

Medical center institutions

Yale School of Medicine
 Yale Medicine
 Yale School of Public Health
 Yale School of Nursing
 Yale New Haven Health, which consists of:
 Bridgeport Hospital
 Greenwich Hospital
 Lawrence + Memorial Hospital
 Northeast Medical Group
 Westerly Hospital
 Yale New Haven Hospital, including the Saint Raphael Campus
 Yale New Haven Children's Hospital
 Yale New Haven Psychiatric Hospital
 Smilow Cancer Hospital at Yale New Haven
 Yale Health
 Connecticut Mental Health Center
 John B. Pierce Laboratory

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To order copies, contact us at 1 Church Street, Suite 300, New Haven, CT 06510, or (203) 785-5824, or by email at facts.med@yale.edu.

On the web: medicine.yale.edu/facts.

Photos: Anthony DeCarlo, Robert A. Lisak, Harold Shapiro, JoAnne Wilcox

MEDICAL CENTER

An affiliation agreement between the medical school and Grace-New Haven Hospital in 1965 created Yale New Haven Hospital (YNHH), which expanded in 1993 with the opening of the Children's Hospital, and again in 2000 with the acquisition of the Psychiatric Hospital. The 14-story Smilow Cancer Hospital opened in 2009, and in 2012 YNHH acquired the Hospital of Saint Raphael, adding 533 beds and making it one of the largest hospitals in the United States. The medical campus has grown over the years to include or abut the institutions listed at left. Four miles away in West Haven, the affiliated VA Connecticut Healthcare System maintains active clinical, research, and education programs in conjunction with many medical school departments. Extensive maps and directions to medical center destinations are available online at medicine.yale.edu/maps.

HOW TO REACH US

- **To find a Yale doctor**, visit Yale Medicine online at yalemedicine.org, or call (877) YALEMDS or (877) 925-3637.
- **For information on medical school admissions**, visit medicine.yale.edu/admissions, or call (203) 785-2696.
- **For news about the school**, visit medicine.yale.edu. Media inquiries should be directed to the Office of Public Affairs and Communications at communications.yale.edu/about-opac or (203) 432-1345.
- **To find a person at Yale University**, consult the online directory at directory.yale.edu, or call directory assistance at (203) 432-4771. To find a person at Yale New Haven Hospital, call (203) 688-4242.
- **To make a gift in support of the School of Medicine**, please visit yale.edu/givemedicine or contact Roopashree Narasimhaiah at ysmgifts@yale.edu.

New Haven

Population (2018) 130,418
 Distance from:
 NYC 80 miles
 Boston 137 miles

University profile

Yale totals include YSM

FACULTY	
Yale	4,739
YSM	3,116
STAFF	
Yale	10,050
YSM	3,608
STUDENTS	
Yale	13,462
YSM	1,533 ⁹

Community service

The majority of students volunteer for at least one of the school's many community service projects, including:
 Columbus House
 Downtown Evening Soup Kitchen
 HAVEN (student-run free clinic)
 Health Professionals Recruitment and Exposure Program
 Hill Regional Career High School Anatomy Teaching Program
 Hunger and Homelessness Auction
 Neighborhood Health Project
 Refugee Patient Navigator Program
 Youth Science Enrichment Program

YALE UNIVERSITY AND NEW HAVEN

The School of Medicine is located on the main campus of Yale University, one of the world's great institutions of higher learning. With a residential college system modeled after those of Cambridge and Oxford, the undergraduate school is complemented by the Graduate School of Arts and Sciences and 12 professional schools, including Architecture, Art, Divinity, Drama, Engineering and Applied Science, Forestry and Environmental Studies, Law, Management, Music, Nursing, and Medicine, which includes the School of Public Health. In 2007, Yale acquired the 136-acre West Campus in West Haven.

Established in 1638, New Haven was the first planned municipality in America, organized geographically in nine squares, including a picturesque town green. Today, New Haven is a vibrant coastal city located on Long Island Sound between New York and Boston. Cultural opportunities abound, from dance, theater, and music to the treasures of Yale's art and natural history museums.



The Child Study Center, the Department of Pediatrics, and the Unitarian Society of New Haven co-hosted a rally and candlelight vigil at Hamden Memorial Town Hall to protest conditions faced by refugees.

⁹ The breakdown for this number can be found on the Education page.

Yale Institute for Global Health is a university-wide effort led by the Schools of Medicine, Nursing, and Public Health that serves as the focal point for research, education, and engagement with global partners to improve the health of individuals and populations worldwide.

Yale Office of International Affairs offers support to faculty in establishing and maintaining collaborations abroad, drawing on existing relationships on six continents. It maintains an online faculty research database.

