GW Heart & Vascular Institute

Report for Academic Years 2019 & 2020

Heart & Vascular Institute
The George Washington University
The mission of the GW Heart & Vascular Institute is to promote cardiac and vascular research, education, and community service with the goal of accelerating the pace of scientific discovery, reducing mortality, and improving the quality of life of Americans with heart and vascular disease.

To achieve these goals, the GW Heart & Vascular Institute seeks to provide an interdisciplinary structure to integrate basic and clinical investigators, clinicians, medical educators, health policy experts, and community leaders.

The Institute’s goal is to be the leading center for heart and vascular research, education, and community service and to do so by leveraging the enormous resources of The George Washington University.
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Dear Friends of the GW Heart and Vascular Institute,

**IN THE 2019 + 2020 ACADEMIC YEARS,** the GW Heart & Vascular Institute has made remarkable progress expanding our accomplishments with a wide range of programs in community service, education, and research.

**Community Service**

Honored by the president of Honduras, Drs. Tracy and Mercader conducted their 9th and 10th Annual Medical Missions to Honduras, treating a total of 1,342 patients and implanting 370 devices, using over $3 million in donated medical equipment over the past decade. In Washington, DC, our faculty and fellows provided health screening at churches and high school athletic screening, as well as volunteering at Food & Friends. Our team addressed the social determinants of health with increased patient support by our GW Heart & Vascular Institute community health workers and nutritionist. We launched an innovative Culinary Medicine program engaging our community health workers and inner city families in hands-on heart-healthy cooking.
Education

Educationally, the GW Cardiology faculty supervised our cardiology fellows, in addition to teaching medical residents, GW medical students, and physician assistants. Each year, under the leadership of Dr. Allen Solomon, we graduated nine general cardiology fellows who have moved on to clinical practice, academic positions, or advanced training in interventional cardiology, advanced cardiac imaging, and electrophysiology. The Institute also supported international research trainees. Drs. Mercader and Panjrath organized our weekly Cardiology Grand Rounds, inviting a wide range of national experts as visiting professors on campus and on the web, as well as co-chairing our Annual Heart Failure and Cardiac Arrhythmia Symposia.

Research

Our faculty and fellows have produced a record number of papers and presentations in all the major areas of cardiology, including advanced cardiac imaging, electrophysiology, heart failure, pulmonary hypertension, coronary artery and structural heart disease, preventive cardiology, women's heart disease, and public policy. Between July 2018 and June 2020, the GW Cardiology faculty published 67 manuscripts and presented 56 abstracts at the national meetings of the American Heart Association, American College of Cardiology, American Society of Echocardiography, Society for Cardiovascular Angiography and Interventions, International Society for Heart and Lung Transplantation, American College of Physicians, TransCatheter Therapeutics (TCT), Society of Cardiovascular CT, Heart Failure Society of America, and the Heart Rhythm Society. Noted for their academic leadership, our cardiology faculty have been selected to serve on the organizing committees for several national meetings, as invited speakers for 57 presentations at scientific meetings, and 33 national committees and editorial boards.

We are proud of our accomplishments and thank our Board of Directors, grateful patients, and multiple donors who inspire us to expand our academic mission.

Sincerely,

Richard J. Katz, MD
Walter A. Bloedorn Professor of Cardiology
Director, Division of Cardiology
Director, GW Heart and Vascular Institute
Faculty & Leadership

CARDIOLOGY

WILLIAM BORDEN, MD
Professor of Medicine and Health Policy
Chief Quality and Population Health Officer

ANDREW D. CHOI, MD
Associate Professor of Medicine and Radiology
Co-Director, Cardiac CT and MR I

BRIAN G. CHOI, MD, MBA
Professor of Medicine and Radiology
Co-Director, Advanced Cardiac Imaging
Chief Medical Information Officer, GW MFA

STEVEN FARMER, MD, PhD
Associate Professor of Medicine and Public Health
Associate Director, Office of Clinical Practice Innovation
Chief Strategy Officer for Coverage at the Centers for Medicare and Medicaid Services

MARDI GOMBERG-MAITLAND, MD MSC
Professor of Medicine
Medical Director, Pulmonary Hypertension Program

RICHARD J. KATZ, MD
Director and Board Chairman, GW Heart & Vascular Institute
Director, Division of Cardiology
Walter A. Bloedorn Professor of Medicine

JOSEPH KREPP, MD
Assistant Professor of Medicine
Director, Structural Card Imaging

JANNET LEWIS, MD
Professor of Medicine
Director of Non-Invasive Cardiology
Director, Women’s Heart Center

LISA W. MARTIN, MD
Associate Professor of Medicine
Director, Lipid Research Clinic

ramesh MAZHARI, MD
Associate Professor of Medicine
Director, Interventional Cardiology Fellowship

MARCO MERCADER, MD
Professor of Medicine
Director, Electrophysiology Research

CHRISTIAN NAGY, MD
Assistant Professor of Medicine
Director, Structural Heart Disease Program

GURUSHER PANJRATH, MD
Associate Professor of Medicine
Director, Heart Failure and Mechanical Circulatory Support Program

JONATHAN REINER, MD
Professor of Medicine
Director, Cardiac Catheterization Laboratories

RICHARD J. KATZ, MD
Director and Board Chairman, GW Heart & Vascular Institute
Director, Division of Cardiology
Walter A. Bloedorn Professor of Medicine

