

# ASSESSMENT OF THE VALUE OF AGE-ADJUSTED CHARLSON COMORBIDITY INDEX TO PREDICT PERIOPERATIVE AND SURVIVAL OUTCOMES OF RADICAL CYSTECTOMY



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- **BACKGROUND:** Despite improvements in surgical technique and post-operative care, open radical cystectomy (ORC) is still a procedure with high morbidity risks. Perioperative complications range 30-65%, affecting survival, length of stay, readmission rate and total costs
- **Aims:** To assess the incremental value of age-adjusted Charlson Comorbidity index (ACCI) to predict perioperative complications & To identify any predictors of OS, CSS

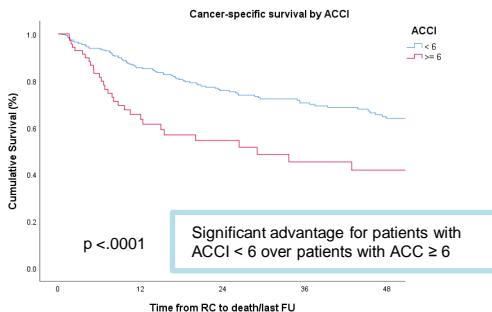
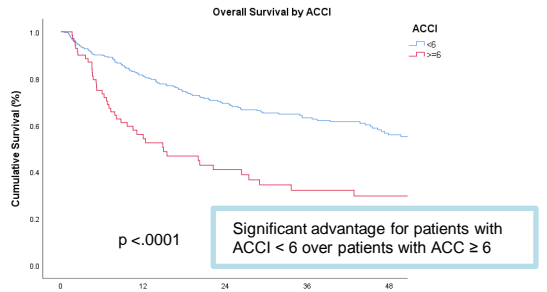
- **PATIENTS:** 413 cN0 patients which underwent ORC and pelvic lymphadenectomy at our academic center. ORC and pelvic lymphadenectomy since 12/2009. Collected data included: baseline data, ORC pathologic data, perioperative complications and follow-up data
- **PRIMARY OUTCOMES:** CSS, OS
- **Statistical methods:** descriptive statistics were used to show baseline and demographic data. Multivariable logistic regression analysis was used to test the association between ACCI and perioperative complications. Multivariable Cox regression analysis were used to identify any predictors of OS

Baseline variables	Median (IQR) or number (%)
Subjects, No.	413
Age at RC, years	70 (63.76)
Gender, female	63 (15.3)
BMI (kg/m <sup>2</sup> )	26.3 (24.2-28.7)
Smoke, current	265 (64.2)
ACCI	4 (2-3)
Time diagnosis to RC, days	27 (19-39)

Perioperative variables	Median (IQR) or number (%)
OR time, mins	365 (325-420)
Intraoperative blood loss	800 (500-1200)
Urinary diversion	
-> ileal conduit	285 (66.6)
-> orthotopic neobladder	103 (24.9)
-> cutaneous ureterostomy	35 (8.5)
Length of stay, days	15 (13-20)

Pathologic variables	Median (IQR) or number (%)
Non-urothelial histology	107 (25.9)
pT3-4 disease	218 (52.8)
pN1-3 disease	120 (29.1)
Nodes removed	16.0 (12.0-23.0)
Positive nodes	3.0 (1.0-7.0)
Concomitant CIS	92 (25.6)
LVI+	214 (59.6)
PSM+	4 (1.1)

Postoperative complications	Median (IQR) or number (%)
30-day complications	
UTI	14 (3.4)
Pulmonary	19 (4.6)
Wound-related	44 (10.7)
Post-operative ileum	47 (11.4)
DVT	8 (1.9)
Acute renal failure	13 (3.10)
Urine leakage	61 (14.8)
Other complications	102 (24.7)
Clavien grade ≥3	120 (29.1)
30-day readmission	23 (5.6)
90-day readmission	33 (8.0)



Multivariable Cox regression	HR	p value
<b>Overall survival</b>		
No. intra-operative blood transfusions	1.15	<0.0001
No. post-operative blood transfusions	1.12	0.002
Overall readmission within 90 days	1.7	0.017
pT3-4	2.96	<0.0001
pN1-3	2.3	<0.0001
ACCI (cont.)	1.12	0.024
<b>Cancer-specific survival</b>		
Age at ORC	1.02	0.48
No. intra-operative blood transfusions	1.15	0.001
No. post-operative blood transfusions	1.10	0.044
pT3-4	3.89	<0.0001
pN1-3	2.83	<0.0001
Readmission within 90 days	1.67	0.048

- **CONCLUSIONS:** ACCI is a reliable predictor of postoperative OS. Patients' selection for ORC should find the optimal balance between oncologic outcomes and the treatment burden. Further research is needed to distinguish between patients eligible for ORC and those eligible for alternative treatments