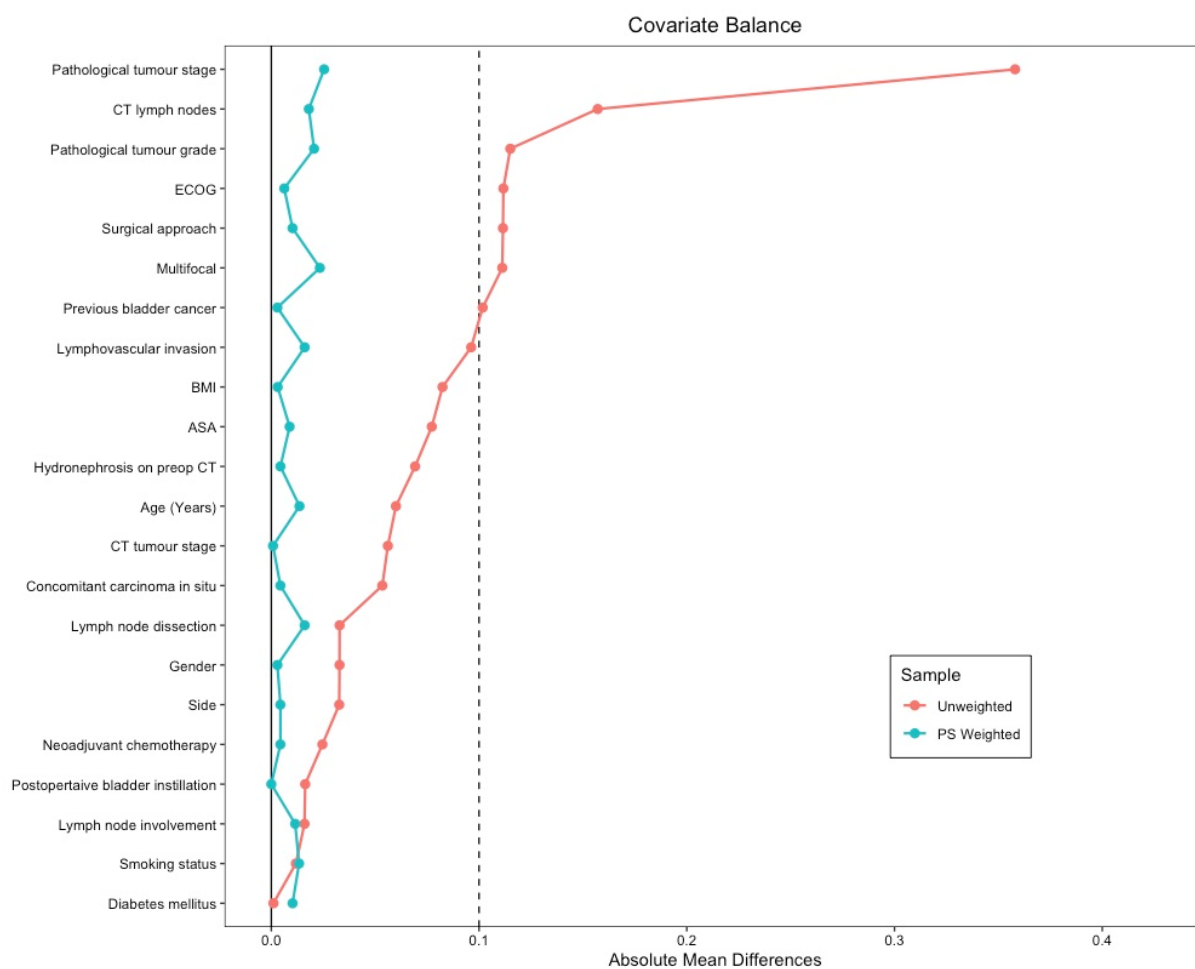