JESSICA JOHNSON
Executive Director, GW Heart & Vascular Institute
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Director, Division of Genomic Medicine

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Senior Associate Dean of Research
GW School of Medicine and Health Sciences

ROBERT MILLER, PhD
Senior Associate Dean of Research
GW School of Medicine and Health Sciences

KIMBERLY S. REINER, MD
Chief Executive Officer
GW Hospital

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Director
Asurion

CYNTHIA M. TRACY, MD
Chairman of the Department of Medicine
Eugene Meyer Professor of Medicine

FARZAD NAJAM, MD
Director of Cardiac Surgery
Clinical Professor of Surgery
GW Hospital

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Chief Executive Officer
GW Hospital

KANNAN SRINIVASAN
Director

ALAN G. WASSERMAN, MD
Chairman of the Department of Medicine
Eugene Meyer Professor of Medicine

RICHARD J. KATZ, MD
Chairman
The Institute in the Community

The GW Heart & Vascular Institute medical professionals, trainees, and support staff are committed to supporting local, national, and international community service programs.

GW Cardiology Faculty and Fellows Volunteer at Food & Friends

The GW Heart & Vascular Institute’s Faculty, Nurses, Physician Assistants, and Fellows donated their time on a Saturday in December 2018 and January 2020 to prepare more than 200 packaged meals and groceries to support Food & Friends. Food & Friends provides more than one million meals per year for people living with HIV/AIDS, cancer, diabetes, and other life challenges.
GW Cardiology Supports the Community for American Heart Month

For American Heart Month in February 2019, the GW Heart & Vascular Institute volunteered at the Temple of Praise church community in the Anacostia neighborhood of Washington, DC, to provide blood pressure screenings and a heart-healthy diet workshop. Dr. Richard Katz led the volunteer team with Kelli Metzger, our registered dietitian; Jason Stein, first-year medical student; Erin Breen, heart failure nurse; Jared Ng, cardiac physician assistant; and two members of the Temple of Praise church. The event served more than 50 people.

In February 2020, Dr. Richard Katz and Kelli Metzger, RD, teamed up with the Giant grocery’s in-store nutritionist, Jillian Griffith, at 1535 Alabama Ave SE in Washington, DC, to deliver heart-healthy nutrition information for American Heart Month.
Community Health Workers and GW Cardiology—
A Bridge to Better Cardiac Care

The 21st Century “Doctor-Patient Relationship” no longer just means your doctor. This modernized “relationship” comprises a team that includes physicians, nurse practitioners, physician assistants, and pharmacists. The GW Heart & Vascular Institute is leading an innovative program expanding the medical team by adding community health workers (CHWs) to interface with our patients and their healthcare providers.

CHWs augment patient care by providing culturally appropriate health advice on disease prevention and management. Our GW Heart & Vascular Institute CHWs Kimberlee Desormeaux, Sawa Kamara, and Tim Mavritte assist patients with heart failure, hypertension, diabetes, and coronary artery disease. Trained and supervised by Drs. Gurusher Panjrat and Richard Katz, along with our nurse practitioners Sherrelle Apugo and Linda Bostrom and our DC-based partner, the Institute for Public Health Innovation, our CHWs meet with patients in their homes and/or our office to help with and clarify medications, prescription refills, transport to clinic appointments, monitoring of weight, blood pressures, blood glucose values, and dietary advice.

The result of this program has been improved patient self-management, better cardiac health, and reduced hospital readmissions. In our first year, adding CHWs to our cardiology team lowered the 30-day re-hospitalization for our DC heart failure patients by over 50%.

Sawa Kamara and Kim Desormeaux presented the results of our GW experience at the national CHW meetings in Las Vegas in 2019.

Our CHWs assist patients with “social determinants of health” including housing, food access, insurance issues, job opportunities, and other social services. An outstanding example of the value and dedication of our CHWs took place on September 19, 2018. Kim Desormeaux and Sawa Kamara were on their way to a home visit when they were notified that there was a fire in the Arthur Capper Senior Building in Southeast Washington, DC. Kim rushed to the scene and alerted the firefighters that one of her patients was still in the building, whereupon the firefighters rescued the patient from the burning building and to safety. Kim Desormeaux and Sawa Kamara were just doing their jobs, but on this day went above and beyond the call of duty and made a tremendous difference in the outcome of this patient.

Support of this program is made possible by partnerships with GW Hospital, AmeriHealth, and the Institute for Public Health Innovation.
Dr. Allen Solomon and GW Cardiology Fellows Provide Free Heart Screenings for Young Athletes

DR. ALLEN SOLOMON AND GW CARDIOLOGY FELLOWS provided free health screenings to high school students in Montgomery County in September 2019. Dr. Solomon has provided these screenings to high school athletes in Silver Spring, MD, for nearly two decades.

GW Heart Failure Team Volunteers at NBC4 Health Expo

GURUSHER PANJRATH, MD, Director of the GW Heart Failure and Mechanical Circulatory Support Program, Erin Breen, RN, CCRN, Heart Failure and LVAD Coordinator, and Ashley Young, ACNP, Heart Failure and LVAD Coordinator, participated in the 27th annual NBC4 Health and Fitness Expo at the Walter E. Washington Convention Center in Washington, DC in January 2020, supported by GW Hospital, The GW Medical Faculty Associates, and The GW School of Medicine and Health Sciences. The wellness expo attracts an estimated 85,000 attendees every year. Dr. Panjrath led educational discussions on heart failure and our heart failure team provided information to thousands of visitors.
GW Heart & Vascular Institute Celebrates 10 Years of Providing Cardiac Care in Honduras

In 2019, the GW Heart & Vascular Institute supported its 10th Annual Medical Mission to Honduras, led by Drs. Cynthia Tracy and Marco Mercader. In partnership with the medical staff at the Centro Medico Colonial Hospital in Comayagua, the Mission provides life-saving pacemakers and defibrillators to patients in need.

