Taking Cancer Survival to Heart

With a new director hired and a dedicated training pathway established, the Cardiovascular Division is gearing up to expand its cardio-oncology program in a big way. This year, the Division will jumpstart a robust clinical trials program and will increase both staff and locations for subspecialty cardio-oncology clinics. "The United States is projected to have more than 18 million cancer survivors by the year 2020," says Daniel J. Lenihan, MD, who joined the Division last fall as director of the cardio-oncology program founded by Ronald Krone, MD. "The most common medical complications these patients struggle with over the long-term are cardiovascular side-effects ranging from cardiac ischemia and arrhythmias to pericarditis, valve disease, fibrosis of the pericardium and myocardium and heart failure."

Lenihan, who previously was a cardiologist at MD Anderson Cancer Center and then a cardio-oncologist at Vanderbilt University, says that the landscape of cancer treatment is more complex, especially as rapid "targeted" drug development spawns new cancer therapies. The Division has a close collaborative relationship with the nationally ranked Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine, and its cardio-oncologists partner with hematologists and oncologists to care for cancer survivors.

"Right now, we have a clinic three days a week, but as we include more faculty, we will increase the days available and add more locations," says Lenihan.

A team of five cardiologists — Krone and Lenihan as well as Andrew Kates, MD, Sudhir Jain, MD, and heart failure specialist Justin Vader, MD — along with Holly Wiesehan, ACNP, Molly Rater, FNP, and Ann Mahoney, RN, help staff the clinic, which now sees more than 500 patients annually. Projections are that the clinic will rapidly see thousands of patients as the team expands services from the medical center campus to satellite clinic locations in south and west St. Louis county.

Joshua Mitchell, MD, the first dedicated cardio-oncology fellow, rotates through the clinic as part of his training. Says Lenihan, "We have a dedicated cardio-oncology training pathway in the third year of fellowship now, but as volume increases, we hope to establish an additional fourth year and/or increase the number of fellows in this subspecialty."

Lenihan is moving fast to create a national model for cardio-oncology care.
If I had to characterize the environment within the Division of Cardiovascular Medicine, I would say that it is alive with science and discovery. For the past several years, we have focused on developing new clinical care programs and engaging in leading edge research. For example, electrophysiologist Phillip Cuculich, MD, and radiation oncologist Clifford Robinson, MD, have found that radiation therapy aimed directly at the heart could be a way to treat ventricular tachycardia in patients who failed to respond to conventional treatments. Early results from a small study last year are promising and were published in the December issue of The New England Journal of Medicine. A larger clinical trial is now under way.

This year, we are expanding our cardio-oncology program by adding clinic locations and increasing relevant research efforts so that we can treat a growing population of oncology patients who have developed — or are at risk of developing — serious cardiac complications as a result of their cancer treatment. We also are in the process of broadening our research into cardiovascular imaging technologies.

On the national front, we congratulate Andrew Kates, MD, for his new leadership role in the American College of Cardiology. As Program Vice Chair for the ACC’s Scientific Sessions, he influences the identification and dissemination of exciting research within the cardiovascular field.

As we all know, we can positively impact the care of our patients whenever we advance research from the laboratory to the clinic. We have so many researchers and physician scientists who are committed to understanding the mechanisms behind cardiovascular disease. I have high expectations that our research continues to break new ground in multiple cardiovascular specialties.

The following physicians have made donations in the past year to the Cardiovascular Division. Your support helps us to advance the field of cardiology by enhancing our fellowship training programs and supporting distinguished lectureships and other activities. Thank you for your support!

