

# Evaluation in the Differences of Surgical Site Infection Rates in Robotically Assisted Radical Cystectomy with Intracorporeal Diversion vs. Open Radical Cystectomy

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## INTRODUCTION

The gold standard treatment for muscle invasive bladder cancer is radical cystectomy (RC) with pelvic lymph node dissection. Robotically assisted radical cystectomy (RARC) has proven benefits such as decreased blood loss, lower transfusion rates, and shorter length of stay (LOS) vs. Open Radical Cystectomy (ORC). RC is a highly morbid procedure with a perioperative complication rate of 64-80%. A common complication is surgical site infections (SSI) which occur in 13-23% of patients undergoing RC of any type.

## OBJECTIVE

We sought to determine the impact of surgical approach (RARC with intracorporeal diversion vs. ORC with extracorporeal diversion) on SSI and other complications

## METHODS

This retrospective study reviewed 262 patients from our institutional cystectomy database from 2013-2021. Patients were stratified by surgical approach (Robotic vs. Open) with wound related complications subdivided into:

- Superficial infection (skin and soft tissue)
- Wound dehiscence (i.e. fascial dehiscence)
- Wound evisceration (evisceration of abdominal organs)

## RESULTS

- 38 (14.5%) patients experienced an SSI within 90-days
- RARC led to decreased rates of
  - Wound infection
  - Wound dehiscence
  - Wound evisceration
- The median age for our patients was 70 and 69 years in the RARC and ORC arms respectively

**Table 1: Comparisons of the highest level of Wound Complication within the first 0-30 days and the first 0-90 days by surgical approach**

	Robotic (n=134)	Open (n=128)	P Value
<b>Wound Complications: First 30 Days</b>	N (%)	N (%)	
No Wound Complications	134 (100.0)	96 (75.0)	<0.000 <sup>1b</sup>
Superficial Wound Infection	0	13 (10.2)	
Wound Dehiscence	0	16 (12.5)	
Wound Evisceration	0	3 (2.3)	
Composite of any wound complications within the first 30 days	0 (0.0)	32 (25.0)	<0.000 <sup>1a</sup>
<b>Wound Complications: First 90 Days</b>	N (%)	N (%)	P Value
No Wound Complications	133 (99.3)	91 (71.1)	<0.000 <sup>1b</sup>
Superficial Wound Infection	0	13 (10.2)	
Wound Dehiscence	1 (0.8)	20 (15.6)	
Wound Evisceration	0	4 (3.1)	
Composite of any wound complications within the first 90 days	1 (0.8)	37 (28.9)	<0.000 <sup>1a</sup>

<sup>a</sup> Chi-Square

<sup>b</sup> Fisher's Exact

## CONCLUSION

RC is a highly morbid procedure due to the inherent risk factors and poor health status with which bladder cancer patients present. Wound infections are often a reason for readmission; thus, reducing wound infections may translate to improved perioperative readmission rates and shorter length of stay. Patients undergoing RARC had lower SSI rates of all types.

Potential reasons for lower wound complication risk in our RARC patients include smaller port incisions which isolates ostomy placement from a large open incision. This may prevent potential leakage of urine and fluids from the ostomy onto the incision precipitating SSI.

## REFERENCES

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