Each year hundreds of Hondurans travel from all 18 regions of the country to see the GW Medical Team in Comayagua. The GW Mission Team evaluated 342 patients and implanted 49 devices during their two-week visit in 2019. Since 2010, the GW team has evaluated a total of 1842 patients and implanted 370 devices, working with more than $3 million in donated medical equipment.

To celebrate this milestone, the Permanent Mission of Honduras to the Organization of the American States (OAS) hosted a reception at the OAS Hall of the Americas. Ambassador Luis Cordero of the Permanent Mission of Honduras to OAS and the Honduran Ambassador to the United States, Maria Dolores Aguero, attended the event.

Supporters of the 2019 GW Medical Mission include Medtronic, Abbott, GW University Hospital, Heart Beat International, GW Medical Faculty Associates, and the Felix Y. Manalo (FYM) Foundation.

Dr. Katz, Dr. Mercader, Ambassador Cordero, Ambassador Aguero, Dr. Tracy, Eli Sevilla, Dr. Volke, and Dr. Covas.
GW Heart & Vascular Institute Shares Heart-Healthy Tips at Anacostia’s Ward 8 Fall Fest

In September 2019, Dr. Richard Katz, Kelli Metzger, RD, and GW cardiology fellows Drs. Angela Ryan and Bayo Atanda shared heart-healthy tastings and tips at the Great Ward 8 Community Fall Fest sponsored by the Giant grocery store in Anacostia.

GW Heart & Vascular Institute is First to Train Community Health Workers in Culinary Medicine

Culinary Medicine, a nationally recognized program developed by Dr. Timothy Harlan, features hands-on training of health professionals and patients in healthy nutrition. Now based at the GW School of Medicine and Health Sciences, Dr. Harlan is collaborating with Dr. Richard Katz, creating a new program training community health workers (CHWs) to be instructors in Culinary Medicine for heart patients and their families. Adapted for in-person and virtual courses, our CHWs will learn about nutrition to educate their patients and provide patients with in-home hands-on cooking demonstrations. In May 2020, Dr. Katz, Kelli Metzger, registered dietitian of the GW Heart & Vascular Institute, and our three GW Cardiology CHWs Kim Desormeaux, Sawa Kamara, and Tim Mavritte, participated in a training session led by Dr. Harlan and Kerri Dotson, RDN, LDN, Executive Chef of the GW Culinary Medicine Program.

The goal of this innovative program is to deliver this first-of-its-kind nutrition education in the Washington region.
Dr. Gurusher Panjrath Inspires Teens at National 4-H Summit for Healthy Living

**Dr. Gurusher Panjrath spoke** at the National 4-H Summit for Healthy Living: Inspire Leaders in Health in February 2020, at the National 4-H Youth Conference Center in Chevy Chase, MD. The program included more than 300 teenagers ages 15-18 who are leaders in health in their respective states. Teens representing 30 states attended, to learn about current national health issues and develop Youth Community Health Action Plans to deliver in their home communities.

GW Heart Team Participates in Pulmonary Hypertension’s First Annual Northern Virginia Walk

**The GW Pulmonary Hypertension Team**, led by Dr. Mardi Gomberg-Maitland, participated in the Pulmonary Hypertension Association’s Northern Virginia Walk in May 2019 in Lee District Park. There were more than 200 people in attendance. The GW Hospital sponsored the team and provided snacks, a tent, and giveaways to participants. Our GW team participants included Drs. Mardi Gomberg-Maitland and Jalil Ahari, Denise Lewis, Monica Jenkins, Lori Marshall, and Maureen Townsend.
Visiting Professors  The GW Heart & Vascular Institute enhances the educational experience of our GW medical residents and cardiology fellows by inviting renowned cardiologists and master teachers to serve as visiting professors. Visiting professors spend two days on campus with GW trainees and faculty, and deliver lectures at cardiology grand rounds and medical grand rounds to more than 200 medical professionals.

2019
Jack Understein Memorial Visiting Professor
JANUARY 2019
Marvin Konstam, MD
Chief Physician Executive, The CardioVascular Center Professor, Tufts University School of Medicine
PRESENTED: Acute Heart Failure and the Cardio Renal Syndrome: Are We Making Progress? and The Future of Cardiovascular Care: Advanced Technologies, Affordable Care, and the Academic Medical System

2019 GW Cardiac Imaging Visiting Professor
NOVEMBER 2019
Dee Dee Wang, MD
Director of Structural Imaging and 3D Printing Henry Ford Hospital, Detroit, MI
PRESENTED: The Emerging Role of 3D Printing in Planning Complex Heart Interventions

GW Women’s Heart Center Visiting Professorship
OCTOBER 2018
Leslee J. Shaw, PhD
Professor of Medicine Weill Cornell Medical College
PRESENTED: Imaging for Stable Ischemic Heart Disease in Large Clinical Trials, and Evaluation of Symptomatic Women with Stable Ischemic Heart Disease

SEPTEMBER 2019
Martha Gulati, MD, MS
Professor of Medicine and the Chief of Cardiology, University of Arizona (Phoenix)
PRESENTED: An Update on Women’s Heart Disease
Annual P. Jacob Varghese Visiting Professorship and GW Cardiology Alumni Receptions

Graduates of the GW Cardiology Fellowship Program join current cardiology faculty and fellows annually for the P. Jacob Varghese Visiting Professorship and Alumni Reception.