Dr. Benico Barzilai
Dr. Matthew S. Bosner
Dr. Mohit K. Chawla
Dr. William H. Danforth
Dr. Abhinav Diwan
Dr. Ali Ehsani
Dr. Paul R. Eisenberg
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Dr. Douglas L. Mann
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Dr. Robert Roberts
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Dr. Jerry Allison Snow

If you are interested in making a donation to the Cardiovascular Division, please contact Rachel A. Hartmann in the Washington University Medical Alumni and Development office at: 314-935-9715 or rachel_hartmann@wustl.edu

Washington University in St. Louis Office of Medical Alumni and Development
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Campus Box 1247
7425 Forsyth Blvd.
St. Louis, MO 63105
Part of my role as program director is to encourage our fellows to participate in meetings at the state and national level, to engage in advocacy efforts, and to obtain knowledge of critical health policies that impact our profession. Not only do these activities strengthen leadership skills, they provide opportunities for fellows to be part of the national dialogue that advances our cardiovascular field.

For example, some of our fellows attended the American College of Cardiology’s Annual Legislative conference in Washington, DC, last fall. Among the issues discussed were the growing administrative and economic burden of electronic health records and the need to increase bipartisan support of NIH funding to advance medical research. A key discussion also included review of a bill that would allow non-physician providers to supervise cardiac rehabilitation programs, potentially enabling broader access to such programs that can improve patient outcomes.

For aspiring clinician educators, the ACC recently launched 3T (Teaching Tomorrow’s Teachers), a workshop that offers academic skills training for interested fellows and links them with career mentors. Four of our fellows have participated in 3T. We continue to seek out more leadership and training opportunities such as these. In the meantime, our own program continues to evolve with the addition of new training pathways. This year, we added a cardio-oncology pathway during the third year of fellowship. We continue our efforts to obtain formal certification for our adult congenital heart disease fellowship and to fund an advanced cardiac imaging fellowship. As alumni, you also have many opportunities to advance our field by mentoring fellows and participating in peer-to-peer dialogues. I hope you are actively engaged at local and national conferences and in research and clinical training opportunities.

Alumni Update
Jennifer Lynn Cook, MD, FAHA
Clinical Cardiology Fellow, 2004-2007
Advanced Fellowship, Heart Failure/Transplant, 2007-2008
Current: Medical Director of Advanced Heart Failure, MCS and Transplantation Services and Advanced Heart Failure Fellowship Program Director, University of Arizona Tucson. Since joining as program director two years ago, transplant volume has increased 400 percent and the team has expanded to include seven heart failure cardiologists and four surgeons. The university is part of the Banner Hospital System with 39 hospitals across the southwest. In the past year, creation of a system wide research network now supports the first clinical trial involving five hospitals and eight cardiology practices.

Favorite Fellowship Memories: Watching the birth of MCS, participating in the early trials of the first generation VADs was an amazing opportunity. WU created a strong cohort of first generation MCS cardiologists; it is rewarding to maintain these WU ties as we advance the field. My first call was July 1, 2004. It was my first day, I was handed the STEMI pager and the assignment to report to the ER within 3 minutes. There was no tour, so with the first STEMI I found myself running through the basement, following “ambulance route” After three tries arriving at the parking lot instead of the ER I realized the signs led out of the hospital. Finally, it is hard to forget the gluttony of Sushi Club, with Dr. Ben Barzilai leading the charge.

Favorite Leisure Activities: As the mother of two boys, it’s baseball ALL the time. I have attended countless Little League games. Spring break in Arizona = spring training and this summer we fulfilled my sons dream to sleep in the centerfield hotel of the Toronto Blue Jay’s stadium.

Welcome New Fellows
We welcome the following first-year fellows who will join our training program in July 2018:

- Rahul Chhana, MD, Barnes-Jewish Hospital/Washington University School of Medicine
- Daniel Fox, MD, PhD, Barnes-Jewish Hospital/Washington University School of Medicine
- Samuel Lindner, MD, Duke University
- Christian McNeely, MD, Barnes-Jewish Hospital/Washington University School of Medicine
- Krasimira (Krissy) Mikhova, MD, University of Michigan
- Rachita Navara, MD, Stanford University
- Breck Sandvall, MD, Vanderbilt University
- Jonathan Wolfe, MD, University of Pittsburgh
- Bin Yang, MD, Vanderbilt University
Kates Named Vice Chair, ACC Scientific Sessions

Andrew Kates, MD, professor of medicine and director of the Cardiology Fellowship Program, has had a long-standing interest in education and enhancing the training of cardiovascular fellows. This year, Kates serves as Vice Chair for the American College of Cardiology’s Scientific Sessions, slated for Orlando, Fla. in March 2018.

