Bladder Cancer: Upper Tract Transitional Cell Carcinoma II
MP82-08

"Two cycles of neoadjuvant chemotherapy improves survival of upper tract urothelial carcinoma patients"

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I have no COI to disclose.

Introduction and Objectives

- Upper tract urothelial carcinoma (UTUC) is frequently upstaged after surgery and is associated with poor prognosis.
- However, the efficacy of neoadjuvant chemotherapy (NAC) and optimal No. of NAC cycles for UTUC have been poorly defined.
- In this study, we evaluated if two cycles of NAC improves clinical outcomes of high-risk cN0M0 UTUC patients in our institute.

Materials and Methods

- A total of 184 patients who received radical nephroureterectomy (RNU) at Fujita Health University between 2005 and 2018 were retrospectively analyzed.
- The study group comprised 117 patients with UTUC who received 2 cycles of platinum-based NAC (Figure 1B) followed by surgery. The control group consisted of 67 patients who underwent initial surgery without NAC.
- We compared two groups in demographics, overall survival (OS), cancer specific survival (CSS), recurrence free survival (RFS, visceral) and independent prognostic factors

Median follow up: 39months

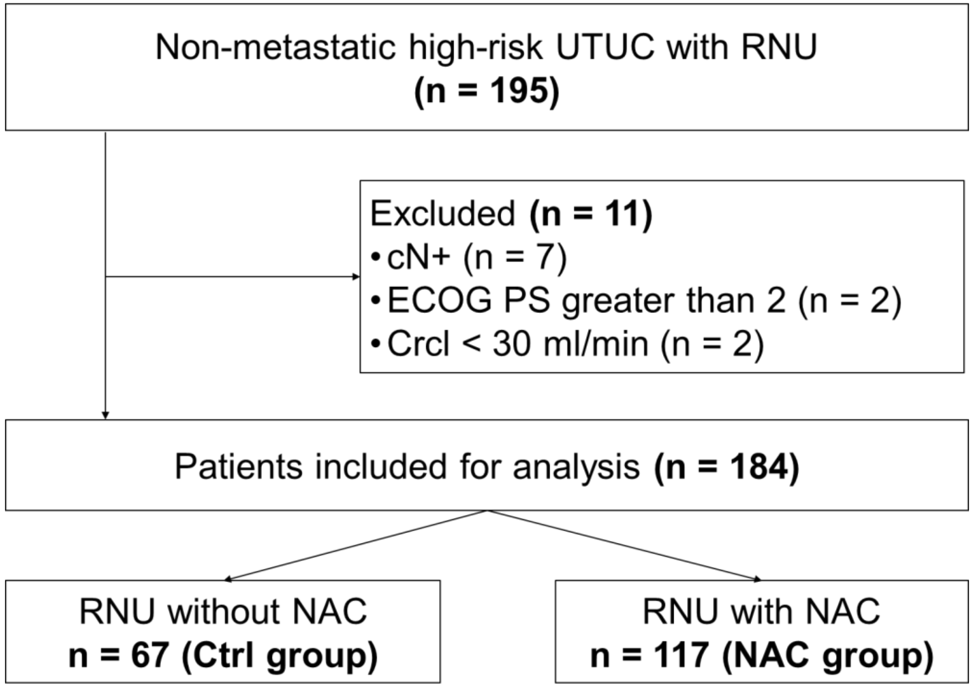

Figure 1. Oncological outcomes

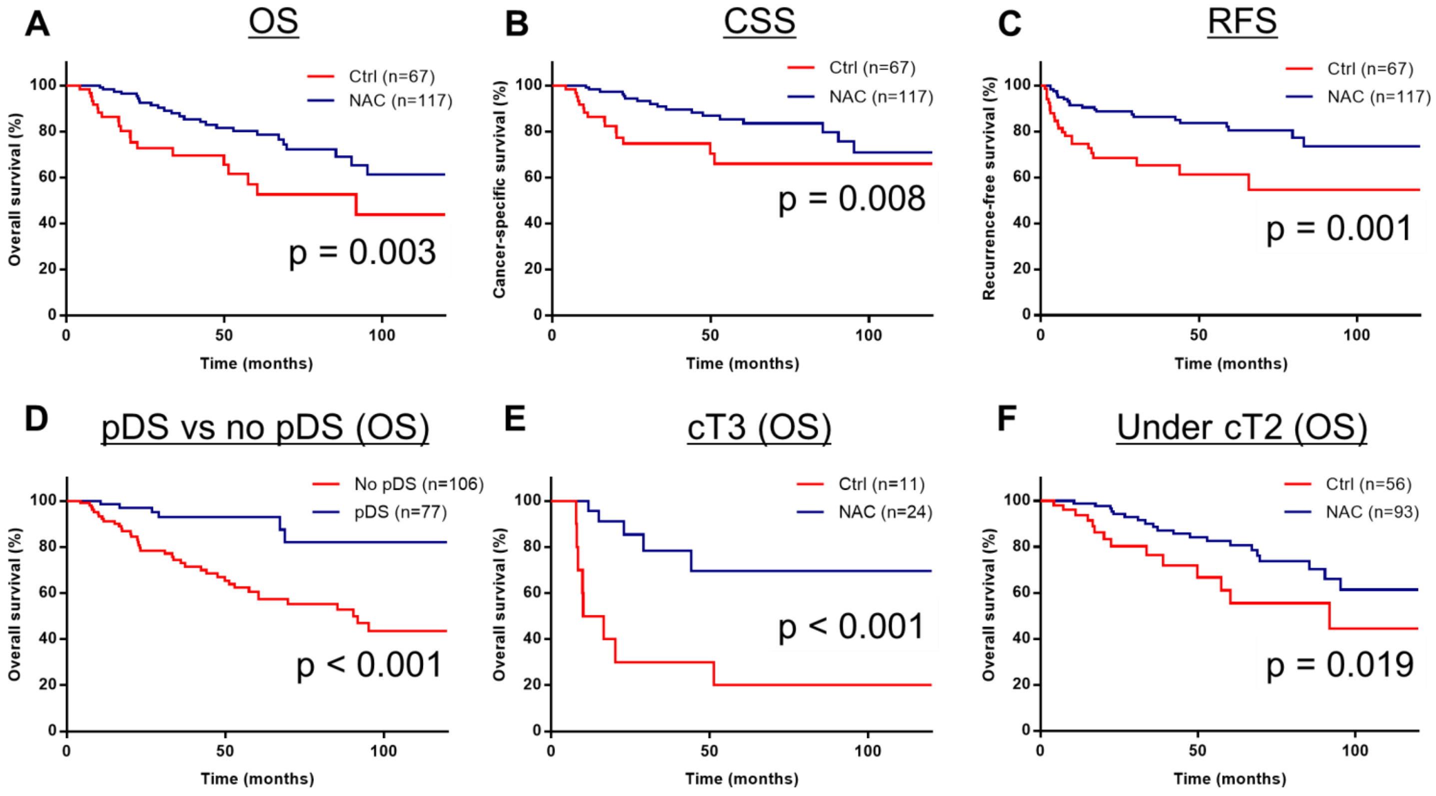

Table 1. Predictors for OS

