

Survival analysis and predictors of non-muscle invasive bladder cancer recurrence in clinical complete-responders after neoadjuvant chemotherapy for muscle-invasive bladder cancer

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NMIBC recurrence in cCR after NAC

INTRODUCTION

- Gold standard treatment for MIBC: cisplatin-based NAC + RC.
- 30-40% patients achieve a clinical complete response (cCR) after TURBT and NAC.
- cCR patients are at risk for NMIBC and MIBC relapses during follow-up.
- Outcomes of MIBC relapse have been extensively assessed, while the results after NMIBC recurrence have been less studied.



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OBJECTIVE

- Analyze clinical outcomes and identify predictive factors related to NMIBC recurrences in patients with cCR following NAC for MIBC.



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METHODS

- IRB approved retrospective review of cCR patients after NAC
- **Inclusion:**
 - Elected bladder preservation after TURBT + cisplatin-based NAC
 - cT0 assessed with: negative re-TURBT + negative cytology + negative imaging
- **Exclusion:**
 - N+ and/or M+ staging prior to NAC
 - Partial or radical cystectomy
 - Radiotherapy
 - Systemic immunotherapy



NMIBC recurrence in cCR after NAC

MATERIAL AND METHODS

- Follow-up:
 - 1st year: cystoscopy + cytology q2 months and CTAP q3 months
 - 2nd year: cystoscopy + cytology + CTAP q3 months
 - 3rd and 4th year: cystoscopy + cytology + CT q6 months
- Uni-/multivariate analysis:
 - Predictors for NMIBC recurrence
 - Predictor for BCG response after NMIBC recurrence
- Kaplan Meier Survival Analysis, Log-Rank Test:
 - Survival differences between NMIBC-relapse group and non-relapse group