Norwegian University of Science and Technology partnership provides support for the exchange of students, fellows, and faculty in such areas as cancer, immunology, neuroscience, and public health.

By the numbers (2017-18)

International students at Yale (%)	
MD	17%
MPH	32%
PhD (Sciences)	31%
Yale students/trainees abroad ¹⁰	
MD (international sites)	22
MD (domestic sites)	6
MPH	51
Downs Fellows	6
Yale/Stanford J&J Scholars	42
Visiting MD students (at Yale) from other nations	
	93

INTERNATIONAL ACTIVITIES

The School of Medicine is an active partner in fulfilling Yale's international goals, which include preparing students for international leadership and service, attracting the most talented students and scholars to Yale from around the world, and positioning Yale as a global university of consequence. Faculty members conduct research abroad, teach, and design courses in global health. Their work runs the gamut from molecular studies at the nanoscale to the analysis of social networks in disease transmission and prevention, to the improvement of health care systems.

Among the programs spanning the institution are:

- **Office of Global Health**, which facilitates the placement of Yale medical students in global clinical electives at sites in Argentina, Chile, China, Colombia, Dominican Republic, Ghana, Jamaica, South Africa, Thailand, and Uganda, and the U.S. (rural sites in Appalachia and on the Navajo reservation in Arizona as well as in free clinics in New Haven and San Francisco). The office also administers the Visiting International Student Electives Program.
- **Downs International Health Student Travel Fellowship**, which supports students who undertake health-related research, primarily in low- and middle-income countries.
- **Yale/Stanford—Johnson & Johnson Global Health Scholars**, which sponsors rotations abroad for Yale house staff and physicians from other institutions, who travel to six sites in Africa and Asia.



A panel of Yale experts explained the threat and future direction of the coronavirus outbreak at a forum held at the School of Public Health.

¹⁰ Data refer to the 2015-16 academic year.

Endowment

Yale	\$30.3 billion
YSM	\$2.79 billion

2019 operating income

Yale	\$4.1 billion
YSM	\$1.95 billion

2019 capital projects

NEW CONSTRUCTION & ACQUISITIONS

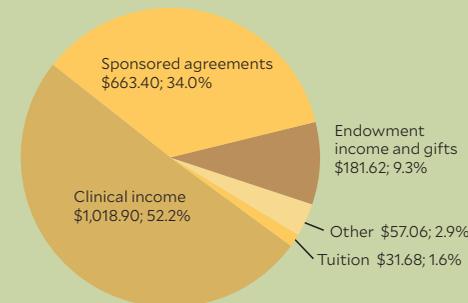
Yale	\$154.7 million
YSM	\$0

RENOVATIONS/ALTERATIONS

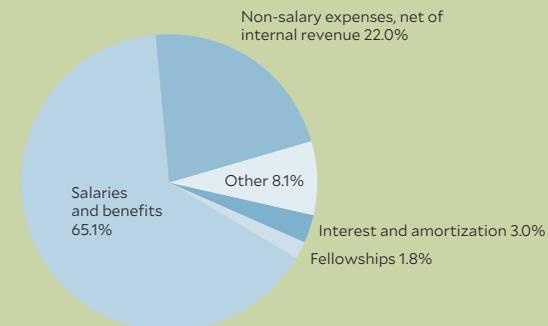
Yale	\$292.4 million
YSM	\$42.65 million

Operating summary for the year ending June 30, 2019 (in millions)

Income:
 Total \$1,953.38



Expenditures



¹¹ Research income does not equal award amounts because research dollars are not always spent in the same period in which they are awarded.



Yale SCHOOL OF MEDICINE

FACTS AND FIGURES 2019-20
medicine.yale.edu/facts



Brief chronology

1701 Yale College founded

1810 Medical Institution of Yale College chartered

1833 The State Hospital, precursor to the New Haven Hospital, opens

1857 First African American student graduates

1915 Department of Public Health established and later accredited as a school of public health

1916 First female students admitted

1924 School moves from 150 York Street to Sterling Hall of Medicine at 333 Cedar Street

1941 Yale Medical Library is dedicated

1965 Medical school and hospital revise their affiliation, creating Yale New Haven Hospital

1970 Physician Associate Program founded

1974 Yale Cancer Center established

2003 Anlyan Center completed

2007 Amistad Street building opens

2007 West Campus acquired

2009 Smilow Cancer Hospital at Yale New Haven opens

2010–11 Medical school celebrates 200th anniversary

2012 YNHH acquires the Hospital of Saint Raphael

2018 Physician Assistant online program launches

OVERVIEW AND HISTORY

The Yale School of Medicine is one of the world's leading centers for biomedical research, advanced clinical care, and medical education. It ranks sixth among medical schools receiving funds from the National Institutes of Health (NIH) and twelfth in NIH dollars per faculty member. More than 1,500 Yale physicians provide care to patients from across the region and around the world. The Yale system of medical education, with its emphasis on critical thinking and independent student research, has produced leaders in every field of academic medicine.

