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Predictors of postoperative complications after robotic and open radical cystectomy: An analysis from the RAZOR trial

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Objectives and Methods

- Determine differences in complications between robotic and open radical cystectomy

- ***Per-protocol population*** of **RAZOR** trial cohort

- 90-day complication rates using ***Clavien-Dindo system***

- Multiple regression analysis to identify predictive factors

Results

- ***No significant difference*** in overall and major (Clavien ≥ 3) complication rates

- Gastrointestinal (predominantly ileus) and urinary tract infections were the most common complications in both groups

Results - Multivariable logistic regression for predictors of grade III-V complications within 90 days of radical cystectomy.

Variable	Contrast	OR (95% CI)	P
Arm	Robotic vs Open	1.01 (0.72, 1.43)	0.934
UD type	NCUD vs CUD	1.02 (0.48, 2.16)	0.960
Lymphadenectomy	Extended vs Standard	1.05 (0.59, 1.86)	0.875
Neoadjuvant Chemo	Yes vs No	0.99 (0.57, 1.72)	0.963
Adjuvant Chemo	Yes vs No	0.56 (0.21, 1.49)	0.245
Tstage	T3-T4 vs Ta,Tis, T1-T2	1.26 (0.47, 3.40)	0.641
pNstage	N1, N2, N3 vs N0, NX, missing	1.05 (0.42, 2.66)	0.914
Age	>65 vs ≤65	1.46 (0.99, 2.15)	0.055
Sex	Women vs Men	1.84 (1.08, 3.15)	*0.026*
BMI	25-29.9 vs <25	1.21 (0.63, 2.32)	0.566
	>=30 vs <25	1.77 (0.62, 5.10)	0.288
Simplified Frailty index (sFI)[a]	1 vs 0	1.18 (0.67, 2.09)	0.565
	2 vs 0	1.52 (0.77, 2.99)	0.223
	3-4 vs 0	5.90 (2.65, 13.14)	*<.0001*

a – sFI = ECOG≥2, history of diabetes mellitus, chronic obstructive pulmonary disease, congestive cardiac failure, and hypertension requiring treatment). OR (95% CI): odds ratio and 95% confidence interval. P: p-value.

Conclusion

- Postoperative complication rates do not differ between RARC and ORC in this analysis from the RAZOR trial

- ***Women and frail patients*** had a significantly higher rate of major complications

- This data suggests that ***inherent patient factors*** like frailty contribute significantly to recovery from a major procedure like RC, and surgical approach may not be a significant contributor