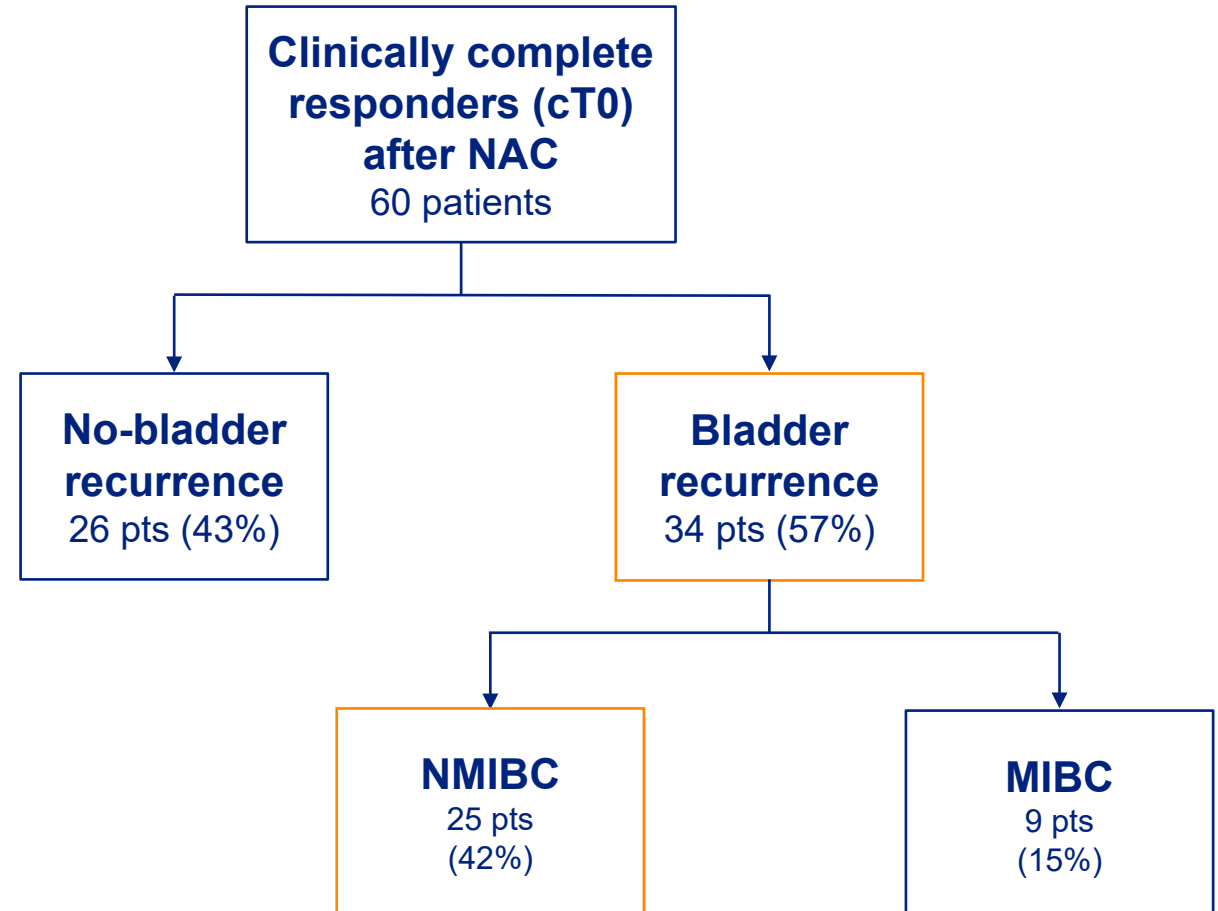
NMIBC recurrence in cCR after NAC

RESULTS

Complete cohort:

- 60 patients, 2001-2019
- Median age: 70 years old (33 – 85)
- Male: 50 pts (83%)
- Median follow-up: 51.4 mos (3.5 – 173.5)

- MIBC recurrences excluded from the final analysis.



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RESULTS

Predictors of NMIBC relapse

Variable	Non-relapse group (n=26)	NMIBC-relapse group (n=25)	p value
Age	69.1 (SD 9.9)	65.9 (SD 12.6)	0.32
Gender (male)	81% (21)	88% (22)	0.70
Previous NMIBC history	27% (7)	24% (6)	1.00
Received BCG previous to MIBC	31% (8)	16% (4)	0.32
MIBC tumor size:	15% (4)	4% (1)	0.10
- Small (<2cm)	50% (13)	79% (19)	
- Medium (2-5cm)	35% (9)	17% (4)	
- Large (>5cm)			
MIBC hydronephrosis	12% (3)	12% (3)	1.00
MIBC aberrant histology	23% (6)	20% (5)	1.00
MIBC LVI	38% (10)	24% (6)	0.37
CIS concurrent with MIBC	23% (6)	56% (14)	0.02*

Multivariate analysis:

Variable	OR	95% CI	p value
Previous NMIBC history	2.48	0.00 – inf	0.994
BCG prior to MIBC	1.99	0.00 – inf	0.993
MIBC tumor size	6.28	0.20 – 1.96	0.423
Hydronephrosis with MIBC	1.43	0.19 – 10.60	0.728
Variant MIBC histology	8.38	0.17 – 4.21	0.830
LVI with MIBC	8.01	0.18 – 3.57	0.771
CIS with MIBC	4.28	1.07 – 17.14	0.040*



