the first in Connecticut to perform balloon pulmonary angioplasty.

Yale-PCCSM outpatient services continue to expand. The Winchester Center for Lung Disease, with locations in North Haven and New Haven, tripled its capacity to treat patients. This multidisciplinary program provides access to some of the best physicians in the nation from every subdiscipline of respiratory medicine, as well as support services from respiratory therapists, physical therapists, pharmacists, and social workers, among others.

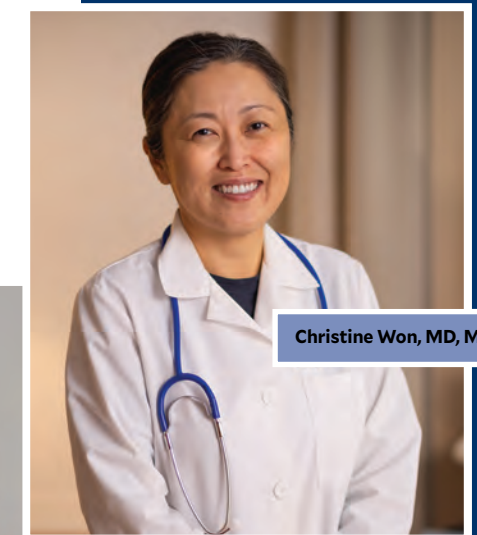
New Faculty

Eight new faculty members were recruited to enhance and expand the Yale-PCCSM outpatient and lung disease programs. They are:

Giuliana Cerro Chiang, MD, MSc
Genta Ishikawa, MD, MPH
Shannon Kay, MD
Kathleen McAvoy, MD
Divya Menon, MD
Hannah Oakland, MD
Parvati Singh, MD
Fatima Zeba, MD.



Lauren Ferrante, MD, MHS



Christine Won, MD, MSc

Honors and Awards

Farida Ahangari, MD, received a Blavatnik Award from a program that honors young scientists in the United States, the United Kingdom, and Israel.

Vivian Asare, MD, was awarded an American Academy of Sleep Medicine Foundation Community Sleep Health grant.

Clemente Britto-Leon, MD, received the Carol B. Basbaum Award from the Respiratory Cell and Molecular Biology Assembly of the American Thoracic Society (ATS).

Lauren Ferrante, MD, MHS, received the Jo Rae Wright Award for Outstanding Science from the American Thoracic Society.

Kathleen McAvoy, MD, was awarded top abstract recognition by the ATS.

Margaret Pisani, MD, MPH, was selected by the American College of Chest Physicians (CHEST) to give the Roger C. Bone Memorial Lecture in Critical Care.

Lynn Tanoue, MD, MBA, was chosen by CHEST to give the Richard S. Irwin, MD, Master FCCP Honor Lecture.

Christine Won, MD, MSc, was elected president of the Society of Anesthesia and Sleep Medicine (SASM).

Andrey Zinchuk, MD, MHS, received a Distinguished Service Award from the New Haven County Medical Association.

Richard Bucala, MD, PhD, Section Chief
 Christina Price, MD, Clinical Chief (Allergy & Immunology)
 Vaidehi Chowdhary, MBBS, MD, Clinical Chief (Rheumatology)



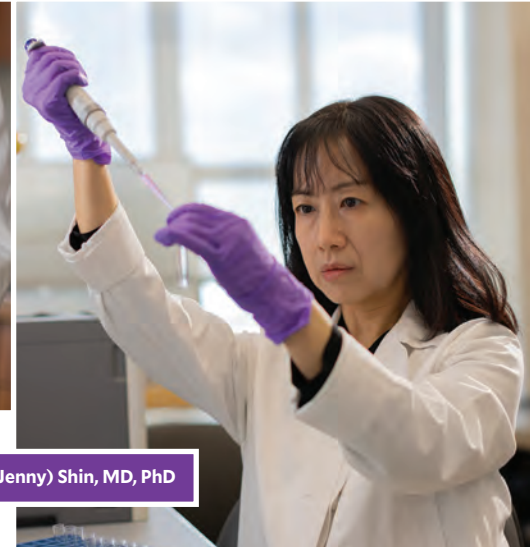
Betty Hsiao, MD



Mark Mamula, PhD



Junghee (Jenny) Shin, MD, PhD



New Faculty

The section welcomed six new members: Ami Belmont, MD; Sang Taek Kim, MD, PhD; David Podell, MD, PhD; Mario Rodeñas, MD; Gabriela Sanchez-Zuno, PhD; and Abhinav Seth, MD, PhD.

