Supplementary material

Supplementary Table 1. Correlation between *ZWINT* expression and clinicopathological characteristics of PCa.

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| --- | --- | --- | --- |
| Characteristic  | Low expression of *ZWINT* | High expression of *ZWINT* | *p* value |
| n  | 249 | 250 |  |
| T stage, n (%)  | Reference |  | 0.002\* |
|  | T2  | 111 (22.6%) | 78 (15.9%) |  |
|  | T3  | 132 (26.8%) | 160 (32.5%) |  |
|  | T4  | 2 (0.4%) | 9 (1.8%) |  |
| N stage, n (%)  | Reference |  | 0.038\* |
|  | N0  | 175 (41.1%) | 172 (40.4%) |  |
|  | N1  | 29 (6.8%) | 50 (11.7%) |  |
| M stage, n (%)  | Reference |  | 1.000 |
|  | M0  | 225 (49.1%) | 230 (50.2%) |  |
|  | M1  | 1 (0.2%) | 2 (0.4%) |  |
| Age, n (%)  | Reference |  | 0.303 |
|  | ≤60  | 118 (23.6%) | 106 (21.2%) |  |
|  | >60  | 131 (26.3%) | 144 (28.9%) |  |
| PSA (ng/mL), n (%)  | Reference |  | 0.112 |
|  | <4  | 212 (48%) | 203 (45.9%) |  |
|  | ≥4  | 9 (2%) | 18 (4.1%) |  |
| Gleason score, n (%)  | Reference |  | <0.001\* |
|  | 6  | 28 (5.6%) | 18 (3.6%) |  |
|  | 7  | 142 (28.5%) | 105 (21%) |  |
|  | 8  | 32 (6.4%) | 32 (6.4%) |  |
|  | 9  | 46 (9.2%) | 92 (18.4%) |  |
|  | 10  | 1 (0.2%) | 3 (0.6%) |  |

*ZWINT*: *ZW10* Interactor;PSA: Prostate-specific antigen; \* *p* < 0.05.

Supplementary Table 2. Univariate COX regression analysis of PCa prognosis.

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| Characteristics  | Progress free interval | Disease free survival |
| Total (n) | Hazard ratio (95% CI) | *p* value | Total (n) | Hazard ratio (95% CI) | *p* value |
| T stage  | 492 |  |  | 471 |  |  |
|  | T2  | 189 | Reference |  | 184 | Reference |  |
|  | T3 & T4  | 303 | 3.79 (2.14–6.69) | <0.001\* | 287 | 3.66 (2.06–6.50) | <0.001\* |
| N stage | 426 |  |  | 409 |  |  |
|  | N0  | 347 | Reference |  | 334 | Reference |  |
|  | N1  | 79 | 1.95 (1.20–3.15) | 0.007\* | 75 | 1.93 (1.19–3.14) | 0.008\* |
| Age | 499 |  |  | 477 |  |  |
|  | ≤60  | 224 | Reference |  | 214 | Reference |  |
|  | >60  | 275 | 1.30 (0.86–1.96) | 0.208 | 263 | 0.65 (0.43–1.01) | 0.053 |
| PSA | 442 |  |  |  |  |  |
|  | ≤4  | 415 | Reference |  | 395 | Reference |  |
|  | >4  | 27 | 4.20 (2.09–8.41) | <0.001\* | 26 | 3.44 (1.65–7.14) | <0.001\* |
| *ZWINT* | 499 |  |  | 477 |  |  |
|  | Low  | 249 | Reference |  | 238 | Reference |  |
|  | High  | 250 | 1.93 (1.27–2.96) | <0.001\* | 239 | 2.01 (0.40–0.95) | 0.027\* |
| Gleason score | 499 |  |  | 477 |  |  |
|  | 6 & 7  | 293 | Reference |  | 287 | Reference |  |
|  | 8 & 9 & 10 | 206 | 4.68 (2.96–7.39) | <0.001\* | 190 | 4.36 (2.74–6.94) | <0.001\* |

*ZWINT*: *ZW10* Interactor;PSA: Prostate-specific antigen; CI: Confidence interval; \* *p* < 0.05.



**Supplementary Fig. 1. The correlation between *ZWINT* expression and immune factors.** (A): Correlation of *ZWINT* expression with immunosuppressive factors in PCa and other cancers. (B): Correlation of *ZWINT* expression with immunostimulatory factors in PCa and other cancers. (C,D): The expression of *ZWINT* was negatively correlated with the expression of immunostimulatory factors CD40 and TMEM173. CD40: Cluster of differentiation 40; TMEM173: Transmembrane protein 173; PRAD: Prostate adenocarcinoma.