LVI = Lymphovascular invasion

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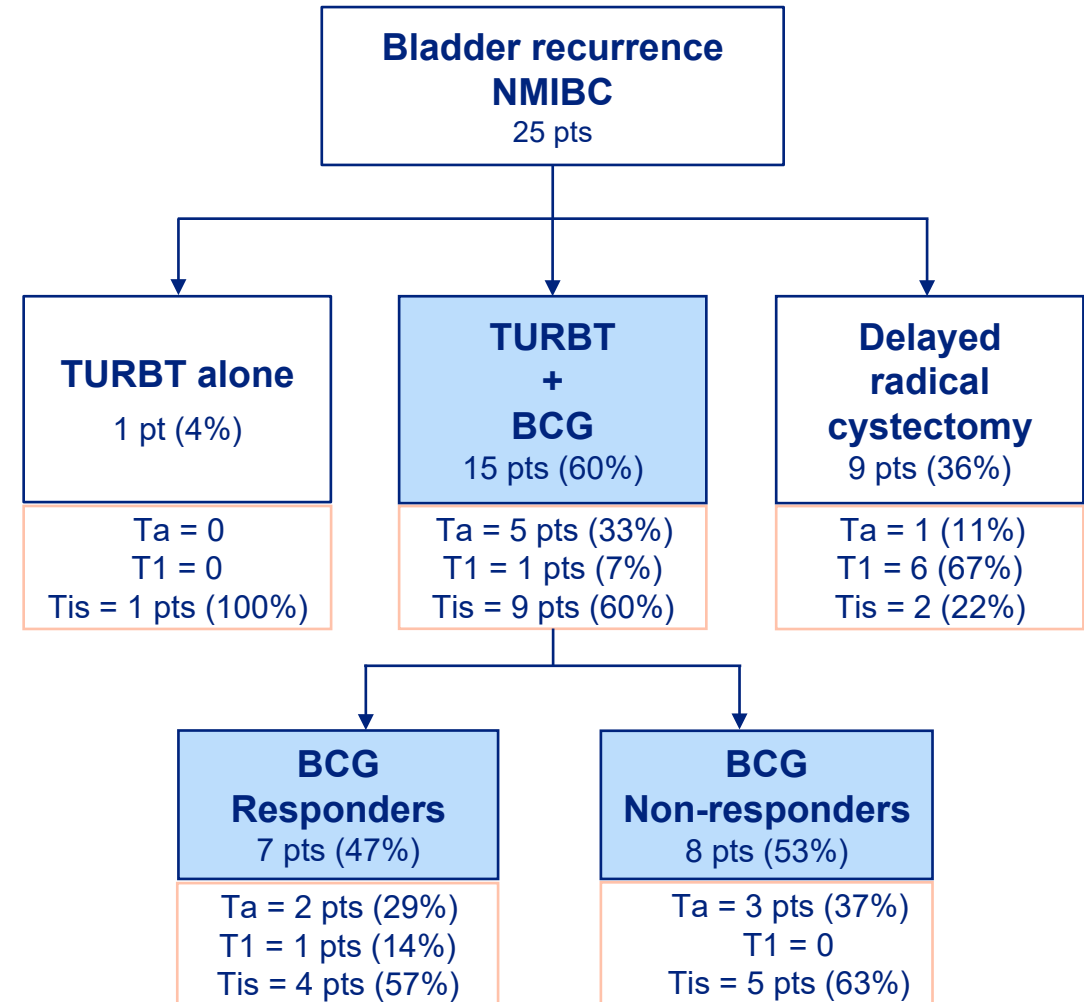
RESULTS

Management of NMIBC relapses

- Patients treated with **TURBT+BCG**:
 - Median follow-up: 56.3 mos (21.4 - 148.8)
 - Predictors of BCG response (multivariate analysis):

Variable	OR	95% CI	p value
Stage Ta or T1	1.16	0.11 – 12.06	0.898
CIS at MIBC	0.13	0.01 – 1.33	0.086

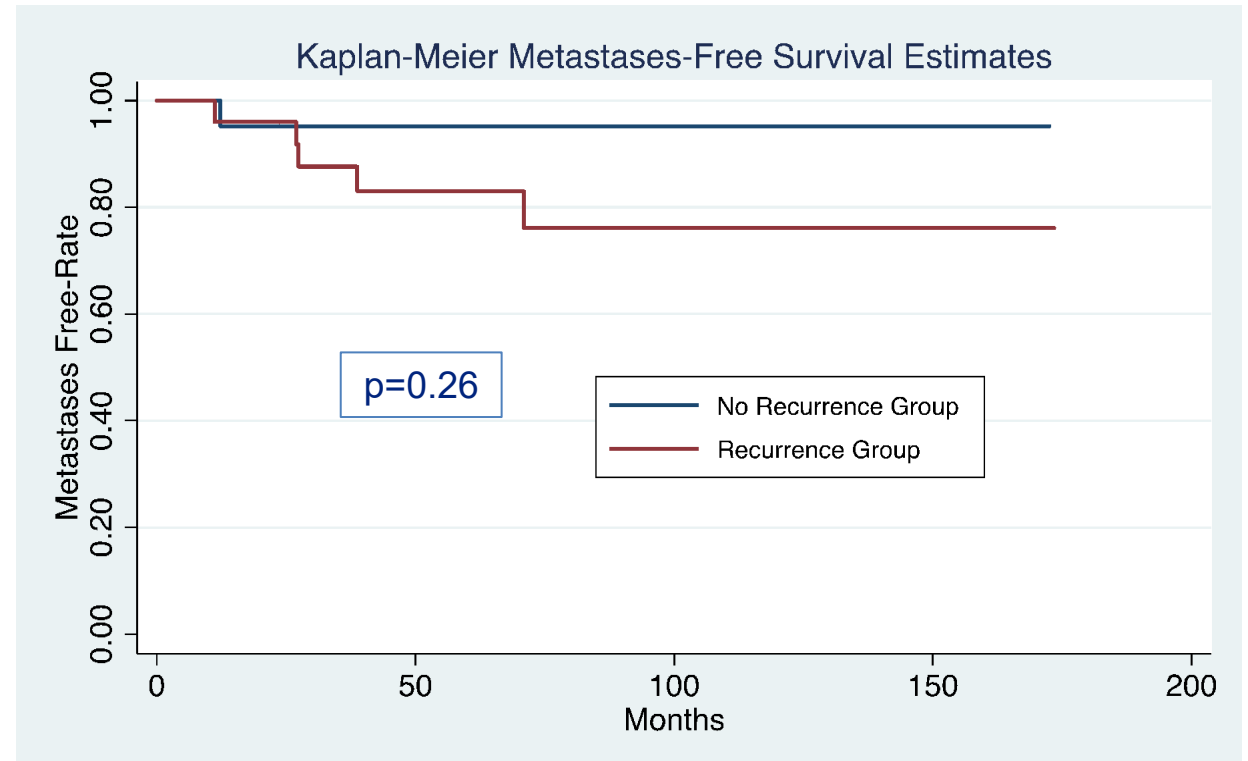
Patients with concurrent CIS with MIBC had a **non-significant trend** for reduced BCG response