	Multivariable (IPTW model)	
Variable	HR (95% CI)	P
cT3	3.580 (1.509-8.495)	**0.004**
LVI+	2.521 (1.021-6.223)	**0.045**
RM+	4.680 (1.516-14.45)	**0.007**
pN+	9.118 (3.165-26.27)	**<0.001**
pDS	0.269 (0.112-0.651)	**0.003**
NAC	0.468 (0.245-0.892)	**0.021**

Table 2. Predictors for OS in NAC group

	Multivariable (IPTW model)	
Variable	HR (95% CI)	P
LVI+	5.862 (2.140-16.06)	**<0.001**

Summary

- The NAC group showed significantly better OS, CSS and RFS compared to Ctrl group (Figure 1A, 1B, 1C).
- Comparison of OS between with pDS and without pDS demonstrated significantly better OS in with pDS group (Figure.1D).
- Although NAC showed more obvious OS benefit in cT3 patients, also improved OS in under cT2 patients (Figure 1E, 1F).
- Multivariate cox proportional hazards models identified cT3, LVI+, RM+, pN+, NAC and pDS as independent prognostic factors for OS. (Table 1).
- LVI after NAC was identified as predictor in NAC group (Table 2).

Conclusions

Two cycles of NAC induced pDS and improved survival of high-risk cN0M0 UTUC patients. Reduced number of NAC cycles may offer clinical benefits of low chemo-associated toxicity, appropriate surgery without delay in chemo-resistant case and sufficient cancer regression with pDS. Further prospective studies are needed to identify the clinical benefit of NAC and optimal number of NAC cycles for UTUC.