

Surgeons Kuwayama, Meguid team up for a tough case

Climbing Buddies' Friendship Extends to ORs

By Todd Neff

If Hollywood were to make a buddy movie about David Kuwayama and Robert Meguid, it might be called "Smart and Smarter." Rather than bumbling along and leaving comedic damage in their wake, the plot, if faithful at all to the reality at University of Colorado Hospital, would involve them teaming up, superhero-style, to repair the bodily damage of people like Dawn Scott, who didn't know where else to turn.



Friends and CU School of Medicine surgeons David Kuwayama, left, and Robert Meguid at Mount Rainier in 2011. They've since topped a few Colorado fourteeners and collaborated on several complex surgeries at UCH.

[Kuwayama](#), MD, MPA, and [Meguid](#), MD, MPH, are indeed close friends. They are also surgeons at UCH and faculty of the CU School of Medicine. Both graduated from Ivy League medical schools in 2002 (Meguid from Brown, Kuwayama from Harvard); both set their surgical residency sights on Johns Hopkins University and landed spots there. Both added three research years to their residencies in 2008, with Meguid earning a Master of Public

Health at Johns Hopkins and Kuwayama a Master in Public Affairs from Princeton. Both served stints as Johns Hopkins chief surgical residents in 2010.

When Meguid was in Seattle for his cardiothoracic surgery fellowship, Kuwayama, who was doing his vascular surgery fellowship at Dartmouth, flew out so they could climb Mount Rainier together. Kuwayama was a groomsman in Meguid's wedding. Later, Meguid, who joined the CU faculty in early 2012, alerted Kuwayama to the opening for a vascular surgeon at UCH. Kuwayama arrived that October.

They climb Colorado's fourteeners together now, most recently Mount Oxford and Mount Belford. They also team up to perform highly complex surgeries that demand the full scope of their combined expertise.

The case. Dawn Scott's was one of those surgeries. Scott, 37, had an exceptionally bad case of [thoracic outlet syndrome](#) resulting in [subclavian vein obstruction](#). The Cody, Wyo. attorney also had a complicated medical history. In 1998, as a 20-year-old undergraduate at the University of Northern Colorado, she was diagnosed with epithelioid hemangioendothelioma ([EHE](#)), a rare cancer, in the right subclavian vein beneath her collarbone.

That treatment involved surgery and also chemotherapy infusions, the port for which went into her left subclavian vein. That vein collapsed, and in 2001, radiologists in northern Colorado placed a stent to hold it open.

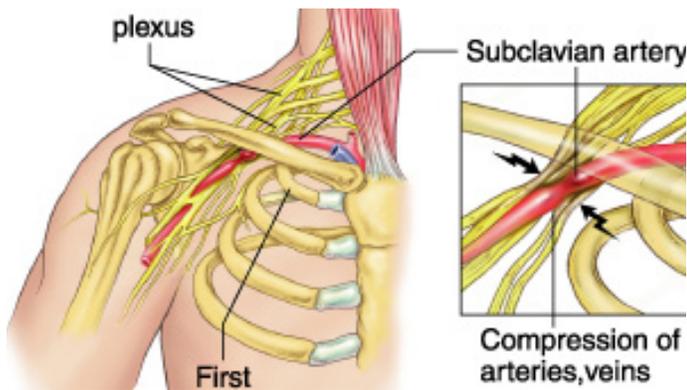
The stent failed. Ten more stents were placed, each failing under the squeeze of Dawn's left clavicle and first rib. With the pulsing blood unable to drain, the pressure in her left arm skyrocketed,

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causing pain, swelling, and discomfort so severe that she deferred her first year of law school at the University of Wyoming.

The misery went on for more than a decade. Doctors in Cody, where she moved after graduating from law school in 2005, suggested [lymphedema](#) as a possible cause, though her lymph nodes had never been a problem. By the summer of 2014, Scott suffered from more and more debilitating headaches, to the point of being bedridden.

