

Robot-assisted kidney cancer surgery offers many benefits, but at a cost

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Robot-assisted surgery to remove kidney cancers has seen a rapid increase in use, and has both replaced and proven safer than laparoscopic procedures for the same purpose, according to a study by the Vattikuti Urology Institute at Henry Ford Hospital in Detroit.

However, the study also shows that robotic partial nephrectomy (RPN) – while resulting in fewer complications than both open (OPN) and laparoscopic (LPN) removal of cancerous [kidney tissue](#) – also involves more "excessive" [hospital charges](#).

"Excessive hospital charges were significantly higher with robotic partial nephrectomy," says Khurshid R. Ghani, M.D., of Vattikuti Urology Institute and lead author of the study. "While we can report no cost-savings with the procedure – quite the opposite – the benefits are obvious."

"It is a safe operation that has rapidly replaced LPN as the most common minimally [invasive approach](#) for partial nephrectomy. It has shown superior results compared to open surgery, and was better than laparoscopy in every respect but cost," he adds

The findings will be presented May 7 at the annual meeting of the American Urological Association in San Diego.

Dr. Ghani says data was mined from the Nationwide Inpatient Sample (NIS), which includes inpatient discharge information from 1,044 U.S.

hospitals.

Between October 2008 – when the NIS first included an identifier for robot-assisted procedures – and December 2010, the researchers found a total of 38,064 patients who underwent OPN, LPN or RPN to treat kidney cancers that had not metastasized.

Of the total, nearly 70 percent had open surgery, nearly 24 percent had robot-assisted surgery and a little more than 9 percent were treated laparoscopically.

Researchers also noted that while all three forms of kidney surgery had increased in 2010, robot-assisted [partial nephrectomy](#) soared by more than 45 percent, far overshadowing the other two types.

Complications were tracked during and after each procedure. The Henry Ford team found:

- Patients undergoing RPN were least likely to receive a blood transfusion, while those who had open surgery were most likely to need one.
- The same was true for developing complications after surgery or requiring a prolonged hospital stay.
- Only those undergoing RPN were less likely to develop complications during surgery.

Provided by Henry Ford Health System

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