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RESULTS

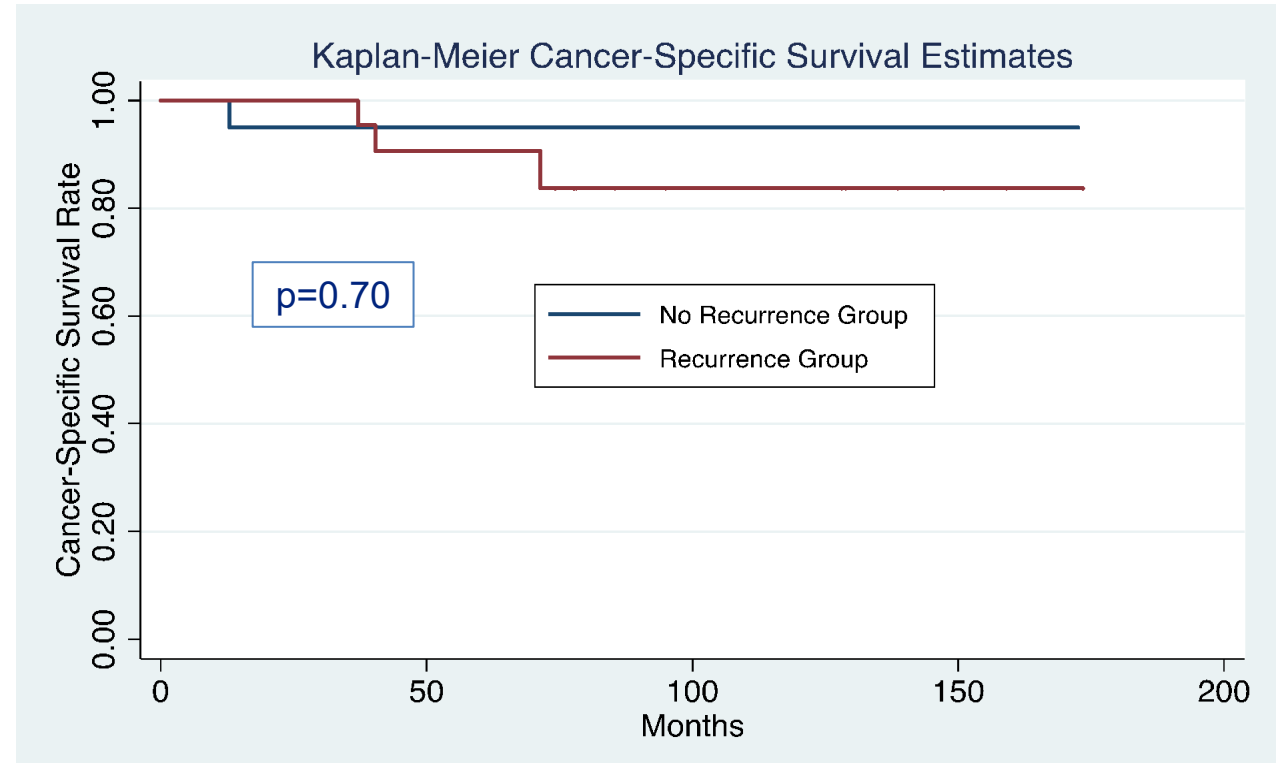
- Median follow-up: 57.9 mos (95%CI: 42.7 - 78.1)
- Metastases-free survival:
No significant differences between non-relapse and NMIBC-relapse group (p=0.26)



