



BACKGROUND

- Locoregional nodal involvement predicts poor outcomes in patients with upper tract urothelial carcinoma (UTUC).
- The utilization of neoadjuvant chemotherapy (NAC) for UTUC has been steadily increasing pertinent to the potential of improving survival for high risk patients, including those with concerns for node-positive disease.
- We sought to determine the clinical utility of neoadjuvant chemotherapy in patients with concerns for clinical nodal involvement (cN+) who subsequently underwent radical nephroureterectomy (RNU) in a large population registry.

MATERIALS and METHODS

- Utilizing the National Cancer Data Base (NCDB), we assessed patients with high grade UTUC who underwent radical nephroureterectomy with or without neoadjuvant chemotherapy between 2006 and 2014.
- The effect of NAC on patients with concerns for clinical nodal involvement (cN+) was investigated using Kaplan-Meier survival curves, Log-rank test, and Cox proportional hazard regression models. RNU.

Figure 1A: Kaplan Meier curve NAC + Surgery vs Surgery alone

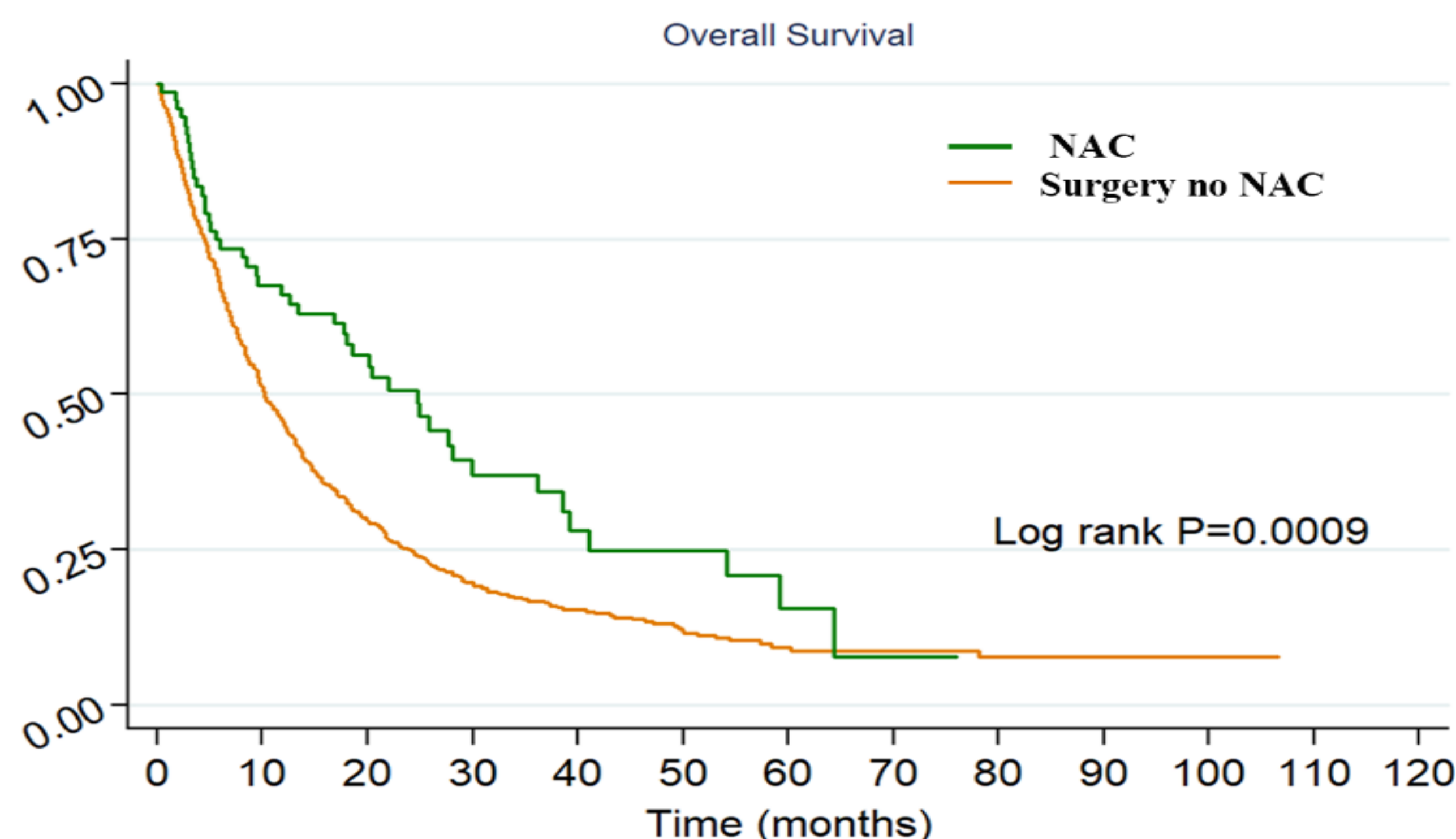
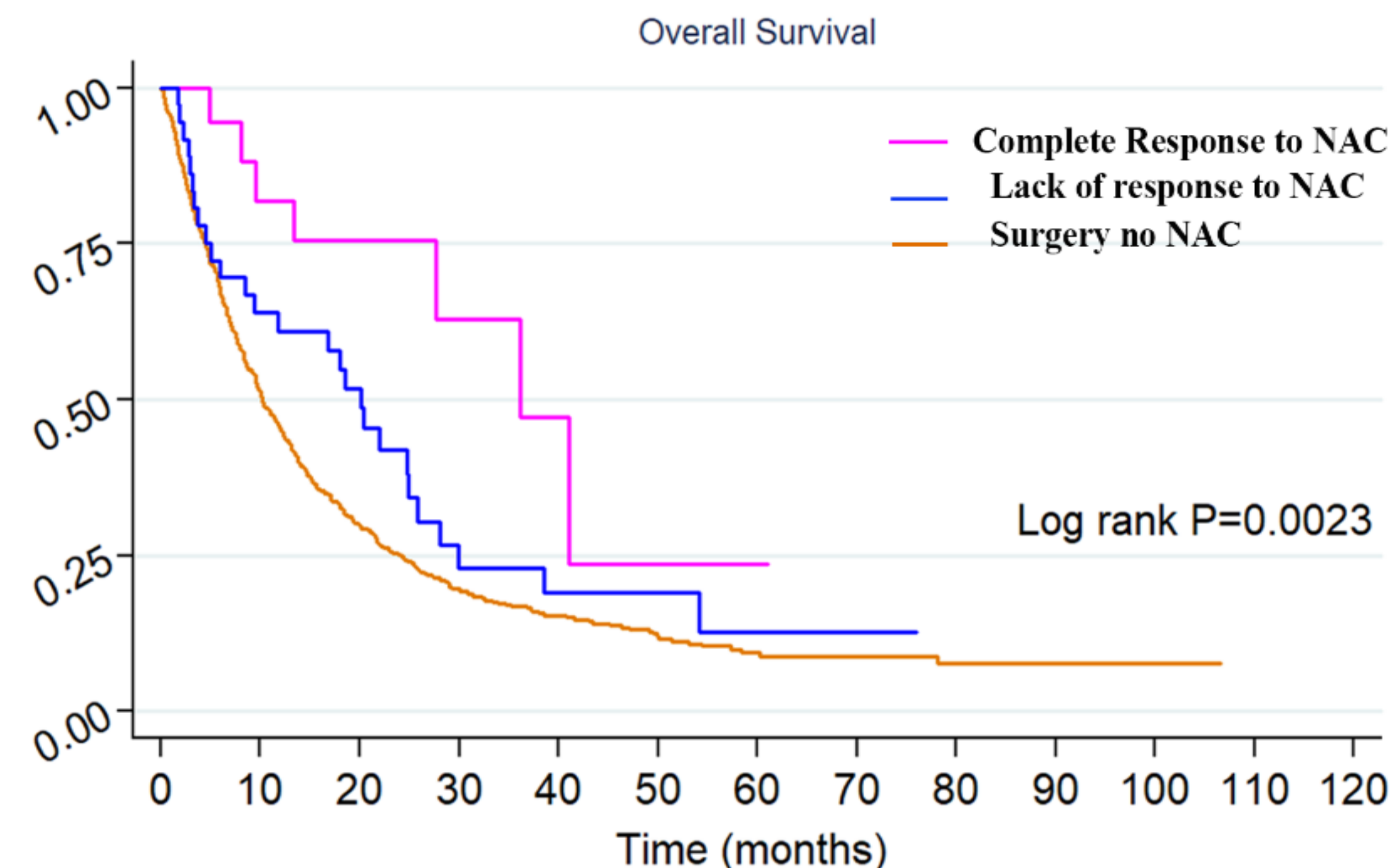


