

Appendix Table 1. Characteristics of all urologists in the sample who both diagnose and perform surgery, urologists who only diagnosed patients, and urologists who only performed surgery, SEER-Medicare 1995 to 2005

	Diagnosis and Surgery	Diagnosis Only	Surgery Only	P
N (%)	1,827 (100)	711 (100)	231 (100)	
Patient panel				
Mean Diagnosed (SE)	13.17 (15.51)	2.81 (3.56)	N/A	
Mean Treated (SE)	14.01 (21.45)	N/A	2.00 (2.46)	
Board certified				0.001
No	552 (30.3)	242 (34.0)	97 (42)	
Yes	1273 (69.7)	469 (66.0)	134 (58.0)	
Years since medical school graduation**				<0.001
Top quartile (Oldest)	432 (23.6)	243 (34.2)	34 (14.7)	
Middle top quartile	511 (28.0)	142 (20)	39 (16.9)	
Middle bottom quartile	516 (28.2)	129 (18.2)	86 (37.2)	
Lowest quartile (Youngest)	368 (20.1)	196 (27.6)	72 (31.2)	
Missing		1 (0.00)		
Surgical volume				0.006
Low	1747 (95.6)	N/A	230 (99.6)	
High	80 (4.4)	N/A	1 (0.4)	
Performed minimally invasive procedures				<0.001
No	1,652 (90.4)	N/A	182 (78.8)	
Yes	175 (9.6)	N/A	49 (21.2)	

** Years since medical school graduation was calculated as the number of years between 2005 and graduation year. This variable was then categorized into quartiles based on the physician distribution.

Note: N/A is not applicable.

Appendix Table 2. Characteristics of urologists who performed any surgeries in the sample by those who diagnosed patients and those who performed surgery, SEER-Medicare 1995 to 2005

	Diagnosis	Surgery	P
N Urologists (%)	1,494 (100)	1,450 (100)	
Board certified			0.348
No	445 (29.8)	456 (31.4)	
Yes	1,049 (68.6)	994 (68.6)	
Years since medical school graduation**			<0.000
Top quartile (Oldest)	321 (21.5)	236 (16.3)	
Middle top quartile	423 (28.3)	392 (27.0)	
Middle bottom quartile	416 (27.8)	466 (32.1)	
Lowest quartile (Youngest)	334 (22.4)	356 (24.6)	
Surgical volume			0.546
Low	1,419 (95.0)	1,370 (94.5)	
High	75 (5.0)	80 (5.5)	
Performed minimally invasive procedures			<0.000
No	1,345 (90.0)	1240 (85.5)	
Yes	149 (10.0)	210 (14.5)	

** Years since medical school graduation was calculated as the number of years between 2005 and graduation year. This variable was then categorized into quartiles based on the physician distribution.

Note: This table excludes diagnosing physicians who did not perform any prostatectomies on men in the sample. Physicians who both diagnosed and performed surgery on men who changed urologists are included in both the diagnosis and surgery groups.

We performed multiple sensitivity tests to assess the robustness of our results to the model specification (Appendix Table 3). First, because some patients may select their treating urologist based on the treating urologist's volume, board certification, and years in practice, we repeated the analysis but with propensity score models that included these treating urologist characteristics. Second, we reclassified high volume diagnosing and treating urologist as the top two quartiles of the sample distribution for all analyses. Third, we reclassified urologist's surgical volume based on the number of radical prostatectomies performed during the previous year (e.g., the year prior to the patient's diagnosis date). Fourth, we included patients whose diagnosing urologist did not perform any radical prostatectomies in our sample (N=1,997), all of whom were classified as having changed urologists. Fifth, we assessed whether the relationship between urologist change and surgical outcomes varied over time by using an interaction term between urologist change and year

Appendix Table 3. Odds ratios of surgical complications using ‘doubly robust logistic regression for sensitivity tests

	Type of Complication		
	30-Day Surgical	Late Urinary	Long-term Incontinence
Model A: Propensity score model includes patient level covariates and <i>treating urologist surgical volume, board certification, and years of experience.</i>			
Urologist change			
No Change	1.00	1.00	1.00
Urologist Change	0.82 (0.76-0.88)	0.91 (0.85-0.97)	0.96 (0.88-1.04)
Model B: Propensity score model includes patient level covariates, <i>diagnosing physician surgical volume as the top two quartiles</i> , diagnosing physician board certification, diagnosing physician experience, and treating physician experience with laparoscopic and robotic procedures. In the outcome model, <i>high surgical volume was as classified as the top two quartiles.</i>			
Urologist change			
No Change	1.00	1.00	1.00
Urologist Change	0.84 (0.78-0.95)	0.96 (0.89-1.03)	1.01 (0.93-1.10)
Model C: Propensity score model includes patient level covariates, diagnosing physician surgical volume as the top quartiles, diagnosing physician board certification, diagnosing physician experience, and treating physician experience with laparoscopic and robotic procedures. In the outcome model, <i>high surgical volume was as classified using the surgeon’s previous year’s total number of procedures. High volume was classified as the top quartile</i>			
Urologist change			
No Change	1.00	1.00	1.00
Urologist Change	0.82 (0.75-0.89)	0.92 (0.86-0.99)	0.95 (0.87-1.04)
Model D: Propensity score model includes patient level covariates, diagnosing physician surgical volume, diagnosing physician board certification, diagnosing physician experience, and treating physician experience with laparoscopic and robotic procedures Sample includes <i>all men</i> , including those whose diagnosing urologist did not perform any radical prostatectomies in our sample.			
Urologist change			
No Change	1.00	1.00	1.00
Urologist Change	0.82 (0.76-0.89)	0.93 (0.87-1.00)	0.99 (0.91-1.07)
Model E: Propensity score model includes patient level covariates, diagnosing physician surgical volume, <i>type of surgery performed</i> , diagnosing physician board certification, diagnosing physician experience, and treating physician experience with laparoscopic and robotic procedures.			
Urologist change			
No Change	1.00	1.00	1.00
Urologist Change	0.83 (0.76-0.90)	0.94 (0.87-1.01)	0.97 (0.89-1.05)