With all of the program and research enhancements, the national Hypertrophic Cardiomyopathy Association named Washington University an HCM Center of Excellence in 2014. “We want to advance the quality of care and foster cutting edge HCM research here to improve the lives of our HCM patients,” says Dr. Bach. “The comprehensive nature of our HCM Center of Excellence program — from research to genetic counseling and clinical care — has allowed Washington University to evolve into one of the nation’s leading HCM centers.”

“In addition, we’re looking at echo and genetic parameters to see if we can predict disease severity,” says cardiologist Sharon Cresci, MD, who is principal investigator of one of the studies and who also provides genetic counseling to patients and their families. “We’re conducting other basic studies on gene expression in the abnormal septal myocardium of individuals undergoing septal myectomy.”

The addition of a heart failure specialist has widened the breadth of care offered in the HCM Center. In the last several years, several patients have benefitted from the implantation of left ventricular assist devices, with two patients successfully moving to transplant. “HCM is not a disease with a linear progression, so if patients don’t have the anatomy or physiology to benefit from myectomy or alcohol septal ablation, they need other advanced therapies if their disease progresses, including mechanical support or transplant,” says heart failure specialist Shane LaRue, MD.

NATIONAL LEADERS IN MEDICINE
The mission of the Washington University and Barnes-Jewish Heart & Vascular Center is to achieve excellence in patient care, research and education through seamless integration of heart and vascular care. The Heart and Vascular Center is committed to promoting heart and vascular health through education, prevention and treatment of heart and vascular disease.
Everything we do, even the slightest thing we do, can have a ripple effect and repercussions that emanate. If you throw a pebble into the water on one side of the ocean, it can create a tidal wave on the other side.” —Victor Webster

It is amazing what a “ripple” effect can do. Last month, we were surprised and delighted to receive news that Jerry Snow, MD, a 1965 graduate of Washington University School of Medicine, has honored our Division by designating a significant gift to fund cardiovascular research in his will. Dr. Snow, who completed his internship, residency and fellowship at Boston City Hospital (now Boston Medical Center), is renowned for developing the “Snow Formula,” a mathematical formula widely used to calculate heart volumes in different phases. While in medical school, he was greatly influenced on his career path by Drs. David Goldring and Alex Hartmann Jr., both in pediatric cardiology at the time. Following fellowship training, Dr. Snow researched the role of adenosine in the regulation of coronary blood flow at Walter Reed Army Institute of Research, and the served as Assistant Chief of Cardiology at the VA Hospital in Washington, D.C., before going into private practice. He was a clinical professor of cardiology at Georgetown University for 35 years and even though he has retired from full-time practice, he still works part-time at Sibley Memorial Hospital.

In designating a $1.2 million gift to our Division, Dr. Snow told us he received an excellent education at Washington University and wants to show his appreciation to a school that has given him a strong foundation and the opportunity to practice for more than 34 years. By taking the time to mentor a young medical student, cardiologists in our division not only jumpstarted the career of an outstanding cardiologist, they also have impacted the future of cardiovascular research here.

The ripple effect — a small ripple can reverberate for years to come. I hope you will continue to be excited about your connection to our Division and Washington University and enjoy reading our latest news in this newsletter.
At Washington University School of Medicine, we are excited to be establishing another cardiovascular subspecialty training pathway. This year, we began the initial steps towards obtaining certification from the Accreditation Council for Graduate Medical Education (ACGME) for advanced training in Adults with Congenital Heart Disease (ACHD). This comes on the heels of ACGME approval earlier this year for our training program in Advanced Heart Failure and Transplant Cardiology. We will soon be able to provide advanced training in these fields as well as EP, Intervventional Cardiology and Structural Heart Disease. This adds to the multiple clinical pathways we have for fellows to pursue during the third year of fellowship training as well as several investigator pathways. This depth and breadth provides fellows with a wide range of options, enhancing our ability to recruit the best and brightest fellows to our program.