Figure 1B: Kaplan Meier curve in patients who had complete response vs lack of response to NAC



RESULTS

- A total of 18,133 patients were identified. 739 (4.1%) patients had cN+ status, of which 94 (12.7%) received NAC + RNU and 645 (87.9%) underwent upfront RNU.
- A total of 567 (87.91%) patients in the RNU group had pathologic nodal involvement (pN+), and 45 patients (65.22%) in the NAC + RNU group were pN+ (p=0.0001).
- The relative risk of nodal involvement in the absence of NAC was 1.35 higher.
- NAC was associated with 22.69% of absolute risk reduction in node positivity, and improved median OS compared to RNU alone (24.73 vs 10.22 months, p=0.0009, Figure 1A).

RESULTS: Subgroup

- Patients had better median OS if they had complete nodal response compared to patients who remained node positive (36.1 vs 20.16 months, P=0.002, Figure 1B).
- In multivariate analysis, NAC patients had improved survival compared to upfront RNU (HR=0.65, P=0.01).

CONCLUSIONS

- In this large cohort study of high-grade UTUC patients, concerns of clinical nodes involvement without preoperative chemotherapy correlated with substantially low overall survival.
- NAC in cN+ patients leads to an absolute decrease in the rate pN+ at RNU over upfront surgery, and translates clinically into survival benefit.
- Lack of nodal status response to NAC is a poor prognostic sign, which might necessitate further treatment in this group of patients