Clinical Care

Epoprostenol (Flolan) infusions are safely given to patients whose fingers and toes are damaged by severe Raynaud phenomenon in a new outpatient treatment launched at Yale in July 2023. Monique Hinchcliff, MD, MS, and Vaidehi Chowdhary, MBBS, MD, developed the process. Yale is the first location in the Northeast and the second in the United States to administer this medication in an outpatient setting. See page 8 for the whole story.

Established in early 2023, the Immunotherapy Adverse Events in Rheumatology Program treats patients with undesirable side effects from immunotherapy or autoimmune conditions that may cause

flare-ups or a severe onset of symptoms when receiving immunotherapy. The clinic is directed by Sang Taek Kim, MD, PhD, who uses data from the clinic to better understand the underlying mechanisms of these conditions.

Opened in October 2022, the Yale Myositis Program uses a multidisciplinary approach to caring for people with this complex condition. Directors Harjinder Chowdhary, MBBS, MD, and Oana Zaha, MD, lead a team of dedicated specialists from such different areas as neurology, pulmonology, dermatology, pathology, and genetics to provide comprehensive patient care.

Allergy and Immunology

Elise Liu, MD, PhD, furthered her investigation into the environmental signals that lead to the production of antibodies in the context of food allergies. She also worked on understanding the cellular mechanism of making these antibodies to find a way

to interrupt the production of pathogenic food antibodies.

Ami Belmont, MD, performed a multidisciplinary intervention at Yale New Haven Health to improve the utilization of first-line prophylactic antibiotics for surgical site infections. Her study demonstrated that implementing a guideline and best-practice advisory alert for surgical patients with reported penicillin allergy to receive cefazolin (Ancef) is safe and effective.

Since late 2022, Allergy and Immunology has been expanding the availability of ambulatory services and locations to both the Bridgeport and Milford campuses of Bridgeport Hospital. Such critical services as drug testing, infusions of immunoglobulin and biologic medications to treat immunodeficiency and asthma/allergic diseases, and patch testing to evaluate and treat skin allergies are just a few of the services now available.

Global Health

Joshua Bilsborrow, MD, MHS, developed a workshop series for Rwandan internal medicine residents to increase their rheumatology knowledge and generate interest in pursuing training in the specialty. Bilsborrow is working to create a mobile rheumatology curriculum that can be implemented in other countries lacking rheumatologists.

This project was performed under grant support by the International League Against Rheumatism (ILAR) and under the auspices of the Yale Rheumatology Program in Global and Community Health, directed by Evelyn Hsieh, MD, PhD, who also chaired the American College of Rheumatology (ACR) Global Engagement Committee.

CAR T-cell Therapy

Cellular therapies are poised to dramatically change treatment options for patients with intractable systemic lupus erythematosus (SLE) and other autoimmune diseases. Director of Clinical Trials Fotios Koumpouras, MD, has been developing a Yale program to test chimeric antigen receptor (CAR) T-cell therapy for SLE. Koumpouras will leverage Yale's established CAR T-cell therapy program for cancer to advance the state of clinical care for SLE and related disorders. Koumpouras and his team expect to identify their first candidates for this novel therapy in 2024.



Elise Liu, MD, PhD, and Jennefer Par-Young, MD

Honors and Awards

Ami Belmont, MD, received the abstract award at the Yale Graduate Medical Education Health Equity Quality and Safety Symposium.

Joshua Bilsborrow, MD, MHS, was named Yale Rheumatology Teacher of the Year.

Lenore Buckley, MD, MPH, Vaidehi Chowdhary, MBBS, MD, and Monique Hinchcliff, MD, MS, were part of a group that developed new ACR guidelines for screening, monitoring, and treating interstitial lung disease in patients with rheumatic conditions.

Joseph Craft, MD, won the Lupus Research Alliance's 2022 Distinguished Innovator Award and a Yale Cancer Center Basic Science Research Prize.

Deborah Dyett Desir, MD, was sworn in as president of the ACR. She was also honored with a leadership award from the New Haven County Medical Association.