As we begin the new academic year this July, we are excited to have established several elective rotations at the John Cochran VA Medical Center. Second year fellows will have the opportunity to focus on echocardiography, vascular medicine, or electrophysiology within the federal VA health system. Under the leadership of Bill Balke and Ilia Halatchev, these educational rotations will further strengthen our connection to the JCVAMC’s cardiovascular program’s clinical and research opportunities and serve veterans and their families.

Our fellows’ research experience during their training has never been stronger. During their fellowship, each fellow works with a faculty mentor to develop and conduct a research project during the latter stages of training (many participate in research projects throughout their training). Graduating fellows present their data during Grand Rounds in May and June. We have found that this process provides our trainees with the critical thinking skills necessary in their careers, be it as a researcher, clinician or both.

Finally, we were delighted to have Joe Rogers (’95) back at our institution as the Second Annual Smith-Oliver Society Alumni Professor. As Medical Director of Duke’s Cardiac Transplant and Mechanical Circulatory Support Program, Joe offered our fellows his unique perspective on advanced heart failure therapies. Joe has made us all proud in his role at Duke and on the national front in cardiac transplant.
Dr. Phillip Ludbrook Retires

Philip Ludbrook, MD, is looking forward to his next adventure. After 42 years at Washington University, Ludbrook retired from full-time status on June 30 and is headed back to school — to Eden Theological Seminary.

“I’ve said for decades that when I retire, I plan to go to seminary,” he says. “I’m going to participate in the whole process of seminary education to see where it leads me.”

A physician for more than 50 years, Dr. Ludbrook has been at the forefront of groundbreaking cardiovascular research and clinical care during his career. He trained under some of the giants in the field — with John Goodwin, MD, at the University of London Royal Postgraduate Medical School, and with Eugene Braunwald, MD, at the University of London while also doing research on myocardial mechanics in the catheterization and echo labs.

He followed colleague Burton Sobel, MD, to Washington University and began the cardiac catheterization lab in 1973, a program he directed for 23 years.

“We were really in a position to flourish clinically and scientifically,” says Dr. Ludbrook. “I have had great opportunities to build from the ground up, but I think the crowning joy and satisfaction of my academic life was to develop the catheterization program into a nationally recognized center for care and research.”

Dr. Ludbrook and colleague Dr. Alan Tiefenbrunn were the first to administer melanoma-derived t-PA to patients with acute myocardial infarction, ushering in the modern era of coronary thrombolysis. He was instrumental in nurturing congenital heart disease as a specialty in its own right, establishing the WUSM Center for Adults with Congenital Heart Disease in 1995, now one of the largest programs in the country.

“Dr. Ludbrook has made enormous contributions to Washington University School of Medicine during the course of his career,” says Larry Shapiro, MD, Executive Vice Chancellor for Medical Affairs and Dean of Washington University. “His legacy at Washington University will endure through his many contributions, including the Catheterization Laboratory and the Center for Adult Congenital Heart Disease at Barnes-Jewish Hospital, as well as the Human Research Protection Office and the Institutional Review Board (IRB) at the School of Medicine.”

“The IRB was a great position for me to practice and teach the ethics and regulation of human research,” adds Dr. Ludbrook. “It was a huge part of my life and work; I served as a member for 35 years and chair for 25 years.”

Dr. Ludbrook personally selected a new cardiologist for his patients — hundreds of them — before retiring. “I told them, ‘I have chosen the most suitable physician for you,’” he explains. “It’s just respecting their personhood. Caring for patients empathetically is, in itself, a ministry.”

Dr. Ludbrook wants to leverage his medical ‘ministry’ experience by nurturing programs to care for people with developmental intellectual disorders.

“Retirement has opened up so many avenues,” he says with a smile.

New Structural Heart Fellowship

The Cardiovascular Division has added an advanced clinical pathway as an additional year for interventional fellows seeking specialized training in treating patients with simple and complex acquired or congenital heart defects.

“The pathway covers a broad spectrum, including any and all valve disorders regarding their repair or replacement, as well as congenital heart problems,” says John Lasala, MD, PhD, Director of Adult Structural Heart Disease. “It involves a multidisciplinary team of echocardiographers, interventional cardiologists, cardiac surgeons and radiologists.”

