

# US has seen widespread adoption of robot-assisted cancer surgery to remove the prostate

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A new study reveals that the US has experienced widespread adoption of robot-assisted prostate removal surgery to treat prostate cancer in recent years. The *BJU International* study also found that while such surgeries are more expensive than traditional surgeries, their costs are decreasing over time.

In 2001, surgeons began using robotic technologies in operations to remove the prostate. To examine trends in the use of such robotic-assisted radical prostatectomy (RARP) procedures for [prostate cancer](#) patients, Steven Chang, MD, MS, of Harvard Medical School, the Dana-Farber Cancer Institute, and Brigham and Women's Hospital, led a team that analyzed 489,369 men who underwent non-RARP (i.e., open or laparoscopic [radical prostatectomy](#)) or RARP in the United States from 2003 to 2010.

During the study period, RARP adoption (defined as performing more than 50 percent of annual radical prostatectomies with the robotic approach) increased from 0.7 percent to 42 percent of surgeons performing radical prostatectomies. Surgeons who performed at least 25 radical prostatectomies each year were more likely to adopt RARP. Also, from 2005 to 2007, adoption was more common among surgeons at teaching hospitals and at intermediate and large-sized hospitals. After 2007, adoption was more common among [surgeons](#) at urban hospitals. RARP was more costly, disproportionally contributing to the 40 percent

increase in annual prostate cancer surgery expenditures; however, RARP [costs](#) generally decreased and plateaued at slightly over \$10,000 while non-RARP costs increased to nearly \$9,000 by the end of the study.

"Our findings give insights on the adoption of not just robotic technology but future surgical innovations in terms of the general pattern of early diffusion, the potential impact on costs of new and competing treatments, and the alternations in practices patterns such as centralization of care to higher volume providers," said Dr. Chang.

**More information:** "The Impact of Robotic Surgery on the Surgical Management of Prostate Cancer in the United States." Steven L. Chang, Adam S. Kibel, James D. Brooks, and Benjamin I. Chung. *BJU International*; Published Online: August 26, 2014. [DOI: 10.1111/bju.12850](#)

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