

UROLOGICAL ONCOLOGY

Cancer control and functional outcomes after radical prostatectomy as markers of surgical quality: analysis of heterogeneity between surgeons at a single cancer center

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Background: Previous studies have shown that complications and biochemical recurrence rates after radical prostatectomy (RP) vary between different surgeons to a greater extent than might be expected by chance. Data on urinary and erectile outcomes, however, are lacking.

Objective: In this study, we examined whether between-surgeon variation, known as heterogeneity, exists for urinary and erectile outcomes after RP.

Design, Setting, and Participants: Our study consisted of 1910 RP patients who were treated by 1 of 11 surgeons between January 1999 and July 2007.

Intervention: All patients underwent RP at Memorial Sloan-Kettering Cancer Center.

Measurements: Patients were evaluated for functional outcome 1 yr after surgery. Multivariable random effects models were used to evaluate the heterogeneity in erectile or urinary outcome between surgeons, after adjustment for case mix (age, prostate-specific antigen, pathologic stage and grade, comorbidities) and year of surgery.

Results and Limitations: We found significant heterogeneity in functional outcomes after RP ($p < 0.001$ for both urinary and erectile function). Four surgeons had adjusted rates of full continence $< 75\%$, whereas three had rates $> 85\%$. For erectile function, two surgeons in our series had adjusted rates $< 20\%$; another two had rates $> 45\%$. We found some evidence suggesting that surgeons' erectile and urinary outcomes were correlated. Contrary to the hypothesis that surgeons "trade off" functional outcomes and cancer control, better rates of functional preservation were associated with lower biochemical recurrence rates.

Conclusions: A patient's likelihood of recovering erectile and urinary function may differ depending on which of two surgeons performs his RP. Functional preservation does not appear to come at the expense of cancer control; rather, both are related to surgical quality.

Editorial Comment

Surgical volume or institutional volume is regarded as markers of quality and outcome in cancer surgery. Here, the authors show that within a single, high-volume institute large differences in cancer control and functional results exist between the 11 surgeons involved. Furthermore, in contrast to other available data which report incredible results of specialized centers the data presented here can be regarded as very honest. Overall, the mean adjusted proportion of patients with good erectile function at 1 year for all surgeons was 30% and the mean adjusted proportion of patients who were continent at 1 year for all surgeons was 80%. The adjusted rates of good erectile functions ranged from 8% to 49% and rates of continence ranged from 64% to 97%, showing large differences between surgeons. Interestingly, surgeons with better functional outcomes also had higher rates of cancer control.

In short, the surgeon matters, and not so much the institution.

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