The sixth-oldest medical school in the United States, it was chartered by the Connecticut General Assembly in 1810 as the Medical Institution of Yale College, located first on Grove Street, then at 150 York Street. Since 1924, it has occupied Sterling Hall of Medicine at 333 Cedar Street and surrounding buildings. It has awarded 9,190 medical degrees since 1814. There are 5,582¹ living alumni with MD degrees, 4,780 with MPH degrees, and 1,249 alumni of the Physician Associate Program with the PA-C certificate or MMSc degree.



above: At Match Day, students learn where they will spend the first phase of their medical careers.

cover: Detail of sculpture outside Sterling Hall of Medicine.

¹ There has been a change in the total number of Physician Associate Program alumni due to an update in the tracking system. All data in Facts & Figures as of 6/30/19 unless otherwise noted.

Students by degree program

MD program ²	550
MD	370
MD/PhD	143
MD/MHS	20
MD/MBA	13
MD/MPH	2
MD/JD	2

MMSc (PA-C)	217
Physician Associate Program	119
Physician Assistant	
Online Program	98

MPH	403
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PhD	363
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Total	1,533
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MD program details

CLASS OF 2023 PROFILE

Applicants	4,932
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Class size	104
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Acceptance rate	5.5 %
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Median cumulative GPA	3.83
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MCAT median	518
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MCAT median of sections	130
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Male-to-female ratio	51 to 53
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Faculty-to-student ratio	4.2 to 1
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Finances

Tuition, 2019–2020	\$62,974
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Average debt, 2019 graduates w/debt	\$121,843
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Medical Library

Volumes	367,000+
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Journals	23,000+
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Online books, biomedical	40,000+
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EDUCATION

In its MD and other degree programs, the School of Medicine educates future leaders in medicine, public health, and biomedical science. The MD program follows a unique educational philosophy, the Yale system of medical education, which was established in the 1920s by Dean Milton C. Winternitz, MD. No course grades or class rankings are given in the first two years, examinations are limited, and students are expected to engage in independent investigation. Since 1839 Yale medical students have written a thesis based on original research. The thesis requirement grew out of the recognition that the scientific process of investigation, attentive observation, interpretation of data, and critical evaluation of literature are fundamental to the practice of medicine.

Many Yale medical students opt to take a tuition-free fifth year to pursue additional study. Some conduct in-depth research or explore clinical electives and subinternships. A significant number each year are awarded fifth-year research fellowships and earn the MHS degree.

Each year, approximately 20 students enroll in the school's MD/PhD Program, one of the original Medical Scientist Training Programs established and funded by the NIH. Graduate students in the Combined Program in the Biomedical and Biological Sciences (BBS) earn a PhD degree through the Faculty of Arts and Sciences. The School of Medicine also offers joint degree programs with other professional schools including Public Health, Law, Management, and Divinity.

² Of the 550 total enrolled students, 55 students are currently on extended study pursuing a joint degree, completing a fully funded year of research, or a combination of research and clinical rotations.

Academic departments

Basic science	10
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Clinical	18
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Public Health	6
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Total	34
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Programs and centers

Active patents

U.S.	491
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World (56 countries)	810
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Yale-founded biotech companies

Faculty³

Teaching (ladder)	1,925
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Research	716
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Lecturer/Instructor	475
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<i>Subtotal</i>	<i>3,116</i>
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Visiting	229
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Emeritus/Retired	153
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Voluntary/Adjunct	1,695
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<i>Subtotal</i>	<i>2,077</i>
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Total	5,193
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Postgraduate fellows and associates

	1,777
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Memberships⁴

National Academy of Sciences	67
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National Academy of Medicine	53
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HHMI investigators	10
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Faculty with endowed professorships

	139
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Research activity

2,534 awards	
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totaling	\$671.2 million
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NIH

Awards	\$451.5 million
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Rank among medical schools (total grant dollars) ⁵	6th
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Rank, grants per faculty member ⁶	12th
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Centers and program grants	25
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Laboratory space (net assignable sf)

Medical School	689,932
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BASIC AND TRANSLATIONAL RESEARCH

Research at the medical school covers a broad spectrum, from fundamental studies in the life sciences, including cell biology, genetics, immunobiology, microbial pathogenesis, neuroscience, pharmacology, physiology, biophysics and biochemistry, to translational and clinical studies aimed at improving the diagnosis and treatment of human diseases. Important research collaborations bring together scientists on the medical campus, Science Hill, and the West Campus. Funding for research at YSM has increased over the past decade, rising from \$612.9 million in 2010 to \$671.2 million in 2019.