2020 GW Heart & Vascular Institute Visiting Professor

JANUARY 2020

Anjali Vaidya, MD
Associate Professor of Medicine
Co-Director, Pulmonary Hypertension, Right Heart Failure, and CTEPH Program
Associate Program Director, Cardiology Fellowship
Temple University Lewis Katz School of Medicine

Presented: Chronic Thromboembolic Pulmonary Hypertension (CTEPH): 2020

2020 GW Cardiac Imaging Visiting Professor

MARCH 2020

James K. Min, MD
Founder and CEO, Cleerly, Inc.
Former Professor of Radiology Medicine at Weill Cornell Medical College

Presented: The Vulnerable Patient: New Insights into Atherosclerosis Imaging and AI/Machine Learning Applications in Medicine: CV Disease as a Use Case

Fourth Annual P. Jacob Varghese Visiting Professorship

Arshed A. Quyyumi, MD
Professor of Medicine, Emory University School of Medicine
Co-Director, Emory Clinical Cardiovascular Research Institute

Presented: Precision Medicine: Predicting Risk in Patients with Cardiovascular Disease

Fifth Annual P. Jacob Varghese Visiting Professorship

Samuel J. Asirvatham, MD
Professor of Medicine and Pediatrics
Program Director, Clinical Cardiac Electrophysiology Fellowship
Mayo Clinic, Rochester, Minnesota

Presented: Can We Ablate Ventricular Fibrillation?
Invited Speakers

National Lipid Expert

OCTOBER 2018

Daniel J. Rader, MD
Seymour Gray Professor of Molecular Medicine
Chair of the Department of Genetics
Chief of the Division of Translational Medicine and Human Genetics
University of Pennsylvania School of Medicine

PRESENTED: Beyond LDL: Addressing the Residual Risk for Coronary Events

GW Cardiology Alums Present at Grand Rounds

DECEMBER 2018

We are proud of the fact that our GW cardiology graduates are making a difference in academic cardiology. Graduates of the GW Cardiology Fellowship are invited to deliver cardiology grand rounds on GW’s medical campus.

Monica Mukherjee, MD, MPH
Director, Echocardiographic Research
Assistant Professor of Medicine
Johns Hopkins University School of Medicine

PRESENTED: Beyond LDL: Addressing the Residual Risk for Coronary Events

Behnam Tehrani, MD
Director of Cardiac Catheterization Laboratory
INOVA Heart & Vascular Institute

PRESENTED: Right Ventriculo Pulmonary Hypertension

Virtual GW Visiting Professor Cardiology Grand Rounds: Continuing the Institute’s Education Mission During the COVID-19 Pandemic

MAY 2020

While the coronavirus pandemic may have prevented group gatherings, our cardiology grand rounds series featuring visiting professors from national medical centers is being delivered as virtual videoconferencing through WebEx.

Dhanunjaya Lakkireddy, MD
Medical Director for the Kansas City Heart Rhythm Institute at HCA Midwest Health

PRESENTED: Left Atrial Appendage Occlusion; Devices and Anticoagulation Strategies

Garima Vishwanath Sharma, MD
Assistant Professor of Medicine, Johns Hopkins Medicine


Drs. Monica Mukherjee and Janett Lewis.
American College of Cardiology Board of Governors Chair

JANUARY 2019

B. Hadley Wilson, MD

Sanger Heart & Vascular Institute
Carolinas HealthCare System/Atrium Health
Clinical Professor of Medicine at UNC School of Medicine

PRESENTED: ACC Global ST-Elevation Myocardial Infarction (STEMI) Project. A worldwide heart focus initiative to improve the treatment of heart attack in third world countries.

THE GW GENERAL CARDIOLOGY FELLOWSHIP PROGRAM, led by Dr. Allen Solomon, offers a three-year cardiology intensive training program to recent graduates of internal medicine residency programs. Our fellows are selected from a group of more than 200 applicants to train under the GW cardiology faculty. The Institute also sponsors advanced fellowships for cardiology graduates to further specialize as electrophysiologists or interventional cardiologists. Dr. Cynthia Tracy leads the electrophysiology training program and Dr. Ramesh Mazhari leads the interventional fellowship. Each year, the Institute’s faculty train our nine general cardiology fellows, and support two electrophysiology fellows and two interventional cardiology fellows. Fellows participate in academic research studies provided by the Institute’s Annual Young Investigators Awards.

Fourth Annual Heart Failure and Arrhythmia Symposium


GW Cardiologists and Trainees Present at American College of Cardiology Mid-Atlantic Symposium

The GW Heart & Vascular Institute had a major presence at the American College of Cardiology Mid-Atlantic Symposium at the ACC Heart House. Dr. Raza Yunus was invited to present a case of advanced heart failure, in addition to research on “The Role of Hospital Teaching Status in MitraClip Outcomes” with faculty author Dr. Joseph Krepp. Dr. Shani Weerakoon presented a case of arrhythmogenic right ventricular cardiomyopathy, a rare cause of sudden cardiac death managed successfully by the GW cardiac team, with faculty authors Dr. Marco Mercader and Dr. Allen Solomon.