Kates, who was appointed to the position last year, will rise to chair the Scientific Sessions committee in 2019-2020. The sessions, which encompass more than 300 educational programs, are the ACC’s largest educational activity, with more than 20,000 annual attendees and almost 4,000 faculty from across the country and around the world involved.

“The goals of the ACC annual sessions are to be innovative, interdisciplinary, informative, and interactive,” Kates says. “We have 10 different clinical pathways at the Scientific Sessions and we work with more than 100 members of a planning committee to make sure there are fair and equitable educational programs, with equal representation from diverse faculty.”

Kates has held multiple leadership positions within the ACC, both at state and national levels. He has co-chaired the ACC’s Core Curriculum sessions and, for the past three years, has led the ACC’s Health Care in Emerging Countries Symposium. He also was instrumental in designing the fellows in-training exam, which now is the standard for evaluations of fellows in cardiovascular programs across the country. At the state level, he and colleagues created the annual Scientific Session for the Missouri ACC ten years ago. Kates now serves as president of the ACC’s Missouri Chapter.

“It has always been important to me to make education engaging and interactive so that we continue to learn and share information,” says Kates, who says he’s seen educational styles move away from simple lectures to more meaningful audience interactions. He now sees more intensive workshops, half-day sessions and specific opportunities to learn about late-breaking cardiovascular news, such as new clinical trials or basic research.

“What I hope to bring to the Scientific Sessions is more creative and interactive opportunities that engage participants so that we are immersed in learning from each other,” Kates adds. “To continue to advance our field and provide better care for our patients, we need to advance education. It’s very exciting to be a part of that journey.”

New Director of Research Pioneer in ECHO research joins faculty

John Gorcsan III, MD, has joined Washington University’s Cardiovascular Division to pursue what he calls “the joy of discovery” in cardiovascular research.

“Washington University is an institution that truly embraces education and research at the highest levels, and that’s why it is so exciting to be here,” he says.

Gorcsan, the former director of echocardiography at the University of Pittsburgh’s Heart and Vascular Medicine Institute, joined the division last fall. He is internationally recognized for his pioneering use of echocardiography to accurately measure heart function, specifically in heart failure patients. He championed the use of automated border detection and was the first to publish research on the advantages of tissue Doppler echocardiography to obtain quantitative heart function data. He also was one of the leading pioneers in speckle tracking strain analysis and was one of the early leaders in the use of pacing, or cardiac resynchronization therapy (CRT) devices as a way to improve heart rhythm and function.

“During my career, we’ve gone from simple visual assessments to making refined, quantitative measurements with the use of these advanced imaging techniques,” Gorcsan says. “We now can measure heart function, determine a patient’s disease process and prognosis, and evaluate a patient’s candidacy for a mechanical heart assist device and response to device therapy.”

As director of the division’s clinical research program, Gorcsan will not only pursue his own research, but also will mentor junior faculty and fellows as they identifying novel research avenues. Of particular interest will be offering guidance on research presentations and publication. Gorcsan currently serves as Associate Editor for the Journal for Cardiac Failure and the European Heart Journal, and serves on editorial boards for Journal of the American College of Cardiology, Journal of the American Society of Echocardiography, and European Journal of Heart Failure.

“I’m always reviewing manuscripts, so I keep up with the most cutting-edge research,” Gorcsan says with a smile.

