

Postoperative UTI as a Modifiable Risk Factor for Sepsis, Hospitalization and Mortality in Patients with GU cancer

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OVERVIEW

- UTIs are a common complication following genitourinary (GU) cancer surgery.
- The impact of pre- and postoperative UTI on short- and long-term outcomes remains unclear.

Objective: Assess associations between UTI timing and adverse outcomes following GU cancer surgery.

METHODS

- Retrospective Epic Cosmos cohort of adults undergoing prostatectomy, cystectomy, or partial nephrectomy (2017-2025).
- Patients grouped by UTI timing: **pre-op only**, **post-op only**, or **both pre + post-op**; patients with no pre- or post-op UTI served as reference.
- Outcomes: sepsis, ED visits, and mortality at 1 month, 6 months, 1 year, and 5 years.
- Associations reported as odds ratios (OR) with 95% confidence intervals.

CONCLUSION

- Pre and postoperative UTI were associated with increased odds of adverse outcomes following GU cancer surgery.
- Associations were strongest after prostatectomy, with pre + post-op UTI associated with markedly increased odds of sepsis and ED visits.
- UTI prevention may represent a modifiable target to improve outcomes following GU cancer surgery.

ODDS OF ADVERSE OUTCOMES BY UTI TIMING

UTI Timing	Outcome	1 Month	6 Months	1 Year	5 Years
PROSTATECTOMY					
Pre-op only	Mortality	3.6	3.4	3.3	3.2
	Sepsis	7	6.2	6.1	6.3
	ED Visit	6.1	5.3	5.3	5.3
Pre + post-op	Mortality	5	6.4	7.1	8.3
	Sepsis	15.7	18.4	18.6	17.2
	ED Visit	11.6	12.2	11.5	10.6
Post-op only	Mortality	2	2.8	3.3	4.1
	Sepsis	3.8	4.5	4.9	4.4
	ED Visit	2.7	2.3	2.4	2.2
CYSTECTOMY					
Pre-op only	Mortality	1.2	1.2	1.3	1.4
	Sepsis	1.8	1.7	1.8	1.9
	ED Visit	3	2.8	3.2	3.6
Pre + post-op	Mortality	1.1	1.4	1.4	1.4
	Sepsis	2.4	2.5	2.3	2
	ED Visit	4.7	3.9	3.7	3.2
Post-op only	Mortality	1.1	1.4	1.6	1.5
	Sepsis	1.2	1.4	1.4	1.1
	ED Visit	1	1	1.2	1.1
PARTIAL NEPHRECTOMY					
Pre-op only	Mortality	1.3	1.3	1.3	1.1
	Sepsis	1.8	1.6	1.6	1.6
	ED Visit	2.1	1.9	1.9	1.9
Pre + post-op	Mortality	2.1	2	2.1	2.5
	Sepsis	5.3	4.2	3.8	3.3
	ED Visit	3.6	3.5	3.4	2.9
Post-op only	Mortality	2.1	2.3	2.4	2.9
	Sepsis	3.6	3	2.5	2
	ED Visit	3.2	2.7	2.5	1.8

Low OR (1)

High OR (20)