ACC’s DC Governor Dr. Jannet Lewis addressed attendees on behalf of the region’s governors on engagement with the ACC. Dr. Gurusher Panjrath, ACC’s Chair of Heart Failure and Transplantation, spoke to fellows-in-training on section engagement, as well as serving as an expert discussant on clinical cases in advanced heart failure and amyloidosis.
Drs. Joseph Krepp and Gurusher Panjrath Lead Mid-Atlantic Cardiac Amyloidosis Symposium

November 2019

Recently, there have been groundbreaking developments in the diagnosis and treatment of cardiac amyloidosis, once considered a rare and untreatable condition. The GW Infiltrative Cardiomyopathy Center, led by Drs. Gurusher Panjrath and Joseph Krepp, has been at the forefront in the diagnosis and treatment of patients with this life-threatening cardiac disease. As a regional leader in the treatment of patients with cardiac amyloidosis, Drs. Panjrath and Krepp hosted a Mid-Atlantic Cardiac Amyloidosis Symposium. Dr. Panjrath led the sessions, presenting data on new therapeutic options for patients with cardiac amyloidosis, while Dr. Krepp, an expert in cardiac imaging, reviewed the use of nuclear imaging and testing options to detect cardiac amyloidosis.

Dr. Andrew Choi directed the Fellows Forum and was appointed by the Mid-Atlantic chapter as Director of the Symposium, leading cardiovascular education for the region in 2020 and 2021.

In addition, Dr. Pedro Covas, medical resident, presented “Who Truly has Heart Failure? Discordance in Ejection Fraction with Left Bundle Branch Block” with faculty authors Dr. Richard Katz and Dr. Allen Solomon, and Dr. Taher Tayeb, medical resident, presented “Not Your Common Athletic Problem,” a case with faculty author Dr. Cynthia Tracy.
Thought Leaders

Faculty of the GW Heart & Vascular Institute are invited to speak to Congress, Federal Agencies, and leading national academic associations as thought leaders on heart disease prevention and health policy issues.

Dr. Jonathan Reiner Serves as Health Expert on CNN

**Dr. Jonathan Reiner**, GW Director of Cardiac Cath Lab and nationally recognized interventional cardiologist, has had a prominent role in communicating complex medical issues to the public as a regular contributor to CNN since the outbreak of the coronavirus pandemic. The clip above is from an interview on CNN with Erin Burnett in April 2020.

Dr. Ramesh Mazhari on NBC News4 Discussing Loneliness and the Heart

**Dr. Ramesh Mazhari** was featured on NBC News4 in Washington, discussing the health risks of loneliness. Dr. Mazhari stated that “loneliness can increase the risk of cardiovascular disease and stroke by 30%.” She also noted that “the risk associated with social isolation could be as bad as smoking 15 cigarettes a day or being obese.”

Dr. William Borden Leads Discussions on Cardiovascular Quality of Care

**Dr. William Borden**, Chair of the American Heart Association’s Quality of Care and Outcomes Research Council, served on a panel discussing “Improvements to Rural Health Care through Patient-Centered Research,” at the U.S. Senate. Panelists shared what makes health care delivery unique in rural areas, and how patient-centered/community-based programs can lower the risk of heart disease and address other public health challenges. Dr. Borden also spoke at the Centers for Disease Control (CDC) to the Division of Heart Disease and Stroke Prevention in Atlanta on “Cardiovascular Quality and Outcomes Research.”
GW Cardiologists Featured at the National Heart, Lung, and Blood Institute’s 2019 Coronary CT Angiography Summit

**Dr. Andrew Choi** was a presenter at the November 2019 NHLBI Coronary CT Angiography Summit at the National Institutes of Health. The Summit focused on novel vascular disease diagnoses and outcomes derived from coronary CT angiography. Dr. Nehal N. Mehta, Chief of Inflammation and Cardiometabolic Diseases at the National Heart, Lung, and Blood Institute and GW Clinical Professor of Cardiology, chaired the symposium.

**Drs. Andrew Choi and William Borden Speak on the Importance of Influenza and Pneumococcal Vaccinations for Heart Disease Patients**

**Dr. Andrew Choi** was invited to brief the Congressional Public Health Caucus co-chaired by Reps James McGovern (D-MA), Mike Simpson (R-ID), Lucille Roybal-Allard (D-CA), and Rob Wittman (R-VA) on “Stop the Spread, Preparing for the 2019-2020 Influenza Season”. Dr. A. Choi addressed the crucial role of vaccination in preventing heart disease on behalf of the American College of Cardiology.

**Dr. William Borden** joined the nation’s leading experts at the 2019 National Foundation for Infectious Diseases Influenza/Pneumococcal Disease News Conference in September at the National Press Club to share the importance of flu and pneumococcal vaccination for patients with heart disease.

