



High Volume Surgeons are Associated with Lower Cost of Radical Prostatectomy in New York State

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Objective: To understand whether surgeon and hospital volume were associated with cost of Radical prostatectomy (RP).

Methods: The New York Statewide Planning and Research Cooperative System (SPARCS) was queried for men who underwent RP in 2016. We evaluated the total cost for each patient undergoing RP. A generalized linear mixed model with pseudo R^2 statistic was employed to determine whether surgeon and hospital volume were associated with low-cost surgery, using surgeon, patient and hospital characteristics as covariates. Low-cost RP was defined as below the 25th percentile (\$10,764.34).

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Results: This study included 3,132 men undergoing RP by 77 surgeons at 56 hospitals. The median surgeon volume was 27 (IQR: 28) and median hospital volume was 27 (IQR: 61.5). The median cost of RP was \$12,718.92 (IQR: \$10,764.55-16,899.92). The median cost of the low-cost group was \$9,586.71 (IQR: \$8,750.13-10,330.77). Each additional RP performed by an individual surgeon was associated with a 3% increase in odds of low-cost surgery (OR 1.03, 95% CI 1.01-1.05). Moreover, increased years of practice experience showed increased odds of low-cost surgery (OR 1.05, 95% CI 1-1.10). Pertaining to hospital-level factors, each additional RP performed by a hospital decreased the odds of low-cost surgery by 3% (OR 0.97, 95% CI 0.95-0.99). Surgeon and hospital volume were the greatest contributors to cost variables for RP.

Conclusion: High-volume surgeons and those with more years of experience in New York are more likely to have low-cost RP. Surprisingly, high-volume hospitals in the state are less likely to have low-cost RP.