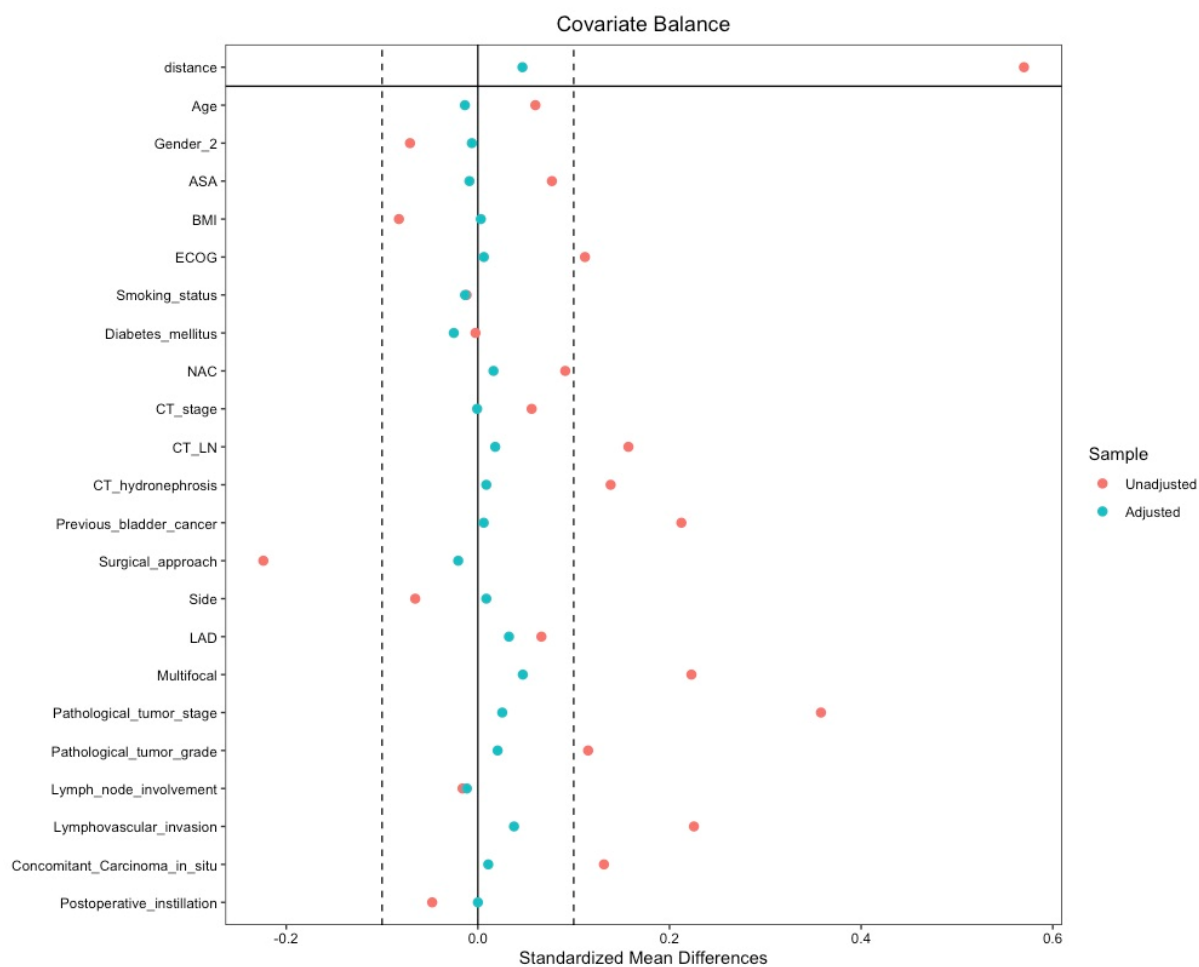