Betty Hsiao, MD, received an Innovative Research Grant from the Rheumatology Research Foundation.

Jake Kuster, MD, was named associate director of the Allergy and Immunology fellowship training program.

Elise Liu, MD, PhD, was chosen to receive an American Society for Clinical Investigation 2023 Emerging-Generation Award.

Mark Mamula, PhD, received a Yale Faculty Innovation Award from Yale Ventures for his canine vaccine work.

Robert Schoen, MD, MBA, recognized as a Master of the ACR in 2023.

Junghee (Jenny) Shin, MD, PhD, received a research grant from the Immune Deficiency Foundation.

MacArthur Award Offers Three Internal Medicine Faculty the Ability to Pay It Forward

By Julie Parry

Of the 19 MacArthur Fellows affiliated with Yale University at the time of their award, three of them are faculty from the Department of Internal Medicine: Gretchen Berland, MD; Mary Tinetti, MD; and Emily Wang, MD, MAS. “Gretchen, Mary, and Emily are shining examples of the stellar, dedicated, ingenious faculty we have within the department, and I could not be happier that the MacArthur Foundation chose to honor them in this way,” said Department Chair Gary V. Désir, MD, the Paul B. Beeson Professor of Medicine and Vice Provost for Faculty Development and Diversity.



Gretchen Berland, MD

Currently an Associate Professor of Medicine (General Medicine), Berland took an unconventional route into patient care. While she took pre-med courses as an undergraduate, she pursued a career in television, and worked at WGBH in Boston, Mass., and MacNeil/Lehrer Productions, in New York, N.Y. But medicine drew Berland back, and she earned her MD in 1996. She combined her passions of medicine and television, and produced short films during her residency and internship. She joined the YSM faculty in 2001.

She recalls receiving a call in 2004 about her MacArthur honor during a screening of her documentary film, *Rolling*, with the National Clinician Scholars Program (NCSP) at Yale. Berland herself was a fellow with the program at UCLA from 1999 to 2001.

“The caller asked if I was sitting down, and they told me this incredible news. It’s like the Wonka Golden Ticket, but the thing that was the most memorable part of the message was that they wanted to let me know they really valued my creative work. You hear a week before the public announcement is made. I remember the day vividly. It is an incredible privilege,” said Berland.

Berland is a general internist at YSM, and cares for patients in the hospital and the ambulatory setting. Her research combines documentary filmmaking with participatory action research to study patient experience and to better understand health culture and behavior. Berland calls the MacArthur Fellowship the good karma coin, and it represents a

means to pay it forward. She tries to apply this practice in her daily life as a physician, and in her creative endeavors. Her goal with the creation of *Rolling* was to understand the experience of being in a wheelchair. When she released the film, *Who is “they”?* gave it away.

Berland wrote about her experiences during the creation of documentary and the impact it had on her personally in her 2007 *New England Journal of Medicine* Perspective piece, “The View from the Other Side — Patients, Doctors, and the Power of a Camera.”

“Making the film *Rolling* taught me so much about how we tend to make so many assumptions about who people are and why they’re in the circumstances that they’re in. The practice of filmmaking reminds me that there’s someone out there who you may think you know, though almost certainly have a dimension of their life experience that you know nothing about and could likely influence your how you see the world.”

“I try to apply that rule with bedside and colleagues and it just makes life a whole lot more interesting, makes life a whole lot more rewarding. For me, I try to approach the practice of medicine increasingly from a place of humility. As I get older, I think that is the most important thing.”

Berland will be “forever grateful” for the honor. “This award has given me more opportunities to pay it forward. In the end, that’s the most important thing you can do.”

Mary Tinetti, MD

Tinetti is the Gladys Phillips Crofoot Professor of Medicine (Geriatrics), Yale School of Medicine (YSM), and Yale School of Public Health (YSPH). Her interests were always in treating chronic problems in older patients rather than acute diseases. In the 1980s, geriatrics was a new field, and Tinetti gravitated to it. She liked the intellectual challenge of caring for older adults, and found the work personally satisfying.

She was named a MacArthur fellow in 2009. At the time, Tinetti’s work was focused on the consequences of falls in older adults, but her interests were evolving into decision making for older people with multiple chronic conditions. She remembers receiving the call notifying that she had been named a MacArthur fellow.