He adds, “We want to keep the academic mission of this great institution a high priority. I’m definitely eager to help others identify and pursue research opportunities that advance the field of cardiovascular medicine.”
More than 250 participants, including current students, fellows, staff, faculty, as well as former trainees, faculty and friends of the Cardiovascular Division and the Center for Cardiovascular Research joined in the Sixth Annual Cardiovascular Research Day held last November. The event, which coincided with the Division’s 70th anniversary, highlighted innovations in basic, clinical and translational research at Washington University. Several nationally and internationally respected physicians headlined the symposium:

Victor Dzau, MD, president of the National Academy of Medicine and chancellor emeritus for Health Affairs and the James B. Duke Professor of Medicine at Duke University Medical School, opened the symposium via videoconference due to obligations in Washington, DC. He discussed “The Cardiovascular Disease Continuum: Past, Present, and Future.”

Paul R. Eisenberg, MD, a former faculty member of the division and now senior vice president of US Medical, Amgen Inc., offered a frank discussion centered on the “Challenges and Opportunities in Cardiovascular Drug Development.”

Elizabeth M. McNally, MD, PhD, Ward Professor of Genetic Medicine and Director of the Center for Genetic Medicine at the Feinberg School of Medicine at Northwestern University, discussed “Genes and Modifiers for Myopathy”.

Peter Libby, MD, Mallinckrodt Professor of Medicine at Harvard Medical School, was the keynote speaker for the 5th Annual Burton E. Sobel Lecture. Libby, who discussed “Inflammation in Atherosclerosis: Time for Translation,” was introduced by Dr. Peter Corr, Co-Founder and Managing General Partner of Auven Therapeutics Management LLP. Formerly a Professor in the Cardiovascular Division, Dr. Corr was a long-term colleague and collaborator of Dr. Sobel’s. Also joining the celebration and attending the Symposium were Dr. Sobel’s two children.

Trainees from 10 different departments on the medical school and Danforth campuses presented more than 60 posters during a lively research session. Recognized for best poster presentations were:

Luigi Adamo, MD, PhD, a clinical fellow in the lab of Douglas Mann, MD, received the inaugural Translational Cardiovascular Research Poster Award for Pirfenidone Modulates Cardiac B Lymphocytes and Reduces Cardiac Dysfunction after Ischemia-Reperfusion Injury

Catherine Lipovsky, predoctoral student in the laboratory of Stacey Rentschler, MD, PhD, for Notch Activation Induces Long-Term Gene Expression Changes Resembling Marine Sick Sinus Syndrome

Li-Hao Paul Huang, PhD, post-doctoral fellow in the laboratory of Gwen Randolph, PhD, for Interleukin 17-Driven Trapping of Tissue lipoproteins links Immunity to Cardiovascular Risk in Marine Psoriasis

Sergio E. Sastriques, MD, visiting clinical researcher fellow with Sean English, MD, for Interleukin-6 Orchestrates Vascular Inflammation and Destructive Matrix Remodeling in Experimental Abdominal Aortic Aneurysms.
Author John O’Leary says, “One life can, and always does, change the world.”

O’Leary, an internationally known motivational speaker, was the keynote speaker at the Cardiovascular Division’s 3rd Annual Michael Beardslee Memorial Lecture, held last November. O’Leary was just nine years old when a devastating accident and fire left him with burns over his entire body. Thanks to a groundswell of family, church, and community support, though, he survived. Today, the native St. Louisan is author of “On Fire: The 7 Choices to Ignite a Radically Inspired Life.” In his book, he says everyone should make intentional choices to live “radically inspired lives” every day.

“John’s personal journey in managing tragedy with grace and fortitude was inspirational,” said Alan Braverman, MD, Alumni Endowed Professor in Cardiovascular Diseases and a close friend and mentor of Beardslee. “The evening was filled with love, appreciation of one another and strong fellowship. John’s comments and the atmosphere of the evening provided a wonderful celebration of Mike Beardslee’s legacy and what he meant to so many people.”

Beardslee was a former associate professor of medicine in the Cardiovascular Division from 1999 to 2008. He left to pursue private practice but then passed away in 2015 shortly before he was to return to the faculty. Adds Braverman, “Mike was an exceptional physician and a wonderful friend. This lecture could not have been a more fitting tribute to his memory.”