A



B



C

| Variable | Observations per m | | | Total |
|----------------------------|--------------------|-------------|---------|-------|
| | Complete | Incomplete | Imputed | |
| ASA | 1481 (86.2%) | 237 (13.8%) | 237 | 1718 |
| BMI | 1451 (84.5%) | 267 (15.5%) | 267 | 1718 |
| ECOG | 1367 (79.6%) | 351 (20.4%) | 351 | 1718 |
| Preoperative creatinine | 1548 (90.1%) | 170 (9.9%) | 170 | 1718 |
| CT lymph nodes | 1480 (86.1%) | 238 (13.9%) | 238 | 1718 |
| CT hydronephrosis | 1538 (89.5%) | 180 (10.5%) | 180 | 1718 |
| Previous bladder cancer | 1661 (96.7%) | 57 (3.3%) | 57 | 1718 |
| Multifocality | 1709 (99.5%) | 9 (0.5%) | 9 | 1718 |
| Postoperative instillation | 1360 (79.2%) | 358 (20.8%) | 358 | 1718 |

D

| Variable | Observations per m | | | Total |
|-----------------------------------|--------------------|-------------|---------|-------|
| | Complete | Incomplete | Imputed | |
| ASA | 1481 (86.2%) | 237 (13.8%) | 237 | 1718 |
| BMI | 1451 (84.5%) | 267 (15.5%) | 267 | 1718 |
| ECOG | 1367 (79.6%) | 351 (20.4%) | 351 | 1718 |
| Smoking status | 1579 (91.9%) | 139 (8.1%) | 139 | 1718 |
| Diabetes mellitus | 1340 (78.0%) | 378 (22.0%) | 378 | 1718 |
| Preoperative creatinine | 1548 (90.1%) | 170 (9.9%) | 170 | 1718 |
| CT lymph nodes | 1480 (86.1%) | 238 (13.9%) | 238 | 1718 |
| CT hydronephrosis | 1538 (89.5%) | 180 (10.5%) | 180 | 1718 |
| Previous bladder cancer | 1661 (96.7%) | 57 (3.3%) | 57 | 1718 |
| Tumour side | 1678 (97.7%) | 40 (2.3%) | 40 | 1718 |
| Multifocality | 1709 (99.5%) | 9 (0.5%) | 9 | 1718 |
| Postoperative instillation | 1360 (79.2%) | 358 (20.8%) | 358 | 1718 |
| Transfusion | 1572 (91.5%) | 146 (8.5%) | 146 | 1718 |
| | | | | |

Figure S1. (A): Absolute mean differences of covariates before (red line) and after (green line) propensity score weighting. Threshold set at 0.1. **(B):** Standardized mean differences of covariates before (red dots) and after (green dots) propensity score weighting. Threshold set at 0.1. **(C):** Imputed variables for Cox proportional hazard regression analyses. **(D):** Imputed variables for logistic regression analyses.

