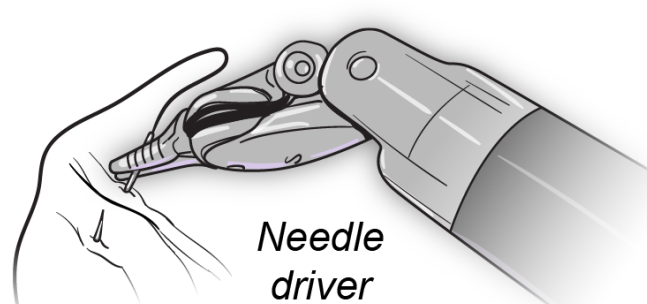
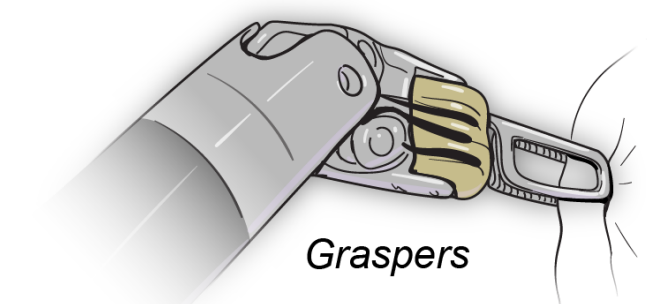
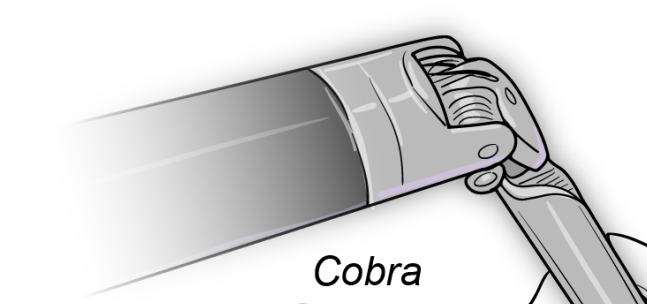
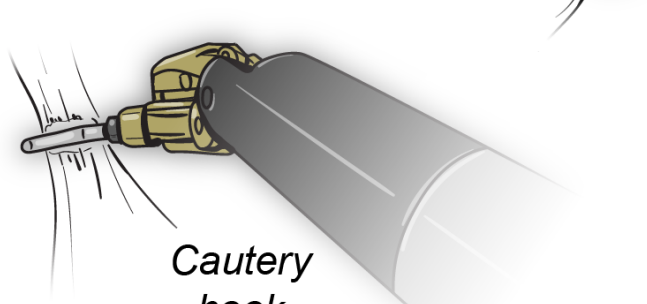
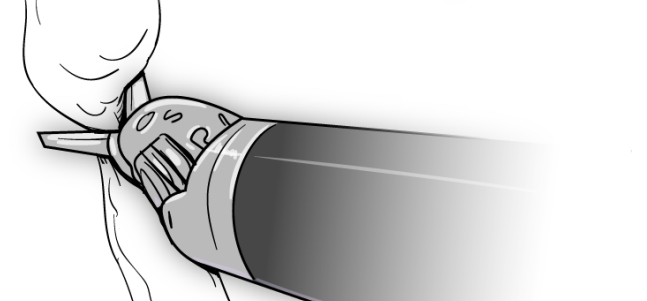


Introduction

- One of the main criticisms of Robot Assisted Radical Prostatectomy (RARP) has been the high running costs.
- We sought to analyze historic variable costs associated with RARP by a single high volume surgeon, and then implement a cost reduction plan to reduce running costs.

Methods

- A cost reduction plan was implemented between August 1st – December 31st, 2018.
- 32 cases (after the cost reduction plan) were compared to 40 cases (prior the cost reduction plan) matched based on patient and disease characteristics.
- Cost reduction plan included reduction of number of robotic instruments (6 vs 4 instruments), use of reusable vs disposable trocars, and use of Vicryl/Monocryl vs V-Loc sutures.
- Operative outcomes (operative time, blood loss and complications), and variable costs (medical supplies, anesthesia related, and operative time) were compared.

Robotic Instruments		Before	After	Surgical Supplies		Before	After
Needle driver		2	1	V-Loc™	VICRYL® / MONOCRYL®		
Graspers		1	1				
Cobra Graspers		1	1				
Cautery hook		1	0	Trocars		Disposable	Reusable
Scissors		1	1				

Results

Table 1. Patient Characteristics & Perioperative Outcomes

	Retrospective	Prospective	All	p-value
Number of Patients	40 (56)	32 (44)	72	0.35
Age ± SD (years)	60.5 ±7	64.5 ±7	62 ±7	0.07
BMI ± SD (kg/m ²)	30 ±5	33 ±14	31±10	0.53
Patient Race Native American (%)	1 (2.5)	1 (3)	2 (3)	0.69
Patient Race African American (%)	4 (10)	1 (3)	5 (7)	0.69
Patient Race White (%)	35 (88)	30 (93)	65 (90)	0.69
ASA > 3	5 (13)	6 (19)	11 (16)	0.53
NCCN Low Risk (%)	10 (25)	4 (15)	14 (21)	0.54
Clinical High T Stage (%)	40 (100)	26 (100)	66 (100)	0.54
Operative Time ± SD (min)	142 ±30	127 ±26	135 ±30	0.12
Estimated Blood Loss ± SD (ml)	146 + 96	188 + 160	164 +129	0.33
Any Complications (%)	5 (13)	8 (25)	13 (18)	0.22

Table 2. Net Savings of Variable Costs

Variable		Estimate	Lower CI	Upper CI	p-value
Total Medical Supplies	Robotic Instruments	\$288	\$227	\$348	<0.01
	Surgical Supplies	\$73	\$1	\$144	0.05
	Trocar	\$110	\$57	\$162	<0.01
Anesthesia Costs*		\$36	\$5	\$66	0.03
Console Costs**		\$198	\$145	\$250	<0.01
Net Saving of Total Variable Costs		\$705	\$661	\$748	<0.01

Note. * Anesthesia Cost billed in 15-minute increments, **Console Costs billed in 15 minute increments.

Conclusion

- Our cost reduction plan resulted in a net saving of \$705 per case (20%), without compromising perioperative outcomes (operative time, blood loss and complications).
- If broadly implemented at our institution, we estimate a net savings of \$104,000 per year.