

Supplemental Information:

Novel Prognosis and Therapeutic response model of Immune-related lncRNA pairs in Clear Cell Renal Cell Carcinoma

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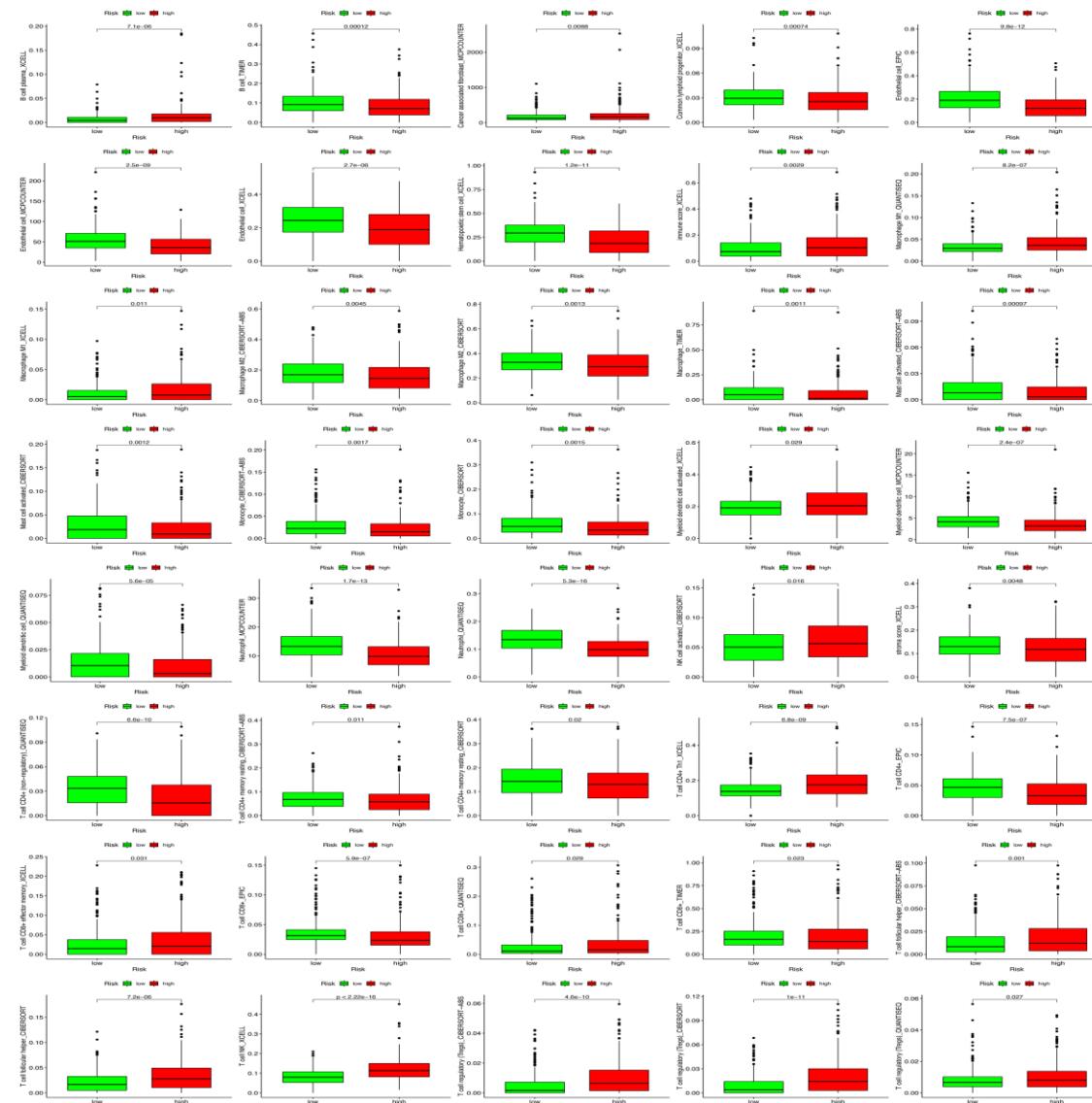


Figure S1. The representative results of the evaluation of tumor infiltrating immune cells with risk assessment model.

