

Complex Surgery, One Small Incision — California First

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Surgeons at the University of California, San Diego Medical Center have performed the next in a series of groundbreaking single-incision surgeries. Through one small port in the navel, surgeons removed a kidney and ureter and reconstructed a patient's bladder as part of an innovative cancer surgery. This is the first time this minimally invasive procedure has been performed in the western United States.

"Unlike traditional laparoscopy, where each instrument is placed through a separate incision, single-site laparoscopy involves placing all instruments through one small opening," said Ithaar H. Derweesh, MD, surgical oncologist in the Division of Urology at UC San Diego Medical Center and Moores UCSD Cancer Center. "With one incision, we may significantly reduce post-operative pain and improve cosmetic outcome while accelerating the patient's recovery."

In a traditional laparoscopic procedure a patient would have 3 to 5 separate incisions for the placement of instruments and organ removal. In this procedure, surgeons were able to remove a large mass in the ureter and the damaged kidney and reconstruct the bladder with one incision measuring six centimeters. This is only the second time this procedure has been reported in the world.

The ureter is a 12 inch muscular tube which transports urine from the kidney to the bladder. Cancer of the ureter, called upper tract urothelial carcinoma, affects approximately 10 percent of kidney cancer patients. Due to its aggressive nature, kidney preserving treatment may not be effective. Removal of the kidney, ureter and a portion of the bladder is advisable in cases of localized disease.

"We want to do everything possible to decrease trauma and to speed the process of convalescence for our patients," said Tracy M. Downs, MD, surgical oncologist in the Division of Urology at UC San Diego Medical Center and Moores UCSD Cancer Center. "Using a single incision for a radical oncologic procedure is an emerging approach that may be a better option for patients — especially for cancer patients who may face more than one operation."



surgical pioneers Derweesh (left) and Downs (right).

The surgeon-scientists of UC San Diego Medical Center have pioneered both scarless and single-incision surgery. As part of research conducted by the UC San Diego Center for the Future of Surgery, the center's surgeons were the first in the United States to perform an oral appendix removal.

Kidney cancer is the most lethal of the commonly diagnosed urologic malignancies, diagnosed in more than 50,000 Americans every year. According to the American Cancer Society, kidney cancer is increasing at a rate of two to three percent each year in the United States. Risk factors for developing kidney cancer include smoking, obesity and hypertension.

The surgical team included lead co-surgeons Derweesh and Downs and Jonathan Silberstein, MD.

Established in 1965, the Department of Surgery at UC San Diego Medical Center represents more than 80 leading surgeons with specialties in open, minimally invasive, and scarless surgery techniques. The Department is committed to advancing surgical education by teaching and training the next generation of innovators; researching, testing and developing groundbreaking surgical techniques; providing superior patient care and service; and attracting a world-class faculty.

[The Moores UCSD Cancer Center](#) is one of the nation's 40 National Cancer Institute-designated Comprehensive Cancer Centers, combining research, clinical care and community outreach to advance the prevention, treatment and cure of cancer.

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