"I was losing more days to being in bed or feeling lousy than I was being productive or doing things," Scott said.



A simpler case of thoracic outlet syndrome (image courtesy Reed Group).

Another friend. A physical therapist in Cody suspected thoracic outlet syndrome. More than one doctor subsequently dismissed it, Scott said. She contacted a good friend, Sunni Hyde, RN, a hospital manager at UCH, who connected Scott with Julie Bishop, MPH, the CU School of Medicine's patient affairs coordinator for Cardiothoracic Surgery and the [Multidisciplinary Chest Wall Disease Management Clinic](#). Bishop touched base with Meguid, the clinic's director. He checked out Scott's CT scans and saw one of the worst thoracic outlet syndrome cases he had ever come across. It was also one that could clearly use a little help from his friend.

"I got [Kuwayama] involved because of my familiarity with him and his expertise and skills," Meguid said. "Because I know him well, I know what his interests are and was able to engage him directly."

Kuwayama added, "It was a problem caused by two bones, but the actual, direct cause of the symptoms was a venous occlusion. We thought this was a great case to do together."

Scott and her husband, Brent Benson, drove the 10 hours down from Cody to the Anschutz Medical Campus and met with Meguid and Kuwayama together on Aug. 28.

"I shared my story and wrapped up with, 'I hope you can do something for me,'" Scott said. "And I held my breath because I was afraid they'd say, 'We can't do anything for you,' or 'You're out of your mind.'"

Instead the surgeons sent Scott for a scan to assess one of her leg vein's suitability as a graft donor that day. Less than two weeks later, on Sept. 8, she was back in Aurora for surgery.

Complex surgery. Either a cardiothoracic surgeon or a vascular surgeon can handle a typical thoracic outlet syndrome case, which involves removing the first rib to stop the pinching of nerves, veins, and arteries between it and the clavicle. Kuwayama said the 30 or so thoracic outlet syndrome surgeries done each year for UCH patients tend to split roughly evenly between the two specialties. In Scott's case, though, the depth of the flawed stent and the extent of vein repair called for collaboration. To get to the damage, Kuwayama needed access to a wide swath of Scott's chest. That meant a sternotomy, a cardiothoracic surgery mainstay with which Meguid is well familiar.

A sternotomy was just one part of the procedure Kuwayama and Meguid planned. They would also create a bypass of the innominate veins in the upper chest using leg veins fashioned into a cylindrical panel graft. They would reimplant the jugular vein – one of the tributaries of the innominate veins – and create an arteriovenous fistula in Scott's elbow to ensure the flow of blood through the veins was strong enough to keep the bypass open.

"This is an example of where having 3D imaging technology makes a huge difference in preoperative planning," Kuwayama said. "We knew exactly what we were going to do. In cases like this, you can't afford surprises."

The surgery itself, with Meguid going first and Kuwayama taking over, took six hours. There were no surprises. Scott was discharged from UCH on Sept. 20. In October, she and her husband welcomed a foster son, now two-and-a-half, into their home.

"He's been my physical and occupational therapy," Scott joked.

Now that her body is equipped to handle blood flow efficiently, Scott can again contemplate having a child of her own. The headaches have become rare – she’s had just a couple in the four months since surgery, she said – and mild. The veins in her left arm are still a bit swollen, but that was expected, and it should abate when the fistula comes out during a procedure scheduled for March 6, she said.



Dawn Scott and husband Brent Benson at stupidcancer.org's [OMG! Cancer Summit for Young Adults](#) in April 2013.

And so the story of a friend referred by a friend to two highly skilled friends comes to an end. Don't bet against a sequel, though.

"Whether a thoracic outlet surgery is straightforward or not, we can handle it at the University of Colorado," Kuwayama said. "And in our case, you also know that the two guys that are going to be working on you are going to work well together because they hang out with each other for fun."