The Power of Prevention
When PAD Awareness can Save Limbs and Lives

After Sam Pryer retired, he enjoyed living an active life and working on his golf game. When he started having pain in his leg, Sam’s primary care physician told him that he had poor circulation. When his leg pain worsened, he was referred to a specialist who told him that his condition was so advanced that the only treatment option was amputation. Neither physician informed Sam that he was suffering from peripheral artery disease (PAD).

“I was a regular at my local golf course until I started having pain in my leg. My primary care doctor sent me for tests and told me that I should walk and do some exercises….”

“‘I was never told that I had PAD’”

The impact of low PAD awareness has very real implications for people like Sam. Unfortunately, his story is not uncommon.

PAD affects the circulatory system by reducing blood flow to the limbs. It is caused by the build-up of plaque inside the arteries and is most noticeable in a patient’s lower extremities. The chronic and disabling condition affects over 10 million people in the US and can lead to impaired mobility, limb loss, and death. Yet, it is routinely undiagnosed and symptoms such as leg cramps and numbness are overlooked.

Left untreated, this debilitating condition can progress to the advanced stage called Chronic Limb Threatening Ischemia (CLTI). Research suggests that of the 2–3.5 million patients with CLTI, approximately 30% will undergo leg amputations. In California, lower extremity amputations have increased by 27% since 1997.

Amputations have serious implications to health. Tragically, half of patients will die within one year of having a lower extremity amputation. Within three years, the death rate rises to 71%. It is estimated that nearly 85% of PAD-related amputations are actually avoidable.

Finding a Solution
PAD awareness among both providers and patients is surprisingly low in spite of the high prevalence of the condition and recent increase in limb loss due to PAD complications. Additionally, there are major health disparities based on socioeconomic status and race in PAD care. For example, the national rate among black Medicare beneficiaries is nearly three times higher than the rate among other beneficiaries, meaning African Americans with PAD are much more likely to have their leg amputated than other populations.

Vascular Cures is exploring a community-based initiative to increase awareness in at-risk populations and educate community-based care providers. We are bringing together experts in patient care and community engagement to design a project focused on prevention that could potentially save thousands of limbs and lives.

Take the Initiative to Stay Informed
Unfortunately, Sam is just one of the countless patients who have experienced the devastating outcome that can result from the widespread lack of awareness of PAD and subsequent late stage diagnosis. When PAD is identified early, patients can usually choose much less invasive treatment options that will both relieve their leg pain and save their limbs. By staying informed and knowing what to ask your physician, you will be in a position to catch a silent disease like PAD in the early stage and be on the path to lead a healthier life and maintain your independence. For more information about PAD risks and management, visit our website at https://vascularcures.org/PAD
Spotlight on Women in Vascular Health

Vascular Cures is honored to support and collaborate with incredible women who are on the front line of fighting vascular disease in their respective fields. They are physicians, researchers, regulators, government officials and advocates, dedicated to improving the lives of the millions of patients living with vascular disease.

**DONNA BUCKLEY, MD**
**MEDICAL DIRECTOR, FOOD AND DRUG ADMINISTRATION**
Donna Carol Buckley, MD, is an assistant professor in vascular and interventional radiology at Georgetown University in Washington, D.C., where she also treats patients at MedStar Hospital. In her role as a medical director at the FDA's Center for Devices and Radiological Health she supports evaluating the safety and efficacy of new medical devices to treat various cardiovascular diseases. Vascular Cures is honored to have her as a member of our Patient-Reported Outcome Measures in PAD (PROM-PAD) Working Group, which strives to improve vascular outcomes by prioritizing the patient voice.

**PAM PARKER**
**PAD PATIENT ADVOCATE**
Pam is an active PE teacher who is also living with PAD and Type 1 diabetes. While she feels lucky to have undergone surgeries that successfully restored blood flow to her legs, she still struggles to walk moderate distances without pain (like during her morning walks around the school gym with her fellow teachers). She is very passionate about the importance of patient empowerment and shared decision-making with care providers. She serves as an AHA Women Heart Champion and is an advocate for patient preferences as a member of our Working Group on Patient-Reported Outcomes in PAD.

**JULIE FREISCHLAG, MD**
**CEO, WAKE FOREST BAPTIST HEALTH**
Julie Freischlag, MD, is the CEO of Wake Forest Baptist Health and dean of Wake Forest School of Medicine. Dr. Freischlag has more than 30 years of experience leading patient-care services at nationally ranked hospitals. She is also a trailblazer herself in the vascular field, serving as the first female faculty at UC San Diego and UCLA (where she was also the first chief of vascular surgery), the first chair of surgery at Johns Hopkins University, and most recently the first woman surgeon appointed the CEO of a medical institution at Wake Forest. Dr. Freischlag is currently on our Advisory Board and previously a member of our Board of Directors.

**KATHRYN FREISCHLAG, MD**
**SURGEON & RESEARCHER, UNIVERSITY OF MICHIGAN**
Julie Freischlag, MD, is the CEO of Wake Forest Baptist Health and dean of Wake Forest School of Medicine. Dr. Freischlag has more than 30 years of experience leading patient-care services at nationally ranked hospitals. She is also a trailblazer herself in the vascular field, serving as the first female faculty at UC San Diego and UCLA (where she was also the first chief of vascular surgery), the first chair of surgery at Johns Hopkins University, and most recently the first woman surgeon appointed the CEO of a medical institution at Wake Forest. Dr. Freischlag is currently on our Advisory Board and previously a member of our Board of Directors.

