

**APPENDIX:****Supplement Table 1 - Detail demographic data of patients with upper tract urothelial carcinoma.**

| All patients (n = 487)                     | N (%)       | Mean $\pm$ SD      | Median (IQR)      | Min - Max     |
|--------------------------------------------|-------------|--------------------|-------------------|---------------|
| <b>Sex</b>                                 |             |                    |                   |               |
| Male                                       | 242 (49.7%) |                    |                   |               |
| Female                                     | 245 (50.3%) |                    |                   |               |
| Age at surgery, y                          |             | 72.8 $\pm$ 9.9     | 73.0 (66.0–80.0)  | 21 - 95       |
| Body mass index, kg/m <sup>2</sup>         |             | 24.51 $\pm$ 3.88   | 24.24 (21.7–26.9) | 15.05 - 39.97 |
| <b>ECOG<sup>2</sup> performance status</b> |             |                    |                   |               |
| < 2                                        | 469 (96.3%) |                    |                   |               |
| $\geq$ 2                                   | 18 (3.7%)   |                    |                   |               |
| Hypertension                               | 272 (55.9%) |                    |                   |               |
| Diabetes mellitus                          | 143 (29.4%) |                    |                   |               |
| Coronary heart disease                     | 71 (14.6%)  |                    |                   |               |
| Smoker                                     | 102 (20.9%) |                    |                   |               |
| Chinese herbs                              | 13 (2.7%)   |                    |                   |               |
| Hydronephrosis                             | 277 (56.9%) |                    |                   |               |
| <b>Preoperative bladder cancer</b>         |             |                    |                   |               |
| No                                         | 399 (81.9%) |                    |                   |               |
| Yes                                        | 29 (6.0%)   |                    |                   |               |
| Concomitant                                | 59 (12.1%)  |                    |                   |               |
| Neoadjuvant systemic therapy               | 16 (3.3%)   |                    |                   |               |
| <b>Surgical procedure</b>                  |             |                    |                   |               |
| Open                                       | 131 (26.9%) |                    |                   |               |
| Minimally Invasive                         | 356 (73.1%) |                    |                   |               |
| Surgical duration, min                     |             | 354.6 $\pm$ 116.0  | 340 (275–409)     | 145 - 1200    |
| Blood loss, mL                             |             | 389.9 $\pm$ 1248.6 | 200 (50–350)      | 30 - 18800    |
| Blood transfusion                          | 88 (18.1%)  |                    |                   |               |
| <b>Clavien-Dindo classification</b>        |             |                    |                   |               |
| 1,2                                        | 90 (18.5%)  |                    |                   |               |
| $\geq$ 3                                   | 13 (2.7%)   |                    |                   |               |
| <b>Pathology</b>                           |             |                    |                   |               |
| < pT3                                      | 293 (60.2%) |                    |                   |               |
| $\geq$ pT3                                 | 194 (39.8%) |                    |                   |               |
| pN (+)                                     | 44 (8.6%)   |                    |                   |               |
| Multifocality                              | 118 (24.2%) |                    |                   |               |
| Variant histology                          | 38 (7.8%)   |                    |                   |               |

Eastern Cooperative Oncology Group; IQR = interquartile range; SD = standard deviation.

**Supplement Table 2 - Detail renal function profile and split renal function test results.**

| Renal function profile                    |              |                  |                        |
|-------------------------------------------|--------------|------------------|------------------------|
| <b>Preoperative (N = 487)</b>             | <b>N (%)</b> | <b>Mean ± SD</b> | <b>Median (IQR)</b>    |
| Creatinine, mg/dL                         |              | 1.25 ± 0.69      | 1.06 (0.84–1.42)       |
| eGFR, mL/min/1.732 m <sup>2</sup>         |              | 50.56 ± 22.54    | 47.27 (33.34–63.12)    |
| Total ERPF, mL/min.                       |              | 252.91 ± 98.64   | 241.30 (184.49–309.00) |
| Lesion Side/Total ERPF ratio, %           |              | 33.22 ± 15.88    | 35.60 (20.83–46.41)    |
| Cisplatin eligibility                     | 142 (29.2%)  |                  |                        |
| <b>Postoperative 3 months (N = 487)</b>   |              |                  |                        |
| Creatinine, mg/dL                         |              | 1.70 ± 1.10      | 1.43 (1.15–1.89)       |
| eGFR, mL/min/1.732 m <sup>2</sup>         |              | 37.74 ± 16.54    | 35.12 (26.02–47.05)    |
| eGFR decline, %                           |              | 23.34 ± 17.47    | 24.03 (9.26–36.25)     |
| Cisplatin eligibility                     | 48 (10.0%)   |                  |                        |
| <b>Postoperative 6 months (N = 386)</b>   |              |                  |                        |
| Creatinine, mg/dL                         |              | 1.75 ± 1.21      | 1.43 (1.19–1.86)       |
| eGFR, mL/min/1.732 m <sup>2</sup>         |              | 37.59 ± 16.34    | 36.10 (25.70–47.01)    |
| eGFR decline, %                           |              | 24.84 ± 17.59    | 26.19 (12.52–37.24)    |
| Cisplatin eligibility                     | 31 (8.0%)    |                  |                        |
| <b>Dialysis (N = 487)</b>                 |              |                  |                        |
| Required after surgery                    | 30 (6.2%)    |                  |                        |
| Postoperative requirement for dialysis, y |              | 3.0 ± 3.48       | 2.1 (0.6–4.4)          |

eGFR = estimated glomerular filtration rate; ERPF = effective renal plasma flow; SD = standard deviation; IQR = interquartile range; y = years.