The school's core research resources are built around the newest technologies:

- State-of-the-art tools for genomics and proteomics, including whole-genome sequencing and mass spectrometry
- High-resolution imaging and image analysis at every scale, including a cryoelectron microscope, cryoelectron tomography, and the only focused ion beam-scanning electron microscope in the region
- 7-Tesla MR spectroscopy
- High-throughput screening, including RNAi and chemical screens
- Construction and analysis of animal models of disease



Research at the School of Medicine spans the medical campus and includes collaborations across the university.

³ Faculty, associates, and fellows data as of 6/30/19.

⁴ Includes faculty across Yale University.

⁵ NIH ranking is for the federal fiscal year ending 9/30/19.

⁶ Per faculty rank averaged over 2018 and 2019.

The National Clinician Scholars Program at Yale was established in 2016 to prepare future clinician leaders to improve health and health care. Graduates of the two-year interprofessional fellowship earn a master of health sciences (MHS) degree.

The School of Public Health offers training and conducts research in biostatistics, chronic disease epidemiology, environmental health sciences, epidemiology of microbial diseases, and health policy and administration.

The Investigative Medicine Program awards a PhD degree to holders of MD degrees who pursue training in either laboratory-based or clinically based human investigation.

By the numbers

RWJ Scholars since 1974	187
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NCSP Scholars since 2016	28
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PhDs awarded by Investigative Medicine Program since 2003	46
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YCCI Scholars trained since 2006	137
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CLINICAL INVESTIGATION

Clinical investigation at Yale bridges the gap between the basic and translational sciences and the practice of medicine. Research is focused on the factors that affect health and illness in populations, the evaluation of therapeutic interventions, and the assessment of health outcomes based on analysis of large data sets. The School of Medicine sponsors a wide range of clinical trials, with more than 2,036 active trials in 2019 and over 8,612 “Help Us Discover” unique volunteers enrolled (see yalestudies.org) and 27,129 active subjects. The school offers superb training for clinical investigators in a number of settings, including the Yale Center for Clinical Investigation, the National Clinician Scholars Program at Yale (the evolution of the Robert Wood Johnson Foundation Clinical Scholars Program), the Yale School of Public Health, and the Investigative Medicine Program, along with discipline-specific training initiatives in selected departments.

The **Yale Center for Clinical Investigation** facilitates the training of clinical and translational scientists and provides infrastructure for innovative and collaborative research directed at improving patient care. It funds up to 20 YCCI Scholars yearly and supports investigators in the areas of biostatistics, bioinformatics, study design, core technologies, regulatory review, patient recruitment, and community-based research.



Clinical research at YSM encompasses studies across a broad range of conditions across the lifespan.

Patient care overview

Income	\$1.02 billion
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Yale Medicine

Patient encounters	2.5 million
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Physicians	
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Full-time	1,267
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Part-time	243
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Allied Providers	776
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Medical residents	867
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Clinical fellows	346
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Yale New Haven Hospital⁷

Patient discharges	73,044
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Emergency visits ⁸	155,505
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Outpatient encounters (including ED)	1.5 million
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Total licensed beds	1,541
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PATIENT CARE

More than 1,500 Yale physicians provide primary and specialty care for patients through Yale Medicine. The practice delivers advanced care in more than 100 specialties and subspecialties, and has centers of excellence in such fields as cancer, cardiac care, minimally invasive surgery, and organ transplantation. Yale physicians have made many historical contributions, including the first use of cancer chemotherapy, the first artificial heart pump, and the first insulin infusion pump for diabetes. Today they use such groundbreaking advances as DNA sequencing technology to diagnose suspected genetic diseases. Yale Medicine is a major referral center for Connecticut and New England, and treats patients from throughout the world.



Yale Medicine, the School of Medicine's clinical practice, provides clinical care in more than 100 specialties and subspecialties.

⁷ Yale New Haven Hospital data as of 9/30/19; includes the Children's Hospital, Psychiatric Hospital, Smilow Cancer Hospital, and the former Hospital of Saint Raphael, which was acquired by YNHH on 9/12/12. Licensed beds include bassinets.

⁸ Number of patients treated and released from the ED. This does not include those ED visitors who were admitted.