**Dr. Andrew Choi Joins National Thought Leaders at Cardiac Imaging Summit**

**Dr. Andrew Choi,** Co-Director of Cardiac CT and MRI at GW, represented the American Heart Association, and GW cardiologist Dr. Steven Farmer represented the Center for Medicare and Medicaid Services at the Technology Advances in Cardiac CT summit. This meeting, sponsored by the American College of Cardiology, articulated new approaches to improve patient-centered care by preventing the onset of heart disease through cardiac imaging.
International Education

Former GW Cardiology Intern Honored by National Hispanic Medical Association

DR. DORYS CHAVEZ, a Honduran physician who interned with the GW Division of Cardiology in 2017, received the 2019 Young Physician of the Year Award from the National Hispanic Medical Association (NHMA). The award was presented during the NHMA’s Hispanic Health Conference in Arlington, Virginia, at the Leadership Awards Gala & Dinner held on April 2019. Dr. Chavez was joined by Dr. Cynthia Tracy, Associate Director of Cardiology at GW and leader of the Institute’s annual medical mission to Honduras. Dr. Chavez, a major participant in GW’s medical mission to Honduras, was selected from a competitive pool of candidates from across the United States. This award goes to individuals who have made a significant contribution to Hispanic health through their continued work as young physicians of NHMA. Dr. Chavez will return to GW as a medical resident in July 2020.

GW Cardiologists Train Visiting Electrophysiology Intern from Italy

MARIA PIA DEL CORRAL, having trained in cardiology at the University of Milano, IRCCS Policlinico San Donato, in Italy, joined the GW Division of Cardiology from 2018-2019 as our international electrophysiology research scholar. Under the supervision of Dr. Mercader, along with Drs. Tracy, Panjrath, and Solomon, her projects evaluated cardiac resynchronization therapy and the burden of cardiac arrhythmias in patients with end stage renal disease. In 2020, Dr. Corral joined GW’s electrophysiology fellowship under the training leadership of Dr. Cynthia Tracy.
The novel coronavirus pandemic caused by COVID-19 adversely affected the health, well-being, and daily life of our community and that of the world. Historic challenges exist nationally in the delivery of care during this rapidly evolving pandemic. Members of the GW Heart & Vascular Institute have risen to the challenge in caring for patients at the front lines, through new telemedicine visits, and by leading the national cardiovascular response to this crisis. Our faculty, fellows, and staff have been actively reviewing the rapidly changing medical knowledge around COVID-19, providing leadership to the region's physicians and incorporating best known clinical practices to patients while serving on the front lines of cardiovascular care.

**DR. JONATHAN REINER**, GW Director of Cardiac Cath Lab and nationally recognized interventional cardiologist, has had a prominent role in communicating complex medical issues to the public as a regular contributor to CNN during the coronavirus pandemic.

**DR. MARDI GOMBERG-MAITLAND** was senior author on “Care of Patients with Pulmonary Arterial Hypertension during the Coronavirus (COVID-19) Pandemic,” published in *Pulmonary Circulation* on April 29, 2020.

**DR. ANDREW D. CHOI**, Co-Director of Cardiac CT and MRI, led the development of a new national cardiac imaging and coronavirus guidance statement for the Society of Cardiovascular Computed Tomography. The statement was published in the *Journal of Cardiovascular Computed Tomography*, and endorsed by the American College of Cardiology.

**GW Heart & Vascular Institute Provides Hand-held Cardiac Ultrasound to Care for COVID-19 Patients and Honduras Mission Patients**

**DRS. JANNET LEWIS AND JOSEPH KREPP** promoted the use of a novel mobile technology-based point-of-care-ultrasound (POCUS) of the heart using the Butterfly iQ, an ultrasound probe that converts an iPhone or iPad into an echocardiogram machine. The GW Heart & Vascular Institute purchased Butterfly iQs for GW cardiology faculty and fellows for bedside examination of COVID-19 patients and physicians, and to help guide clinical decision making during GW’s September 2019 medical mission to Honduras.
In the academic years 2019-2020 our GW cardiology faculty and fellows have produced a record number papers and presentations. The GW Cardiology faculty published 67 manuscripts and presented 56 abstracts. Faculty, fellows, residents, and GW medical students presented their work at national meetings of the American Heart Association, American College of Cardiology, American Society of Echocardiography, Society for Cardiovascular Angiography and Interventions, International Society for Heart and Lung Transplantation, American College of Physicians, TransCatheter Therapeutics (TCT), Society of Cardiovascular CT, American Thoracic Society, Heart Failure Society of America, and the Heart Rhythm Society. In addition, our faculty were invited speakers, providing 57 presentations at national and regional scientific meetings.

CARDIAC IMAGING

ABSTRACTS

PUBLICATIONS
Cardiac Imaging

Cardiac imaging, including echocardiography, nuclear cardiology, cardiac CT, and cardiac MRI, is undergoing major advances. At GW, we have assembled a world-class cardiac imaging team. Drs. Jannet Lewis and Joseph Krepp are developing new insights using echocardiography to assess heart failure and structural heart diseases. Dr. Brian Choi is promoting international access to echocardiography. Dr. Krepp is expanding the use of nuclear cardiac imaging to detect amyloidosis and other diseases that infiltrate the heart. Dr. Andrew Choi has become a national leader in cardiac CT and MRI, with new techniques including artificial intelligence, to visualize and assess coronary artery disease.


Ramsey BC, Fentanes E, Choi AD, Branch KR, Thomas DM. Myocardial Assessment with Cardiac CT: Ischemic Heart Disease and Beyond. Current Cardiovascular Imaging Reports, Nov 2018; 11(7):16.


Choi AD, Villines TC. The Future of the ACC Imaging Section: A Discussion with Todd C. Villines, MD, FACC. American College of Cardiology Imaging Section, acc.org/imaging, Oct 2018.