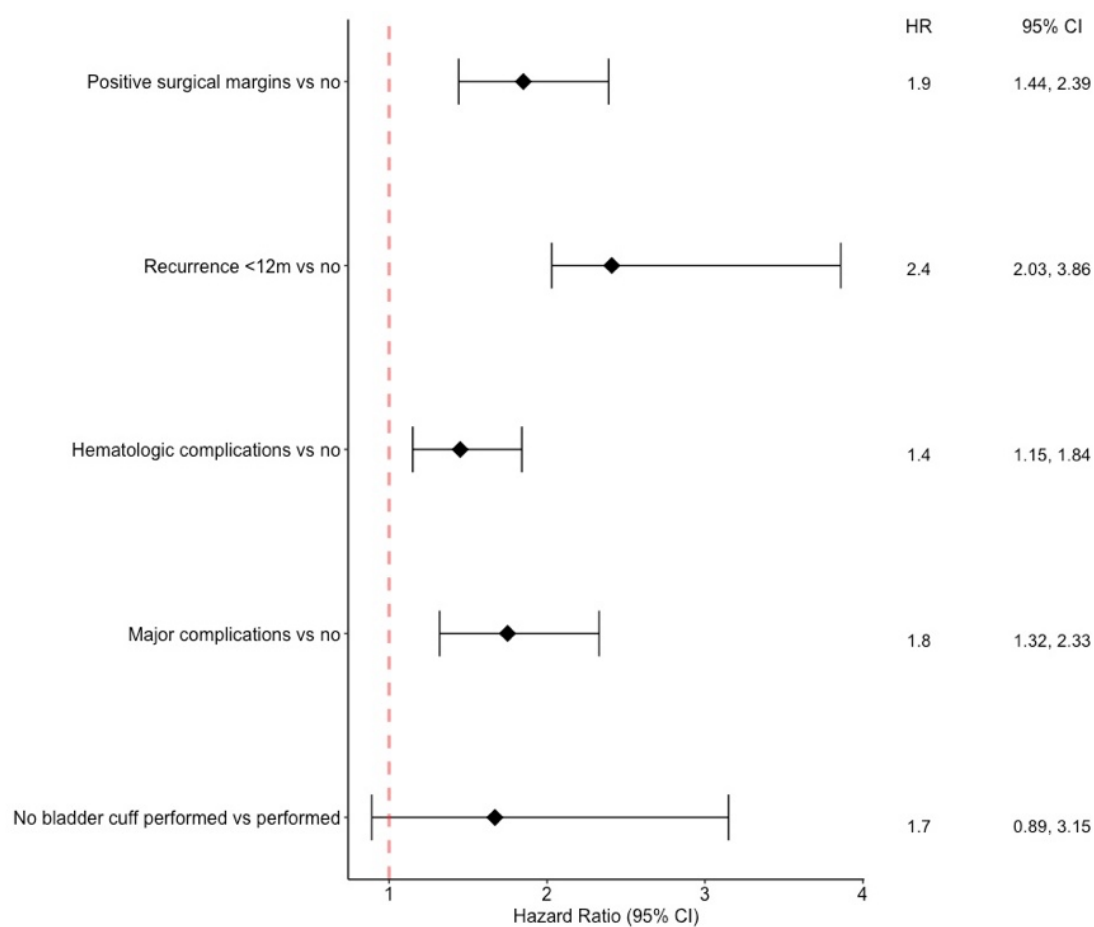


Figure S2. Weight of the particular pentafecta criteria on the overall survival of 1,016 propensity-score matched patients treated with RNU for high-risk UTUC. (HR=Hazard ratio; CI= confidence interval).

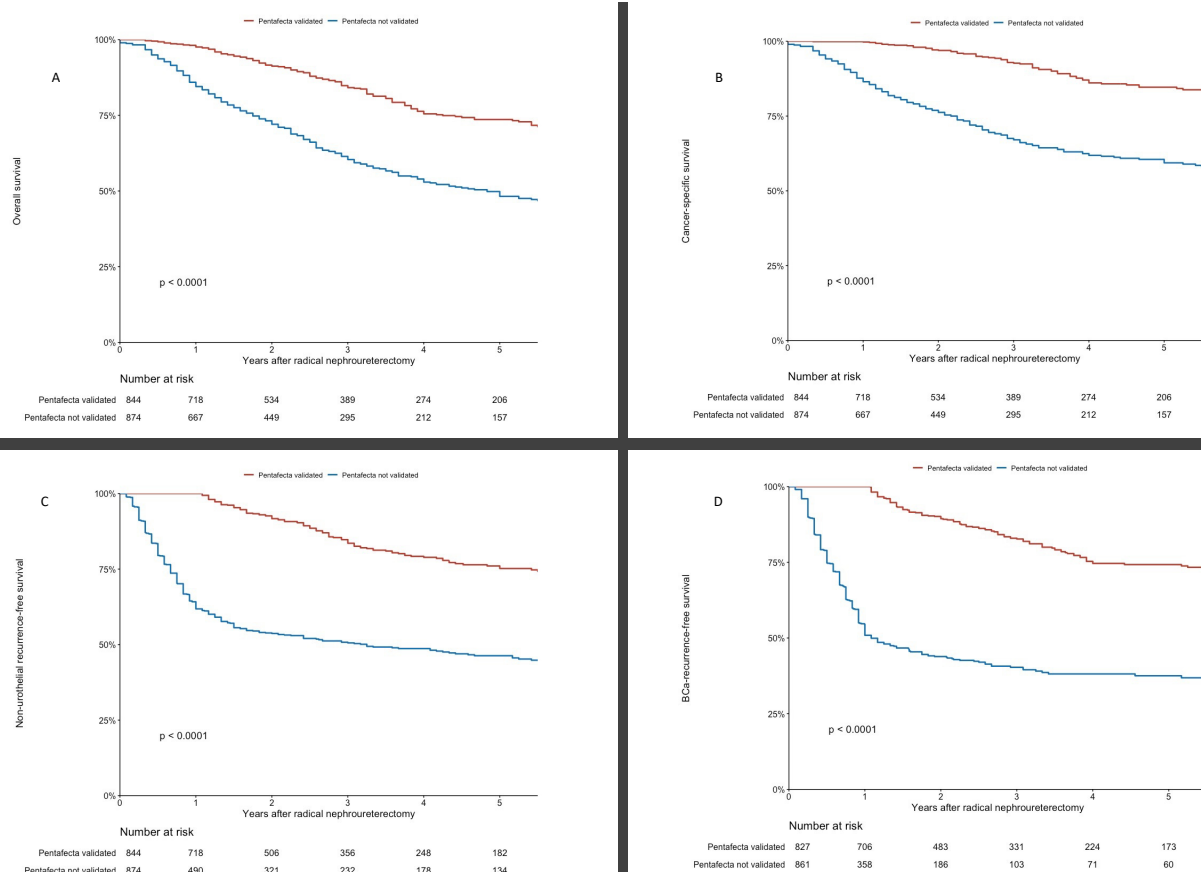


Figure S3. Oncologic outcomes of 1,718 patients treated with RNU for high-risk UTUC. Kaplan-Meier curves visualizing overall (A), cancer-specific (B), non-urothelial recurrence-free (C) and bladder-cancer recurrence-free survival (D).