Supplementary Fig 1. (A, B) Impact of ureteral stone size on uNGAL, u-αGST, and u-πGST levels in the ureteral stone group; (C) Comparing the urine biomarkers at different time periods between subgroups of stones ≤1 cm and stones >1 cm in group 2.
**Supplementary table 1.** Univariate and multivariate logistic regression analysis for the predictors of complete recovery of hydronephrosis (hydronephrosis grade =0 on Day 14 after DBJ removal) after URS.

| Predictor                          | Univariate |          |          | Multivariate |          |          |
|-----------------------------------|------------|----------|----------|--------------|----------|----------|
|                                   | OR (95% CI)| p value  | OR (95% CI)| p value      | OR (95% CI)| p value  |
| Age (year)                        | 0.97 (0.95, 0.99) | 0.005*   | 0.96 (0.94, 0.99) | 0.002*       |           |
| Female (vs. Male)                 | 0.76 (0.42, 1.36) | 0.354    |           |              |           |
| Group (vs. ureteral stricture)    |            |          |          |              |           |
| Ureteral stone                    | 2.49 (0.30, 4.77) | 0.246    |           |              |           |
| Staghorn stone                    | 2.92 (0.81, 10.5) | 0.102    |           |              |           |
| Stone position                    |            |          |          |              |           |
| Upper                             | 0.62 (0.18, 2.11) | 0.448    |           |              |           |
| Middle                            | 0.70 (0.16, 2.98) | 0.630    |           |              |           |
| Lower                             | 0.71 (0.20, 2.53) | 0.596    |           |              |           |
| eGFR (Baseline)                   | 1.02 (1.01, 1.03) | 0.004*   | 1.04 (1.02, 1.06) | <0.001*      |           |
| BMI (kg/m²)                       |            |          |          |              |           |
| 18.5-24 (vs. <=18.5)              | 2.17 (0.40, 11.8) | 0.371    |           |              |           |
| 24-30 (vs. <=18.5)                | 1.43 (0.28, 7.38) | 0.670    |           |              |           |
| >30 (vs. <=18.5)                  | 2.57 (0.42, 15.9) | 0.310    |           |              |           |
| Stone size                        |            |          |          |              |           |
| 0.4-1.0 (vs. <0.4)                | 2.22 (1.06, 4.66) | 0.035*   | 1.90 (0.81, 4.44) | 0.138       |           |
| >1.0 (vs. <0.4)                   | 2.15 (1.07, 4.30) | 0.031*   | 2.56 (1.13, 5.77) | 0.024*      |           |
| Presence of UTI                   | 0.91 (0.51, 1.63) | 0.742    |           |              |           |
| NGAL (Baseline)                   | 1.00 (1.00, 1.00) | 0.357    |           |              |           |
| NGAL (1-day)                      | 1.00 (1.00, 1.00) | 0.317    |           |              |           |
| NGAL (2-wk)                       | 1.00 (1.00, 1.00) | 0.209    |           |              |           |
| ∆ NGAL                            | 1.00 (1.00, 1.00) | 0.234    |           |              |           |
| πGST (Baseline)                   | 1.06 (0.77, 1.45) | 0.744    |           |              |           |
| πGST (2-wk)                       | 1.02 (0.97, 1.06) | 0.521    |           |              |           |
| ∆ πGST                            | 1.00 (1.00, 1.01) | 0.204    |           |              |           |
| αGST (Baseline)                   | 0.83 (0.42, 1.66) | 0.599    |           |              |           |
| αGST (2-wk)                       | 0.97 (0.93, 1.01) | 0.091    |           |              |           |
| ∆ αGST                            | 1.00 (1.00, 1.00) | 0.780    |           |              |           |
Serum Creatinine 1.02 (0.99, 1.04) 0.203
(Baseline)

Abbreviations: NGAL, neutrophil gelatinase-associated lipocalin; GST, glutathione S-transferase; Δ NGAL, ΔNGAL = day 14 NGAL − baseline NGAL; 2-wk, 2 weeks after URS.

Impact of hydronephrosis degree on eGFR and urine biomarkers
**Supplementary table 2.** Impact of baseline eGFR on changes in urinary renal damage markers in both groups.

| Baseline eGFR (mL/min/1.73 m²) | Ureteral stricture | Ureteral stone |
|-------------------------------|-------------------|----------------|
|                               | ≥60 | <60 | ≥60 | <60 |
| n = 40 | n = 11 | n = 108 | n = 33 |
| **ΔNGAL** | 23.8±9.2 | 63.2±24.1 | 25.6±4.9 | 6.0±20.1 |
| p value | 0.132 |  | **0.014** |  |
| **ΔαGST** | 0.8±0.4 | 0.7±0.7 | 0.1±0.1 | 0.5±0.4 |
| p value | 0.857 | 0.768 |  |
| **ΔπGST** | 0.5±0.2 | -0.3±0.6 | 0.7±0.2 | 0.1±0.2 |
| p value | 0.180 | 0.216 |  |

*p value was analyzed by t-test if the variables were normally distributed; the Mann-Whitney U-test was used for data that were not normally distributed. P<0.05 was considered statistically significant.

ΔNGAL = Day 14 NGAL − Day 0 NGAL.

Bold value represents statistically significant p <0.05.