**KATHERINE GALLAGHER, PHD**
**SURGEON & RESEARCHER, UNIVERSITY OF MICHIGAN**
Katherine Gallagher, MD, is associate professor of vascular surgery at the University of Michigan where she also treats patients in conjunction with the Veteran's Administration Medical Center. Her clinical interest and expertise is in the management of PAD, particularly in patients with diabetes. Dr. Gallagher’s research lab, which has received an impressive $7.2 million in funding, investigates the role of bone marrow stem cells in diabetic wound healing and PAD. She is our 2012 Wylie Scholar and mentor to our 2019 Wylie Scholar, Andrea Obi.

**ZORINA GALIS, PHD**
**NATIONAL INSTITUTES OF HEALTH (NIH)**
Zorina Galis, PhD is the Chief of Vascular Biology and Hypertension at the National Heart, Lung, and Blood Institute (NHLBI)/NIH where she oversees a large portfolio of cardiovascular research programs. Dr. Galis is recognized for significant scientific contributions in vascular remodeling and for establishing successful interdisciplinary collaborations within and between academia, industry, and the government. She has an impressive career having risen through the academic ranks at Harvard Medical School, Emory School of Medicine, Georgia Institute of Technology, and Indiana University, and previously serving as Chief Scientific Officer, Cardiovascular R&D at Eli Lilly and Co. Dr. Galis is a member of the Vascular Cures Advisory Board.

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The Personal Impact of PAD

By Katelyn Jackson, Operations Manager

My dad lifted his foot at Disneyland to retie his shoe. At 66, he’s an energetic and cheerful grandpa who still wears the same style of white New Balances from my childhood. “Wait for us, Ezra! Grandpa’s tying his shoe!” I called to my six-year-old as my dad raised his foot, I noticed the skin on his legs was pale and thin, with patches of hair loss. I sent my step-sister, an anesthesiologist who (graciously) answers questions about everything from runny noses to mystery rashes, a text about my concerns. She confirmed my suspicion that he was recently diagnosed with PAD and peripheral neuropathy.

Working at Vascular Cures has exposed me to the startling impact of Peripheral Artery Disease. The devastating effects of PAD (reduced quality of life and, in the worst case, amputation and death) are widely unrecognized and understated in the general population. My dad has a significant advantage over other patients facing PAD: two daughters who both understand the significance of early diagnosis and treatment and will advocate for proactive, noninvasive treatment of his PAD.

My personal connection to vascular disease makes the work we are doing at Vascular Cures to spread awareness of this debilitating condition much more meaningful. I want as many children as possible to experience the joy of walking and playing with their grandparents, like my son does with my dad.

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Vascular Cures Welcomes Kevin Heath, MD to Board of Directors

Vascular Cures is excited to announce the addition of Dr. Kevin Heath to the Board of Directors as of October, 2019. Kevin is currently the Medical Director leading the Education Solutions team within OptumCare Clinical Performance in Kansas City, KS/MO. He brings a unique and valuable perspective with his diverse background in primary care, population health, provider education, reimbursement and health systems. Dr. Heath is also involved in multiple vascular outcomes initiatives, including a partnership with Harvard University/Brigham and Women’s Hospital Center for Cardiovascular Disease Prevention.

Dr. Heath received his graduate (MS, Clinical Anatomy), and doctorate (MD) degrees from Creighton University. He completed internal medicine residency at Creighton followed by nephrology fellowship at Stanford University Hospital. Dr. Heath also holds a Masters of Healthcare Leadership from Brown University, and is a currently a Master of Public Health student in epidemiology at Harvard University.

Two New Collaborative Patient-Centered Research Grants Awarded to Study Aortic Aneurysms & PAD

Peripheral artery disease (PAD) and abdominal aortic aneurysms (AAA) cause significant disability and mortality. Improved technologies have enabled less-invasive treatments, but their long-term effectiveness is limited and new interventions are often necessary. Currently, AAA are treated surgically with endovascular aneurysm repair (EVAR) but approximately 25% of patients still have persistent AAA growth and remain at risk for rupture – fatal 90% of the time.

Multiple studies suggest certain molecules in our blood influence vascular repair, and may serve as biomarkers to predict a positive, or negative, outcome. The goal of each program is to identify biomarkers of poor response to procedures, to improve the patient prognosis and identify new targets for future drugs. There will be two teams of established clinician-scientists at four leading academic medical centers, supported by a shared core laboratory and computational resources at UCSF.

The PAD project will be conducted at UCSF (Michael Conte MD) and University of Florida (Scott Berceli MD); their earlier VCRN work provides key insights in terms of the inflammatory response. The AAA project will be conducted at UPMC (Edith Tzeng MD) and Vanderbilt University (John Curci MD).

The impact on patient lives would be enormous if we could identify the biological factors (biomarkers) that predict the success or failure of these procedures for individual patients. These projects would enable major progress toward the ultimate development of such tests.

Special thanks to Vinita Chaturvedi for assisting with the 2019 Fall Newsletter copywriting!

Vascular Cures is the only nonprofit organization exclusively representing the millions of patients with Vascular Diseases outside of the heart. Our mission is to advance patient-centered research, catalyze breakthrough collaborations and empower people in their vascular health journey.