Pulmonary Hypertension

Dr. Mardi Gomberg-Maitland, an international expert in pulmonary hypertension, joined the GW cardiology faculty in January 2019 and established the GW Pulmonary Center of Excellence. Dr. Gomberg-Maitland is on the organizing committee on multiple multicenter clinical trials, and is the lead author on several of these high impact studies. She serves on the editorial board of several journals and is an invited speaker in the USA and abroad.

FROM LEFT: DENISE LEWIS, SARAH SMITH, ANNA JOHNSON, AND DR. GOMBERG-MAITLAND.
Heart Failure/Infiltrative Heart Disease

Heart Failure is increasing as a major cause for morbidity and mortality in the United States. Gurusher Panjrath, MD, Director of the GW Heart Failure and Mechanical Circulatory Support Program, has been a major contributor to recent research advances in heart failure, and is a national leader for the American Heart Association, American College of Cardiology, and the Heart Failure Society of North America. Assisted by Richard Katz, MD, our heart failure nurse practitioners, and community health workers, the GW Heart Failure team has promoted innovative research assessing use of community health workers to improve cardiac care, and several studies analyzing risks and outcomes of heart failure patients. In addition, Dr. Krepp’s research has expanded the diagnosis and treatment of amyloidosis and other rare causes of heart failure.


HEART FAILURE/INFLITRATIVE HEART DISEASE

ABSTRACTS

Panjrath G, Bostrom L, Wiklin L, Katz R, Moving Mobile Health Forward: Combining mHealth with Community Health Workers Bolsters Heart Failure Care, Heart Failure Society of America 22nd Annual Scientific Meeting, 2019.

HEART RHYTHM DISORDERS

Dr. Cynthia Tracy, Allen Solomon, and Marco Mercader continue to advance the understanding and treatment of cardiac arrhythmias. Our electrophysiologists mentor GW trainees and serve on committees for the American Heart Association, American College of Cardiology, and the Heart Rhythm Society. Dr. Tracy is a co-author on the national atrial fibrillation guidelines, and Dr. Mercader collaborates with the GW Biomedical Engineering arrhythmia group.
Coronary Artery Disease and Structural Valve Disease

Drs. Jonathan Reiner, Ramesh Mazhari, Christian Nagy, and GW cardiology colleagues have expanded clinical procedures and research in the mechanisms and treatment of coronary artery disease and structural valve disease. As non-surgical approaches to valve replacement and repair have grown exponentially, our team has reported on many advances and outcomes of this evolving field of heart disease treatment.


PUBLICATIONS


CORONARY ARTERY DISEASE AND STRUCTURAL VALVE DISEASE

ABSTRACTS


HEALTHCARE POLICY


Prevention and Women’s Health

Prevention of heart disease and understanding women’s health are expanding areas of cardiac research. Several of our GW cardiologists are studying prevention and Women’s Health. Leading our women’s cardiac health programs are Dr. Jannett Lewis, Director of the GW Women’s Heart Center, and Dr. Lisa Martin, longtime co-investigator for the NIH-sponsored Women’s Health Initiative.

Dr. Lisa Martin’s research has provided new understanding of women’s cardiac health.

Dr. Jannett Lewis leading a discussion on prevention methods that can reduce the risk of heart disease.

Prevention and Women’s Health

ABSTRACTS


PUBLICATIONS


Wen Chih Wu, Huang M, Taveira TH, Homali M, Simon AE, McCarthy ML. Changes in Physical and Mental Health are Associated with Cardiovascular Disease Incidence In Postmenopausal Women. Aging. 5;2019.


Young Investigator Research Award

GW CARDIOLOGY FELLOW DR. BAYO ATANDA won the George Washington University’s Graduate Medical Education Resident Research Award in the Basic Sciences category for his work on “The Association Between Heavy Metal and Serum Cholesterol Levels in the US Population: National Health and Nutrition Examination Survey.” Dr. Bayo Atanda was the 2019-2020 recipient of the GW Heart & Vascular Institute’s Young Investigator’s Award that is supported annually by a generous donation from the Dr. Cyrus Katzen Foundation. This award allows young faculty and cardiology trainees to compete for seed funding to begin research projects.

CHRISTIAN NAGY, MD

GURUSHER PANJRATH, MD
Heart Failure Section Highlight Sessions. ACC Scientific Sessions, May 2019.
Top 3 Clinical studies, ACC Highlight Sessions, Mar 2019.

Guideline to Clinical Practice in Heart Failure. International Heart Failure Congress, Shenzhen, China, Jul 2018.
Inotropes and Vasodilators in Acute Heart Failure. Inter American Congress of Heart Failure, Panama City, Panama, Jul 2018.
Evaluation and Management of Cardiogenic Shock. Inter American Congress of Heart Failure, Panama City, Panama, Jul 2018.
Planning committee for the HFSA’s 23rd Annual Scientific Session, Sept 2019.
Co-chair joint session of the HFSA and American College of Cardiology on “How to Best Implement Technologies to Assist in Heart Failure Care and Reduce Readmissions.” HFSA 23rd Annual Scientific Session, Sept 2019.

CYNTHIA TRACY, MD
Novel Ways to Look at Risks of Atrial Fibrillation, American Heart Association Annual Scientific Sessions, Nov 2018.