“The MacArthur Fellowship helped support my focus on the problem of multiple chronic conditions and decision-making with multiple chronic conditions. Being named a MacArthur fellow is a psychological boost as well as a financial boost. Someone believes in you,” reminisced Tinetti. “I think that colleagues at other institutions were perhaps a little more willing to collaborate on a risky project than they otherwise would’ve been. But you never know, right? Because you don’t know what would’ve happened without the award.”

The following year, Tinetti spent a year in Washington, D.C. as a Health & Aging Policy fellow with The Atlantic Philanthropies. As a fellow, she worked at the Centers for Medicare and Medicaid Services, and learned more about how clinical decisions were supported in health care.

Upon the conclusion of her fellowship, she returned to New

Haven and began to lay the groundwork for what would eventually become her “second body of work,” Patient Priorities Care (PPC). PPC engages clinical decision making to address what matters most in the care of older adults with multiple conditions by using the 4Ms framework: What Matters Most, Medication, Mentation, and Mobility. Patient Priorities Care works well for patients of all ages, but can particularly benefit adults who are struggling to manage their multiple conditions; who see many clinicians; who may receive conflicting recommendations; and who may be overwhelmed by their current care regimen.

PPC officially launched in 2016, and has spread across the nation with hundreds of physicians and other health professionals treating patients within its framework. Tinetti has found that many, although not all, health professionals resonate with the approach.

“At first, they don’t quite understand it and they revert to treating each individual disease in isolation. But you can always see when they get that Aha! moment, where we work with them to consider the entire patient: all of their conditions; all of the effects of their treatments, good and bad; and their life context, the social determinants of health. Given all those aspects, what are the major things that are keeping them from achieving their outcome goal?” Tinetti explained. “So they all of a sudden get that movement from diseases in isolation to all of these factors together, and making decisions based on that.”

Tinetti and the PPC team is changing the care of older adults. To learn more about PPC, visit their website: patientprioritiescare.org.



Emily Wang, MD, MAS

Wang’s honor from the John D. and Catherine T. MacArthur Foundation came in 2022. Wang, professor of medicine (general medicine), YSM, and of public health (social and behavioral sciences), YSPH, has dedicated her career to solving inequities in health care for people with a history of incarceration.

Wang recalled when she received the notification. “I received a cryptic text while riding on the Yale shuttle, and next thing I know, I am in my office talking to officers from the MacArthur Foundation, hearing about the award. It was a complete and utter surprise,” said Wang.

She was inspired to begin this work while volunteering in a women’s prison in North Carolina and working in a prison in Botswana as a medical student. During her residency, she co-founded a primary care program for individuals released from incarceration, employing community health workers with prior incarceration to guide individuals through getting insurance, navigating health care, and connecting with housing and employment. The program was founded in 2011 and is now led by Shira Shavit, MD. It grew nationally into the Transitions Clinic Network, where Wang continues to direct research activities.

In 2008, Wang joined the faculty at YSM. At this time, Wang sought to understand whether something about incarceration itself makes people more prone to worse health outcomes. Her research focuses on cardiovascular disease, cancer, opioid use disorder, gun violence, and COVID-19, and has partnered directly with those impacted. In 2020, Wang and her

team launched the SEICHE Center for Health and Justice. This collaboration between YSM and Yale Law School works toward community transformation by identifying legal, policy, and practice levers to improve the health of those affected by mass incarceration. The SEICHE team combines real-world experience with scientific research to identify innovative solutions for addressing the health effects of mass incarceration on individuals, families, and communities, as well as produce evidence-based solutions for the depopulation of prisons and jails and investing in community health and safety.

Among Wang’s honors, she served as co-chair for the National Academy of Sciences, Engineering, and Medicine’s committee on “Decarcerating during COVID-19.” Wang currently serves on the World Health Organization’s Health in Prisons Programme, and recently co-led a curriculum for European prison health providers. Wang was inducted into the American Society for Clinical Investigation in 2022.

Nominated anonymously from leaders in their respective fields, the Fellowship is presented to individuals in a variety of fields who have shown exceptional originality in and dedication to their creative pursuits.

“Emily is just an absolute perfect example of someone who should get the award. This award will open so many doors for her,” said her fellow recipient Tinetti.

