### SUPPLEMENTARY TABLES

#### Supplementary Table 1. Candidate lncRNAs significantly associated with the OS of 410 bladder cancer patients.

| Gene name          | log rank P value | Cox P value | HR       | 95% CI       |
|--------------------|------------------|-------------|----------|--------------|
| ST8SIA6-AS1        | 1.27E-03         | 1.52E-03    | 1.868424 | 1.269702     |
| RNF144A-AS1        | 5.09E-03         | 5.62E-03    | 1.715524 | 1.170852     |
| AC022613.1         | 5.34E-03         | 5.95E-03    | 1.721833 | 1.169022     |
| AC007406.3         | 1.28E-02         | 1.36E-02    | 1.607132 | 1.102546     |
| AL391704.1         | 0.021288         | 0.022361    | 1.560537 | 1.065205     |
| AC19211.1          | 0.030055         | 0.031251    | 1.509522 | 1.030332     |
| SMC2-AS1           | 0.031609         | 0.032703    | 0.666044 | 0.4587       |
| LINC01971          | 0.033246         | 0.034566    | 1.509195 | 1.033332     |
| LINC01929          | 0.037970         | 0.039302    | 1.488602 | 1.019696     |
| AC112721.1         | 0.040431         | 0.041807    | 1.485191 | 1.014757     |
| LINC01602          | 0.043954         | 0.045246    | 1.463558 | 1.008097     |

Abbreviations: HR, hazard ratio; CI, confidence interval.

#### Supplementary Table 2 Univariate and multivariate CPHR analyses of the three-lncRNA signature and clinical risk factors in the primary dataset.

| Characteristic                          | Univariate analysis | Multivariate analysis |
|-----------------------------------------|---------------------|-----------------------|
|                                         | HR (95% CI)         | P value               | HR (95% CI)         | P value               |
| Age (≥65 vs. <65)                       | 1.167 (0.653-2.085) | 0.603                 |                       |                       |
| Gender (male/female)                    | 0.827 (0.472-1.447) | 0.505                 |                       |                       |
| TNM stage (III-IV vs. I-II)             | 4.039 (1.608-10.140)| **0.003**             | 3.436 (1.360-8.682)  | **0.009**             |
| Tumor stage (T3-T4 vs. T0-T2)           | 2.770 (1.353-5.670) | **0.005**             |                       |                       |
| Lymph node metastasis (yes vs. no)      | 3.040 (1.724-5.361) | <**0.001**            |                       |                       |
| Distant metastasis (yes vs. no)         | 2.192 (0.510-9.419) | 0.291                 |                       |                       |
| Risk score (high vs. low)               | 2.698 (1.539-4.729) | <**0.001**            | 2.368 (1.345-4.168)  | **0.003**             |

Note: Bold values indicate statistical significance (P<0.05).
Abbreviations: HR, hazard ratio; CI, confidence interval.

Please browse Full Text version to see the data of Supplementary Table 3

#### Supplementary Table 3. Functional enrichment analysis of GO terms for DEMs that were positively co-expressed with OS-related lncRNAs.
Supplementary Table 4. Summary of the three OS-related lncRNAs.

| Gene name        | Down/up-regulated | log2FoldChange | P value    | co-expressed mRNAs |
|------------------|-------------------|----------------|------------|--------------------|
| RNF144A-AS1      | Up                | 2.460          | 2.86E-10   | 175/184            |
| AC019211.1       | Up                | 2.577          | 7.43E-05   | 4/184              |
| ST8SIA6-AS1      | Up                | 4.073          | 1.23E-05   | 5/184              |

Abbreviations: OS, overall survival.

Supplementary Table 5. The siRNA oligonucleotides against RNF144A-AS1 and the negative control.

| siRNA             | The siRNA oligonucleotides                                      |
|-------------------|-----------------------------------------------------------------|
| RNF144A-AS1-si#1  | Sense: GCCAAGAAAUGGCAAAGAUTT                                      |
|                   | Antisense: AUCUUUGGCAUUCUUGGCTT                                    |
| RNF144A-AS1-si#2  | Sense: CCAUGUGAACUGAAGUCAAATT                                      |
|                   | Antisense: UUGACUUCAGUUCACAUGGTT                                    |
| RNF144A-AS1-si#3  | Sense: GCAGACAGCAACAAGACUUATT                                      |
|                   | Antisense: AAAGUCUUGUGCUGUCUGCTT                                    |
| Negative control  | Sense: UUCUCCGAACGUGUCACGUTT                                      |
|                   | Antisense: ACGUGACACGUUCGGAGAATT                                    |