Table S1: Univariable and multivariable Cox regression analyses in KIRC.

| Characteristics | Univariate analysis | | | Multivariate analysis | | |
|-----------------|---------------------|-----------------|---------|-----------------------|-----------------|---------|
| | HR | 95% CI | pvalue | HR | 95% CI | pvalue |
| Age | 1.02926 | 1.01582-1.04287 | 0.00002 | 1.02803 | 1.01312-1.04316 | 0.00021 |
| Gender | 0.95679 | 0.69889-1.30986 | 0.78284 | 1.16609 | 0.83965-1.61943 | 0.35916 |
| Grade | 2.28613 | 1.86217-2.80660 | 0.00000 | 1.27487 | 1.00643-1.61489 | 0.04410 |
| Stage | 1.89681 | 1.65995-2.16747 | 0.00000 | 1.50680 | 1.29129-1.75829 | 0.00000 |
| riskScore | 1.27745 | 1.23578-1.32052 | 0.00000 | 1.20467 | 1.15751-1.25376 | 0.00000 |

In both univariable and multivariable Cox regression analyses, age, gender, grade, stage and riskScore, Expression were evaluated as continuous variables. P < 0.05 was considered statistically significant in all analyses.

Table S2: The detail comparison results of correlation ship between tumour infiltrating immune cells and risk sore.

| Immune cells | Type | Correlation | p-value |
|---------------|-----------|-------------|------------|
| B cell | TIMER | -0.1589881 | 0.00025125 |
| Macrophage | TIMER | -0.1321237 | 0.00239478 |
| B cell naive | CIBERSORT | -0.1729378 | 6.69E-05 |
| B cell memory | CIBERSORT | 0.20900677 | 1.33E-06 |

| | | | |
|------------------------------|---------------|------------|------------|
| B cell plasma | CIBERSORT | -0.1018875 | 0.01942441 |
| T cell CD8+ | CIBERSORT | 0.10741859 | 0.01370566 |
| T cell CD4+ memory resting | CIBERSORT | -0.1501841 | 0.00054856 |
| T cell CD4+ memory activated | CIBERSORT | 0.1301107 | 0.00279281 |
| T cell follicular helper | CIBERSORT | 0.28179604 | 4.66E-11 |
| T cell regulatory (Tregs) | CIBERSORT | 0.34056042 | 9.48E-16 |
| NK cell activated | CIBERSORT | 0.10593058 | 0.01507605 |
| Monocyte | CIBERSORT | -0.1548498 | 0.00036454 |
| Macrophage M0 | CIBERSORT | 0.16128406 | 0.00020357 |
| Macrophage M2 | CIBERSORT | -0.1365467 | 0.00169572 |
| Mast cell activated | CIBERSORT | -0.206036 | 1.89E-06 |
| B cell naive | CIBERSORT-ABS | -0.1566614 | 0.00031008 |
| B cell memory | CIBERSORT-ABS | 0.20579494 | 1.94E-06 |
| B cell plasma | CIBERSORT-ABS | -0.0957489 | 0.02810671 |
| T cell CD4+ memory resting | CIBERSORT-ABS | -0.1222734 | 0.00498233 |
| T cell CD4+ memory activated | CIBERSORT-ABS | 0.13002696 | 0.00281061 |
| T cell follicular helper | CIBERSORT-ABS | 0.22890281 | 1.11E-07 |
| T cell regulatory (Tregs) | CIBERSORT-ABS | 0.32749205 | 1.29E-14 |
| NK cell activated | CIBERSORT-ABS | 0.08937723 | 0.04045578 |