Department of Internal Medicine's Office of Global Health

The Department of Internal Medicine's Office of Global Health focuses on equitable and bidirectional clinical capacity-building to improve patient care in resource-limited communities in the United States and abroad through its numerous collaborations. During 2022–2023, the office took the following actions:



Tracy Rabin, MD, SM, and Sheela Sheno, MD, MPH



Christine Sekaggya Wiltshire, MBChB, MMed, PhD, and Robert Bona, MD

- Provided travel for trainees participating in the Global Health Scholars Program to engage in clinical rotations with partner institutions in Uganda, Rwanda, and South Africa, as well as in rural Arizona and Tennessee.

- Expanded a Local Global Health Elective, providing trainees with clinical and nonclinical community-based experiences through partner programs in Greater New Haven.

- Continued to run the Global Health and Equity Distinction Pathway to support global health clinical, didactic, and scholarship experiences for current trainees in the Department of Internal Medicine.

- Made the most of opportunities to learn and discuss humanitarian emergencies and other important topics in global health through Global Health Day and other events.

- Continued to support the clinical training of chief residents and faculty from partner institutions abroad. The office hosted Christine Sekaggya Wiltshire, MBChB, MMed, PhD, a hematologist from Uganda; and two chief residents from Rwanda, Prosper Ingabire, MBBS, and Véronique Uwamariya, MBBS.

YSM Faculty Developing “Game Changer” for Global Health

by Julie Parry



Dengue. Zika. Lyme. Yellow fever. Chikungunya virus. Malaria. These worldwide diseases and others are spread by the bite from an infected arthropod—a tick or mosquito. Five faculty from Yale School of Medicine (YSM) are collaborating on a project focusing on creating vaccines against infectious diseases by targeting the vector, which could be a “game changer” for global health. The project is funded by the Howard Hughes Medical Institute (HHMI) Emerging Pathogens Initiative.

The lead investigator, Richard A. Flavell, PhD, FRS, Sterling Professor of Immunobiology, credits his colleague Erol Fikrig, MD, the Waldemar Von Zedtwitz Professor of Medicine (Infectious Diseases), YSM, and Professor of Epidemiology (Microbial Diseases), Yale

Fikrig’s work is concentrated on creating a vaccine to stop the vector—a tick or mosquito—from spreading a disease, rather than targeting the microbe itself, which is the premise behind this new initiative, a perfect “synergy of Flavell’s interests and mine,” Fikrig said.

So Flavell and Fikrig set out to assemble their dream team of collaborators. At YSM, they contacted Maudry Laurent-Rolle, MD/PhD, assistant professor of medicine (infectious diseases), for her expertise in immunology and such flaviviruses as dengue fever; Aaron Ring, MD, PhD, associate professor of immunobiology, who developed genome screening technologies; and Heidi J. Zapata, MD, PhD, assistant professor of medicine (infectious diseases), for her back-

ground in human immunology. They also contacted two of Fikrig’s longtime collaborators, George Dimopoulos, PhD, and Photini Sinnis, MD, at Johns Hopkins Bloomberg School of Public Health. Dimopoulos’s proficiency is in mosquitoes and CRISPR technology, while Sinnis is a world expert in malaria. They also tapped Drew Weissman, MD, PhD, from the University of Pennsylvania, for his knowledge of mRNA vaccines.

“It’s really an amazing group. We are going to produce important finding because the quality of the team and the enthusiasm of everybody. We are off to an incredible start,” said Flavell. In addition to the potential discoveries driving the excitement, both Laurent-Rolle and Zapata spoke about the mentorship opportunity this project presents.

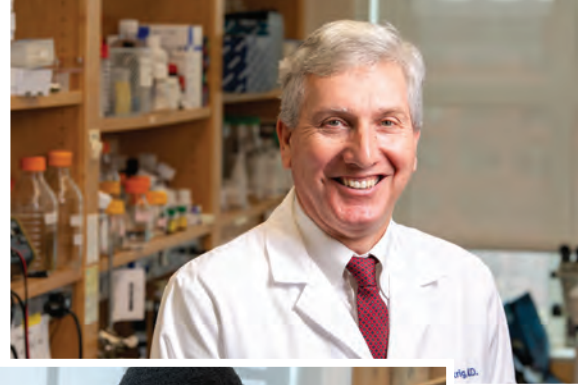
“I am interested in human immunology, so Erol gave me this opportunity to contribute to the grant in that way. So I am going to be focusing on the host response, and it’s amazing to work with Erol; Richard Flavell, who is a giant in the immunology field; and Drew Weissman, whose technology developed the mRNA vaccine for COVID. I’m thankful to be part of it. It’s an incredible chance to work with all these amazing scientists,” said Zapata.

