Keck Medicine of USC is first in Southern California to perform robotic endovascular surgery for treatment of peripheral vascular disease

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LOS ANGELES — Building on their extensive experience and skill in endovascular surgery, Keck Medicine of the University of Southern California (USC) vascular surgeons are the only surgeons in Southern California using a new robotic system with the potential to reduce procedure times, decrease radiation, shorten hospital stays, enhance safety and put patients back on their feet again faster.

Whittier resident Paul Toft, 59, was one of the first patients at Keck Medicine of USC to benefit from the new system being used by surgeons at the USC CardioVascular Thoracic Institute, part of Keck Medicine of USC. Sung Wan Ham, M.D., director of the Endovascular Robotic Program and his team, including Fred Weaver, M.D., M.M.M., chief of vascular surgery and endovascular therapy, and Sugku Han, M.D., assistant professor of surgery at Keck Medicine of USC, performed the surgery in late September.

Toft, a high school mathematics teacher who had been in good health all of his life, began suffering last summer from blockage of the left superficial femoral artery. The blockage cut off oxygen to his lower left leg, causing severe leg cramps and endangering the leg.

“As a teacher, I’m constantly moving, but I couldn’t walk a city block without needing rest,” he said. “My general practitioner told me I needed to get help or I was likely to lose my lower leg. The operation took an hour and a half, and I was out of the hospital by noon the next day. Thanks to my GP and Dr. Sung Wan Ham, who performed my surgery, I feel no restrictions, I can walk and run for miles and do everything I want to do.”

Toft’s surgery was performed with the Magellan Robotic System by Hansen Medical Inc., a robotic endovascular system used to treat peripheral vascular disease (PVD) more efficiently and effectively, with shorter procedure times and less radiation exposure to the patient and surgery staff. PVD, also known as peripheral arterial disease (PAD), includes diseases of blood vessels outside of the brain and heart and refers to narrowing or blockage of such vessels with plaque.

According to the National Institutes of Health (NIH), PAD affects eight to 12 million people in the United States, especially people over age 50.
Radiation is employed in endovascular surgery to help the surgeon see the catheter and move it safely through blood vessels. Radiation exposure varies depending on the procedure. For Toft's procedure, without robotic surgery, radiation exposure would typically be 30 minutes. With robotic surgery, the exposure was decreased to 20 minutes.

Keck Medicine of USC recently acquired two Magellan Robotic Systems, and has plans to serve as a regional Center of Excellence to help train other physicians in the region on use of this emerging technology.

The robotic system was cleared by the federal Food and Drug Administration (FDA) for navigation to anatomical targets in peripheral blood vessels in 2012.

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**ABOUT KECK MEDICINE OF USC**

Keck Medicine of USC is the University of Southern California's medical enterprise, one of only two university-based medical systems in the Los Angeles area. Encompassing academic, research and clinical excellence, the medical system attracts internationally renowned experts who teach and practice at the Keck School of Medicine of USC, the region's first medical school; includes the renowned USC Norris Comprehensive Cancer Center, one of the first comprehensive cancer centers established by the National Institutes of Health (NIH) in the United States; has a medical faculty practice, the USC Care Medical Group; operates the Keck Medical Center of USC, which includes two acute care hospitals: 401-licensed bed Keck Hospital of USC and 60-licensed bed USC Norris Cancer Hospital; and owns USC Verdugo Hills Hospital, a 158-licensed bed community hospital. It also includes more than 40 outpatient facilities, some at affiliated hospitals, in Los Angeles, Orange, Kern, Tulare and Ventura counties.

*U.S. News & World Report* ranked Keck Medical Center of USC among the Top 10 in ophthalmology (No. 9), and among the Top 25 hospitals in the United States for urology (No. 20) and cancer care (No. 23). The medical center was also awarded an “A” grade from The Leapfrog Group in March, representing outstanding patient safety practices and overall patient outcomes.

For more information, go to [www.keckmedicine.org/beyond](http://www.keckmedicine.org/beyond)