Alan Zajarias, MD, Director of the new training program, says fellows will be exposed to more than 150 valve replacement procedures and hundreds of mitral clip implantations. “As we advance in the type of interventional cardiology procedures that are performed, the valvular area is the next frontier to conquer,” he says.

Ravindar Singh Rao, MD, who completed an interventional cardiology fellowship at Mt. Sinai Hospital in New York, is the first fellow in the structural heart pathway. “This is an amazing program, known across the country for structural interventions,” he says. “It’s a very hands on program and Dr. Zajarias is an amazing teacher and mentor. I have learned all aspects of valve interventions from him. I also downloaded the book Dr. Lasala co-authored (Procedures for Structural Heart Disease) before I came for my interview.”

Of particular interest to advanced fellows is participation in leading edge research, including evaluations of the latest TAVR devices. In late April, for example, as part of a multicenter clinical trial, the team implanted its first Lotus Valve, a potential game-changing valve uniquely designed to be repositionable and recapturable. “Our initial impression was favorable,” says Dr. Lasala. “This could be an ideal device for high risk patients needing valve replacement but who are at risk of high morbidity and mortality if they underwent traditional surgery.”

Says Zajarias, “These used to be 100-percent surgical procedures but we are rapidly evolving in the field so that we can offer minimally invasive procedures that minimize risk and reduce inpatient hospital stays. These opportunities enable us to optimize training possibilities and prepare fellows for the latest innovations in treating structural heart conditions.”
Which Patients Should Get Statins

New research indicates that statin therapy is most beneficial to patients with the highest genetic risk of heart attack.

Using statistical methods to combine data on 49,000 people enrolled in five studies, cardiology researchers here and elsewhere assessed heart attack risk independently of traditional risk factors such as age, sex, so-called good and bad cholesterol levels, smoking history, family history and whether the patient has diabetes. They found that patients identified with a high genetic risk score have a 70 percent higher risk of heart attacks when compared to patients with low genetic risk scores.

Statins, routinely prescribed for patients, are known for their cholesterol-lowering effect. Two years ago, the American College of Cardiology and the American Heart Association revised guidelines for statin therapy, dramatically increasing the number of patients put on these medications. Since then, there has been significant debate about whether such drugs are over-used.

In the genetic analysis, statins resulted in a 48 percent reduction in the high-risk group but had only a 13 percent risk reduction in patients with low genetic-risk. The results differ from previous published research that consistently showed statins provide the same relative risk reduction — 30-45 percent — across all categories of patients.

“There is ongoing debate over which individuals should be allocated statin therapy to prevent a first heart attack,” said co-first author Nathan O. Stitziel, MD, PhD, a Washington University cardiologist and human geneticist.

“Genetics appears to be one way to identify high-risk patients. In our research, patients with a high genetic-risk score appear to benefit more from statin therapy because they’re starting at a higher baseline risk, even controlling for all the clinical measures we routinely examine.”

Genetic analysis is currently not available to patients on a routine basis. Stitziel says that with additional research, genetic-risk scoring might become a useful tool in estimating the degree to which an individual is likely to benefit from statin therapy.

To read the full article as well as a commentary published in Lancet on March 4, 2015, visit cardiology.wustl.edu

Reducing Angioplasty Complications

Cardiology researchers here have successfully risk-stratified angioplasty patients and dramatically reduced the incidences of bleeding and acute kidney injury (AKI).

The two complications commonly occur during cardiac catheterization and angioplasty and can impact up to 10 percent of procedures. Cardiologist Amit Amin, MD, MSC, and his colleagues developed a unique model to predict how much contrast dye a patient can tolerate. The dye carries a substantial risk for kidney damage, especially in patients with vascular diseases and poor renal function. “By proactively predicting a patient’s tolerance for the contrast dye and the likelihood of AKI, we are able to make more informed choices,” says Amin. “Our numbers show a dramatic improvement.”