Laurent-Rolle spoke about the excitement in her lab to participate in this project. “I will soon have six to seven people in my lab, postdocs, a postbac, graduate students, and two people focused specifically on the HHMI project. So a really strong team of folks. I have been lucky to have these people, to get them so

quickly, and to participate in this project,” she said.

HHMI committed “\$100 million to support basic research targeted at preparedness for emerging pathogens that could threaten human health in the future,” Who is “they”? said. “Do you remember the summer of 2019? We were all terrified about eastern equine encephalitis (EEE) virus, which is a mosquito-borne disease with a 35% case fatality. This project has global impact if we are able to do this. We wouldn’t have to create a vaccine for every specific disease if we could generate a vaccine against that agent that is transmitting all these viruses; then we could eliminate more diseases rather than targeting the microbe. It’ll be a game changer if we pull this off,” said Laurent-Rolle.

Other Yale faculty participating in other projects through the HHMI Emerging Pathogens Initiative are Akiko Iwasaki, PhD, Sterling Professor of Immunobiology and Professor of Dermatology and of Molecular, Cellular, and Developmental Biology and of Epidemiology (Microbial Diseases); Anna Marie Pyle, PhD, Sterling Professor of Molecular, Cellular, and Developmental Biology and Professor of Chemistry; and Paul Turner, PhD, the Rachel Carson Professor of Ecology and Evolutionary Biology. To learn more about their research, read, “Yale labs to lead new investigations into emerging pathogens.”



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Yale's Department of Internal Medicine is an international leader in research, education, and clinical care. Our programs are enhanced by the generous support of our donors. A gift of any amount is vital to our mission and goals.

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Since 1810, Yale School of Medicine has grown and prospered thanks to significant capital gifts from alumni, parents, patients, and friends. More than 77% of endowment growth has come from a combination of new gifts and their subsequent investment performance. Yale's academic distinction and its institutional stability are a reflection of the generosity of its dedicated supporters.

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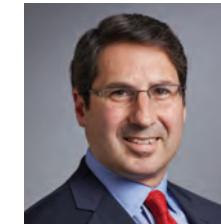


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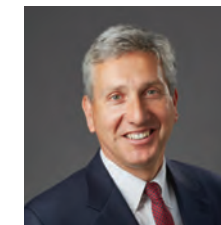
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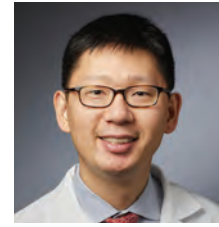
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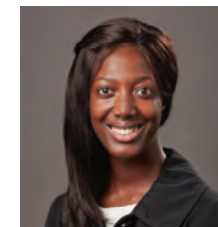


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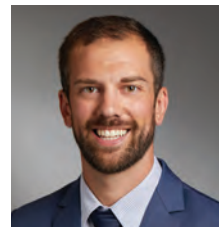
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(As of October 2023)

#9 NIH Funding in Internal Medicine
(per the Blue Ridge Institute for Medical Research)

\$9.5M+

increase from FY22 to FY23

1.2M+

Clinical WRVUs

\$217.5M+

Sponsored Funding

(10/1/22-9/30/23)

\$400M+

Total Operating Budget

77

faculty perform patient
care at VACHS

634

Ladder Track
Faculty

155

Research
Faculty

74

Instructors

21

Lecturers

247

Hospital
Residents

370

Postdoctoral
Associates/Fellows
Includes Clinical Fellows

123

Postgraduate
Associates/Fellows

446

Staff
*Medical Oncology, Hematology, and PA
Program staff not included*

573

Other
*Voluntary, Adjunct,
Emeritus, Visiting*

420

Voluntary

113

Adjunct

32

Emeritus

8

Visiting

HONORING

Those we lost this year



Rosa Hendler, MD
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Fred S. Wright, MD

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