

# Functional and Oncological outcomes of very large Prostate sizes post Robotic

## Radical Prostatectomy

Ahmed Gamal<sup>1</sup>, Shady Saikali<sup>1</sup>, Sumeet Reddy<sup>1</sup>, Travis Rogers<sup>1</sup>, Marcio Covas Moschovas<sup>1</sup>, Vipul Patel<sup>1</sup>  
1-AdventHealth Global Robotics Institute, USA

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### Objective:

To evaluate the functional, and oncologic outcomes of RARP in extremely large prostate sizes.

### Methods:

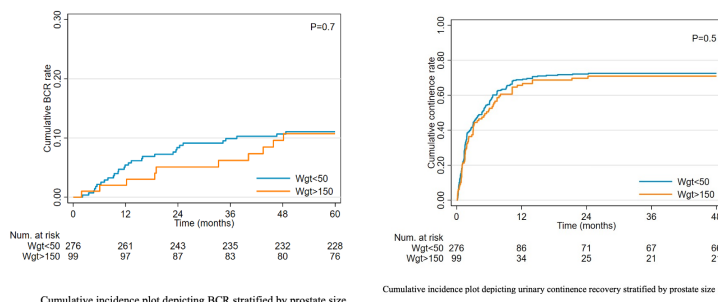
375 RARP patients were divided into 2 groups according to prostate size. Group 1 (>150g) and Group 2 (<50g). Perioperative variables matched with propensity score matching 1:3 and postoperative variables were analyzed for significant differences in outcomes between the two groups. Variables analyzed included estimated blood loss (EBL), operative time, catheter time, hospitalization time, postoperative complications, pathological staging, positive surgical margins (PSM) rates, biochemical recurrence (BCR), potency, and continence rates.

### Results:

The two groups exhibited similar preoperative characteristics. Patients with larger prostates (Group 1) were more likely to have higher blood loss (EBL), higher console time, however there was no significant difference in the overall postoperative complications (Clavien-Dindo). These patients also had fewer lymph node dissection rates compared to those with smaller prostates (51.28% and 71.45%) for Group 1 and Group 2, respectively. Pathological outcomes were also statistically different, patients with larger prostates had more pT2 disease (69.70% vs 47.83%), lower rates of PSM (12.12% vs 22.46%). Finally, we observed no significant difference in the functional outcomes in the 2 groups, rates of urinary continence (70.9% vs 72.5%, P=0.5) and recovery of sexual function (70.0% vs 84.1%, P=0.7).

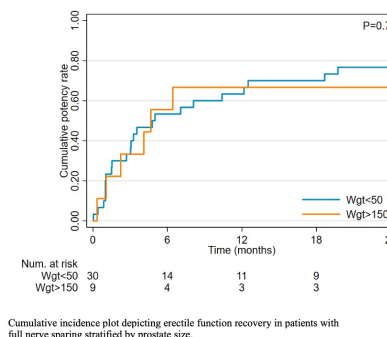
Parameters	Group 1 > 150 (n=99)	Group 2 <50g (n=276)	P-Value
Age (years)	66 (63-70)	67 (62.5-71)	1.0
BMI (Kg/m <sup>2</sup> )	28.59 (26.46-30.55)	28.22 (25.54-31.04)	0.4
PSA ng/dl	9.2 (6.1-12.2)	9.2 (5.97-12.05)	0.4
Charlson index (n, %)			0.8
0	0(0)	4(1.45)	
1-2	53(53.54)	142(51.45)	
3-4	43(43.43)	121(43.84)	
>4	3(3.03)	9(3.26)	
AUA score	14 (10-20)	15 (8-22)	0.4
SHIM Score	17 (5-22)	16 (7-23)	0.9
Biopsy ISUP Grading (n, %)			0.8
Group 1	43(43.4)	108 (39.1)	
Group 2	25(25.3)	76 (27.5)	
Group 3	19(19.2)	51(18.5)	
Group 4	6(6.1)	16(5.8)	
Group 5	6(6.1)	25(9.1)	
Follow up (months)	36.33 (14.73-72.96)	36.57 (16.98-68.18)	0.5

**Table 1.** Comparison of preoperative patient characteristics in the study groups reporting the median value with the interquartile range (IQR) and the number of patients with the percentage. PSA (Prostate Specific Antigen), BMI (Body Mass Index), SHIM (Sexual Health Inventory for Men), AUA (American Urological Association), ISUP (International Society of Urological Pathology).



Parameters	Group 1 >150g (n=99)	Group 2 <50g (n=276)	P-Value
EBL (ml)	150 (100-250)	100 (75-100)	<0.001
Console time (minutes)	90 (90-90)	80 (75-90)	<0.001
Catheter time (days)	6 (4-7)	5 (4-6)	<0.005
Hospitalization (days)	1 (1-1)	1 (1-1)	0.9
Pathology ISUP grading (n, %)			<0.001
Group 1	37 (37.37)	31 (12.35)	
Group 2	24 (24.24)	103 (41.04)	
Group 3	22 (22.22)	82 (32.67)	
Group 4	7 (7.07)	5 (1.99)	
Group 5	9 (9.09)	30 (11.95)	
Lymph node dissection (n, %)			0.002
No	51(51.52)	91(32.97)	
Yes	48(48.48)	185(76.03)	
Pathological T			<0.001
pT2	69(69.70)	132 (47.83)	
>=pT3	30(30.30)	144 (52.17)	
Postoperative complications (Clavien-Dindo) (n, %)			0.065
< IIIb	33 (84.62)	87 (95.60)	
>= IIIb	6 (15.38)	4 (4.40)	
Lymphocele (n, %)			0.4
No	88 (88.89)	234 (85.09)	
Yes symptomatic	11 (11.11)	41 (14.91)	
	1(1.01)	8 (2.9)	
Nerve-sparing (n, %)			0.062
None	1 (1.01)	2 (0.72)	
Partial	83 (83.84)	203 (73.55)	
Full	15 (15.15)	71 (25.72)	
PSM	12 (12.12)	62 (22.46)	0.027

**Table 2.** Comparison of perioperative, functional and pathological characteristics. Reporting the median value and interquartile range (IQR) and the number of patients with percent total for categorical variables. EBL (Estimated blood loss), SHIM (Sexual Health Inventory for Men), ISUP (International Society of Urological Pathology), PSA (Prostatic specific antigen), PSM (Positive Surgical Margins).



### Conclusion:

The results demonstrate that prostate size reflects multiple outcomes, such as nerve-sparing, lymph node dissection, potency, oncological and pathological outcomes. We believe this data is valuable when counseling patients regarding possible outcomes before the procedure.