Amin and his team used a similar predictive model to reduce the risk of bleeding during and after angioplasty. When feasible, the team found that radial instead of groin entry reduced the risk of puncture-site bleeds. “For far too long, these risks were accepted as collateral damage,” says Amin. “Now we’ve found that these adverse events are preventable.”

Since implementing the protocols in late 2013, Barnes-Jewish Hospital has achieved greater than a 50 percent reduction in both bleeding and AKI complications. Now Dr. Amin has received a multicenter grant from the Agency for Healthcare Research and Quality to help two other hospitals to implement these risk-reduction protocols.

3rd Annual John P. Boineau Memorial Lecture

Fred Morady, MD, McKay Professor of Cardiovascular Disease and Professor of Medicine at the University of Michigan Medical School, was the keynote speaker for the 3rd Annual John P. Boineau Memorial Lecture, held this year on April 2.

Dr. Morady is an esteemed cardiologist and has authored more than 600 peer-reviewed original research articles focused on multiple aspects of clinical cardiac electrophysiology. At the University of Michigan, he first joined the faculty in 1984 as director of its electrophysiology service. He continued as director until 2008.

Dr. Morady’s lecture was titled “Rate Control versus Rhythm Control for Atrial Fibrillation.” He was named the associate editor of Heart Rhythm in January 2014 and is on the editorial boards of several major journals, including Circulation and the Journal of the American College of Cardiology. His lecture offered an opportunity for ongoing discussion about the treatment of atrial fibrillation.
Remembering Michael Beardslee, MD
Cardiology Research Fellow, 1995 – 1997
Cardiology Clinical Fellow, 1997 – 1998
Faculty, 1999 - 2008

It is with a heavy heart that we share the news that Michael Beardslee, MD, passed away unexpectedly at his home in St. Louis in April. Dr. Beardslee, a gifted clinician and educator, served as an associate professor of medicine in our division from 1999 to 2008 before leaving for private practice. He had just made the exciting commitment to return to our academic family this year and we were all looking forward to his return.

Many of you will remember Michael. He was recognized as one of our finest educators, receiving the Benico Barzilai Teacher Award from our cardiology fellows from 2003 to 2006 and “Teacher of the Year” recognition by the Department of Medicine and the Cardiology Division in 2008. “What made him great was the care and respect he gave to his patients and the standards that he held for himself and the fellows,” says Andrew Kates, MD, director of the clinical fellowship training program and a fellow when Dr. Beardslee trained here. “Even when he left for private practice, he would drive back to see patients he referred here.”

While at Washington University, Dr. Beardslee helped to train fellows and conducted research. He co-wrote with Dr. Alan Braverman a chapter on bicuspid aortic valve disease in 2009. Dr. Braverman, a mentor and close friend of Dr. Beardslee’s, offered these reflections on a life much admired:

Mike was taken much too early. His life and work held so much promise. He was a gifted patient teacher and had told me many times how much he was looking forward to returning to academic medicine and rejoining friends at Washington University. He often told me how much he missed discussing interesting and perplexing cases. We had made plans to work together on aortic disease, one of Mike’s many passions. He had also planned to work with our consultant group and with the congenital team.

Mike was a great partner — he was always willing to see another patient, stay late to review imaging studies, or talk about a case. He was a doctor for all the right reasons. He took the time to know his patients personally and enjoyed providing continuity of care. He was a constant advocate for his patients’ well-being. When one of his patients was admitted, he worked tirelessly on determining what was wrong, spending all the time necessary reviewing the data personally and discussing the case with trainees, consultants, and partners. Patients and families loved having Mike as their doctor.

Dr. Mike Beardslee was a gifted physician, a devoted father and husband, and a loyal friend. He will be missed by all of us who knew and loved him. Our deepest sympathy goes out to his wife, Debbie and their children.

In recognition of Dr. Beardslee’s many contributions to cardiology and to the St. Louis community, the Cardiovascular Division will establish a lectureship in his honor. Details about the opportunity to support this unique lectureship will be announced in the near future.