WILLIAM BORDEN, MD
Policy to Payment to Practice. American Heart Association Quality of Care and Outcomes Research Scientific Sessions, Apr 2019.
Alternate Payment Model Panel—What Other Payment Modules Other than “Fee-For-Service” are Viable? ACT IAC Health Innovation Day, Apr 2019.
Telehealth Innovations to Promote Person-Centered Care in DC. Nov 2018.
Chair of the American Heart Association’s Quality of Care and Outcomes Research Council.
Improvements to Rural Health Care through Patient-Centered Research. The U.S. Senate.
National Award

**DR. DORYS CHAVEZ**, GW international visiting young physician from Honduras, was awarded the Paul Dudley White International Scholar Award for her poster “Baseline Characteristics and Clinical Outcomes for Patients with Chagas Disease. Insight from the National Inpatient Sample,” co-authored by Drs. Marco Mercader, Talal Alzarhrani, Arnaldo Rodriguez, Syed Quadri, and Joseph Krepp. In addition, Chavez was given the International Early Career Award by the president of AHA.
Over the past two years our cardiologists have been selected for leadership roles on 33 national committees and journals. The GW cardiology faculty has unique expertise as national experts on heart failure, pulmonary hypertension, electrophysiology, structural heart disease, advanced cardiac imaging, and health care policy.

**RICHARD J. KATZ, MD**
*British Journal of Cardiology, Editorial Board*

**MARDI GOMBERG-MAITLAND, MD MSC**
*European Respiratory Journal, Associate Editor*
*CHEST, Associate Editor*
*Journal of the American College of Cardiology, Section Editor, Pulmonary Hypertension*
*Member, Pulmonary Hypertension Association Scientific Leadership Council*
*Chair, Pulmonary Hypertension Association Scientific Leadership Council Education Committee*

**ANDREW D. CHOI, MD**
*Journal of the American College of Cardiology: Cardiovascular Imaging, Editorial Board (Social Media)*
*Journal of Cardiovascular Computed Tomography, Editorial Board (Social Media)*
*Society of Cardiovascular CT, Annual Scientific Meeting Committee*

**WILLIAM BORDEN, MD**
*Vice Chair, American Heart Association Council on Quality of Care and Outcomes Research*
*Member, American Heart Association National Advocacy Coordinating Committee*
*Member, American College of Cardiology Population Health Management Task Force*
*Associate Editor, Circulation: Cardiovascular Quality and Outcomes*
BRIAN G. CHOI, MD, MBA
American College of Cardiology Informatics and Health IT Task Force
RAD-AID International, Senior Member, 2018-present, Director

STEVEN FARMER, MD, PhD
Executive Committee, Heart Valve Collaboratory
Executive Committee, American Heart Association Value in Healthcare Initiative

JANNET LEWIS, MD
American College of Cardiology Governor for the District of Columbia

GURUSHER PANJRATH, MD
Member, American College of Cardiology Heart Failure and Transplant Section Leadership Council
World Heart Federation Heart Failure Roadmap, Heart Failure Writing Group
Heart Failure Society of America, Annual Scientific Session Planning Committee
Member, American College of Cardiology Academic Cardiology Council
Editorial Board, ACC.org
Editorial Board, VAD Journal

ALLEN SOLOMON, MD
American College of Cardiology, Writing Committee, Electrophysiology In-Service Exam

CYNTHIA TRACY, MD
Accreditation Council for Graduate Medical Education, Board of Appeals for Internal Medicine—Electrophysiology
CCEP Program Directors Subcommittee, Heart Rhythm Society
Co-Chair EP Advanced Training Life Long Learning Statement, American College of Cardiology
Heart Rhythm Society 2017-2018 Scientific Sessions Program Committee Member
AHA AF Clinical/Population Program Grants Peer Review
ACC/AHA Practice Guidelines, Peer Review Member, ACC EP Performance Question Committee
Journal of Interventional Electrophysiology
Editorial Board
The Institute by the Numbers

Our Priorities

- 31% Research
- 45% Community Outreach
- 24% Education

Our Supporters

- 39% Corporations and Foundations
- 27% Individuals
- 15% Planned Gifts
- 19% Other Revenue

Endowment Fund Assets

<table>
<thead>
<tr>
<th>Date</th>
<th>Cash</th>
<th>Fixed Income</th>
<th>Equities</th>
</tr>
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<tbody>
<tr>
<td>June 2018</td>
<td>$2,311.9</td>
<td>$2,216.2</td>
<td>$2,094.5</td>
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<tr>
<td>Sept 2018</td>
<td>$2,449.5</td>
<td>$2,311.9</td>
<td>$2,132.9</td>
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<tr>
<td>Dec 2018</td>
<td>$2,311.9</td>
<td>$2,216.2</td>
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<tr>
<td>Mar 2019</td>
<td>$2,527.4</td>
<td>$2,499.5</td>
<td>$2,339.5</td>
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<tr>
<td>June 2019</td>
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<td>$2,527.4</td>
<td>$2,354.5</td>
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<td>Sept 2019*</td>
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<td>$2,479.5</td>
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<td>Dec 2019*</td>
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<td>$2,740.5</td>
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<td>Mar 2020*</td>
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<td>June 2020*</td>
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Asset Allocation

AS OF JUNE 30,

- 2019: 17% Fixed Income, 75% Equities, 8% Cash
- 2020*: 14% Fixed Income, 73% Equities, 13% Cash

*FY2020 is unaudited. Audit will be complete on 10/2/20.