NMIBC recurrence in cCR after NAC

RESULTS

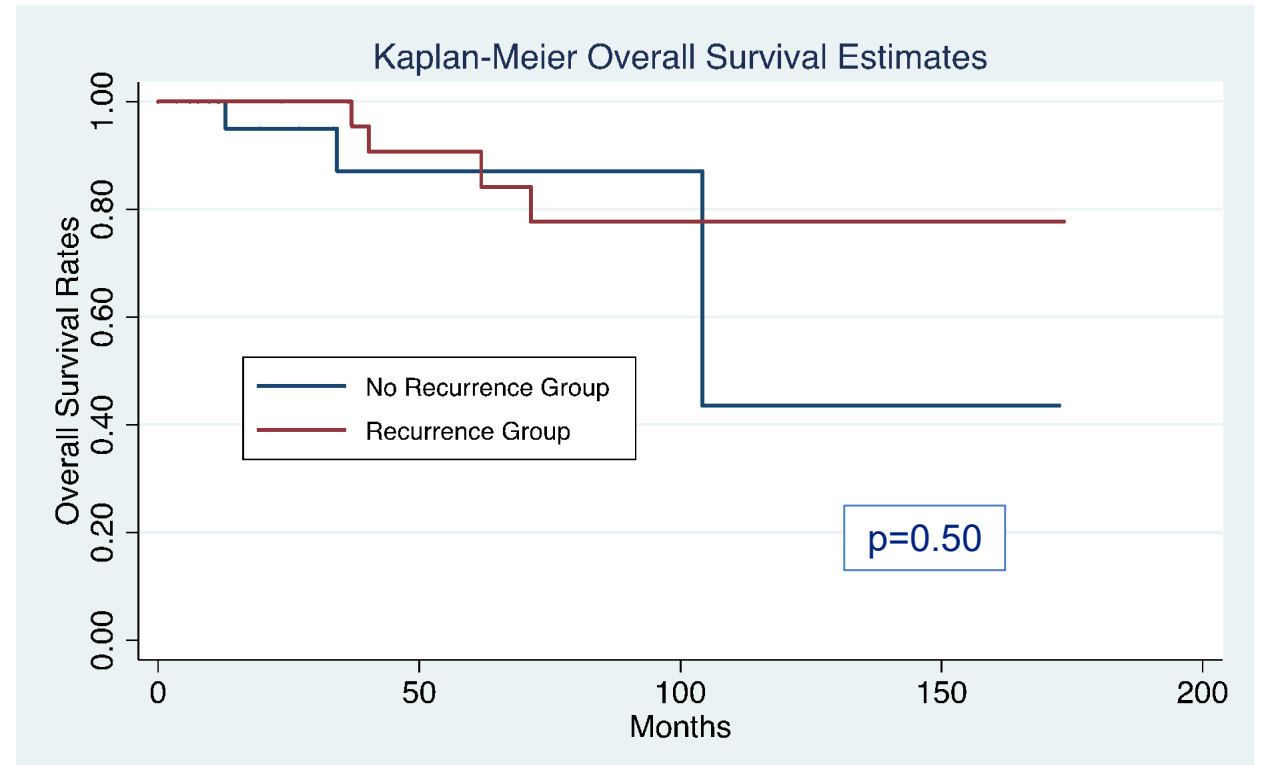
- Median follow-up: 57.9 mos (95%CI: 42.7 - 78.1)
- Cancer-specific survival:
No significant differences between NMIBC relapse and non-relapse group (p=0.70)



NMIBC recurrence in cCR after NAC

RESULTS

- Median follow-up: 57.9 mos
(95%CI: 42.7 - 78.1)
- Overall survival:
No significant difference between
NMIBC relapse and non-relapse group
($p=0.50$)



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CONCLUSIONS

- 42% of patients with cCR will experience NMIBC relapse on surveillance.
- Half the patients treated with BCG responded long term
- Only **CIS prior to NAC** was predictive of **NMIBC recurrence**.
- NMIBC recurrence following NAC for MIBC **did not seem to affect MFS, CSS or OS**, when compared to those who did not recur.
- Larger series are necessary to identify if there is any predictive factor for BCG response in NMIBC recurrences.