| | | | |
|----------------------------------|---------------|------------|------------|
| Monocyte | CIBERSORT-ABS | -0.1343951 | 0.0020083 |
| Macrophage M0 | CIBERSORT-ABS | 0.16169439 | 0.000196 |
| Macrophage M2 | CIBERSORT-ABS | -0.0933823 | 0.03225153 |
| Mast cell activated | CIBERSORT-ABS | -0.2089517 | 1.34E-06 |
| Macrophage M1 | QUANTISEQ | 0.28154893 | 4.85E-11 |
| Monocyte | QUANTISEQ | 0.19805701 | 4.72E-06 |
| Neutrophil | QUANTISEQ | -0.4234731 | 2.65E-24 |
| T cell CD4+ (non-regulatory) | QUANTISEQ | -0.3019058 | 1.51E-12 |
| T cell CD8+ | QUANTISEQ | 0.16776862 | 0.00011063 |
| T cell regulatory (Tregs) | QUANTISEQ | 0.09631144 | 0.0271917 |
| Myeloid dendritic cell | QUANTISEQ | -0.2086886 | 1.38E-06 |
| uncharacterized cell | QUANTISEQ | 0.15391113 | 0.00039615 |
| Myeloid dendritic cell | MCP COUNTER | -0.2191264 | 3.87E-07 |
| Neutrophil | MCP COUNTER | -0.405708 | 2.93E-22 |
| Endothelial cell | MCP COUNTER | -0.305794 | 7.55E-13 |
| Cancer associated fibroblast | MCP COUNTER | 0.14393556 | 0.00093123 |
| Myeloid dendritic cell activated | XCELL | 0.15716339 | 0.0002964 |
| B cell | XCELL | 0.24469266 | 1.31E-08 |
| T cell CD4+ naive | XCELL | 0.11107104 | 0.01079668 |

| | | | |
|---------------------------------|-------|------------|------------|
| T cell CD4+ (non-regulatory) | XCELL | -0.1219773 | 0.00508935 |
| T cell CD4+ central memory | XCELL | 0.14904808 | 0.00060489 |
| T cell CD4+ effector memory | XCELL | 0.12060827 | 0.00561167 |
| T cell CD8+ | XCELL | 0.13751102 | 0.00157067 |
| T cell CD8+ central memory | XCELL | 0.09230036 | 0.03431391 |
| T cell CD8+ effector memory | XCELL | 0.14098965 | 0.00118665 |
| Class-switched memory B cell | XCELL | 0.16428679 | 0.00015393 |
| Common lymphoid progenitor | XCELL | -0.1733453 | 6.43E-05 |
| Endothelial cell | XCELL | -0.2411996 | 2.12E-08 |
| Eosinophil | XCELL | -0.0972864 | 0.02566657 |
| Granulocyte-monocyte progenitor | XCELL | -0.1789821 | 3.65E-05 |
| Hematopoietic stem cell | XCELL | -0.34388 | 4.78E-16 |
| Macrophage M1 | XCELL | 0.16335175 | 0.00016801 |
| Monocyte | XCELL | 0.14106623 | 0.00117926 |
| B cell naive | XCELL | 0.14457396 | 0.00088305 |
| T cell NK | XCELL | 0.40857774 | 1.39E-22 |
| Plasmacytoid dendritic cell | XCELL | 0.16634154 | 0.00012677 |
| B cell plasma | XCELL | 0.23760305 | 3.48E-08 |
| T cell CD4+ Th1 | XCELL | 0.3077537 | 5.30E-13 |

| | | | |
|------------------------------|-------|------------|------------|
| T cell CD4+ Th2 | XCELL | 0.15915894 | 0.00024737 |
| immune score | XCELL | 0.20962918 | 1.23E-06 |
| stroma score | XCELL | -0.1600294 | 0.00022846 |
| microenvironment score | XCELL | 0.12805948 | 0.00325953 |
| B cell | EPIC | -0.1511902 | 0.00050278 |
| Cancer associated fibroblast | EPIC | 0.14355903 | 0.00096078 |
| T cell CD4+ | EPIC | -0.2689344 | 3.63E-10 |
| T cell CD8+ | EPIC | -0.1924836 | 8.76E-06 |
| Endothelial cell | EPIC | -0.3531751 | 6.75E-17 |
| Macrophage | EPIC | 0.15131515 | 0.00049735 |
| NK cell | EPIC | 0.21773541 | 4.60E-07 |

Table S3. The p value of comparing chemotherapeutics sensitivity and risk score.

| Drug | p-value |
|------------|---------|
| Cisplatin | 0.01 |
| Gefitinib | 0.022 |
| KU.55933 | 1.1e-9 |
| Paclitaxel | 2.6e-9 |
| Sorafenib | 0.74 |

Sunitinib

2.7e-11
