Table SI. Probe sequences.

| Gene | Sequence (5′→3′) |
|------|------------------|
| *EpCAM* | TGGTGCTCGTTGATGAGTCA |
| | AGCCAGCTTTGAGCAAATGA |
| | AAAGCCCATCATTGTTCTGG |
| | CTCTCATCGCAGTCAGGATC |
| | TCCTTGTCTGTTCTTCTGAC |
| | CTCAGAGCAGGTTATTTCAG |
| *OCT4* | GGGTTCTTGATCGGCAAATA |
| | ATCCAACTCGCAGTTCAATG |
| | AAATCAATCCCCACTCCGAC |
| | ACCAACTTTATACTTGTCGC |
| | GGCGAAGAAGAGAGCCTGAA |
| | AAATGTCCGAATACTCCTGC |
| | TTTCTTCCTAGCTTAGAGTC |
| | GCATACAACTGTTAGCGAGC |

Table SII. Cox regression models of radiographic progression-free survival.

A, Univariate

| Variable | P-value | HR | 95% CI | |
| --- | --- | --- | --- | --- |
| | | | Lower | Upper |
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | <0.001 | 3.578 | 1.777 | 7.204 |
| Age, ≥70 vs. <70 years | 0.242 | 1.483 | 0.767 | 2.867 |
| History of prostatectomy, yes vs. no | 0.641 | 0.855 | 0.443 | 1.652 |
| History of radiotherapy, yes vs. no | 0.454 | 1.293 | 0.659 | 2.537 |
| History of other therapy, yes vs. no | 0.510 | 0.671 | 0.205 | 2.197 |
| Gleason score at initial diagnosis, ≥7 vs. <7 | 0.300 | 1.435 | 0.725 | 2.843 |
| ECOG PS score, 1 vs. 0 | 0.071 | 1.885 | 0.947 | 3.751 |
| Bone metastasis, yes vs. no | 0.695 | 0.811 | 0.285 | 2.312 |
| Lymph node metastasis, yes vs. no | 0.702 | 1.138 | 0.587 | 2.209 |
| Soft tissue metastasis, yes vs. no | 0.783 | 1.144 | 0.438 | 2.987 |
| Visceral metastasis, yes vs. no | 0.145 | 1.805 | 0.815 | 3.999 |
| PSA, high vs. low | 0.437 | 1.297 | 0.673 | 2.499 |
| ALP, high vs. low | 0.506 | 1.249 | 0.648 | 2.406 |
| LDH, high vs. low | 0.007 | 2.593 | 1.290 | 5.210 |

B, Multivariate model 1

| Variable | P-value | HR | 95% CI | |
| --- | --- | --- | --- | --- |
| | | | Lower | Upper |
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.005 | 2.907 | 1.383 | 6.111 |
| LDH, high vs. low | 0.127 | 1.786 | 0.848 | 3.762 |

C, Multivariate model 2

| Variable | P-value | HR | 95% CI | |
| --- | --- | --- | --- | --- |
| | | | Lower | Upper |
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.006 | 2.980 | 1.360 | 6.527 |
| ECOG PS score, 1 vs. 0 | 0.048 | 2.056 | 1.005 | 4.207 |
| LDH, high vs. low | 0.180 | 1.705 | 0.781 | 3.720 |

D, Multivariate model 3

| Variable | P-value | HR | 95% CI | |
| --- | --- | --- | --- | --- |
| | | | Lower | Upper |
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | <0.001 | 3.833 | 1.887 | 7.784 |
| ECOG PS score, 1 vs. 0 | 0.033 | 2.163 | 1.063 | 4.402 |

Low and high levels of PSA, ALP, and LDH were classified by median value. Model 1 included factors with P<0.05, model 2 included factors with P<0.1 and model 3 included all factors in the univariate model and the backward elimination method was used. HR, hazards ratio; CI, confidence interval; OCT4, octamer-binding transcription factor 4; CTC, circulating tumor cell; ECOG PS, eastern cooperative oncology group performance status; PSA, prostate-specific antigen; ALP, alkaline phosphatase; LDH, lactate dehydrogenase.

Table SIII. Cox regression models of overall survival.

A, Univariate

| Variable | P-value | HR | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.008 | 3.956 | 1.434 | 10.913 |
| Age, ≥70 vs. <70 years | 0.246 | 1.701 | 0.694 | 4.168 |
| History of prostatectomy, yes vs. no | 0.391 | 0.674 | 0.274 | 1.657 |
| History of radiotherapy, yes vs. no | 0.362 | 1.534 | 0.611 | 3.852 |
| History of other therapy, yes vs. no | 0.512 | 0.509 | 0.067 | 3.842 |
| Gleason score at initial diagnosis, ≥7 vs. <7 | 0.228 | 1.805 | 0.691 | 4.716 |
| ECOG PS score, 1 vs. 0 | 0.030 | 2.719 | 1.101 | 6.716 |
| Bone metastasis, yes vs. no | 0.352 | 0.552 | 0.158 | 1.929 |
| Lymph node metastasis, yes vs. no | 0.490 | 1.366 | 0.563 | 3.312 |
| Soft tissue metastasis, yes vs. no | 0.558 | 1.454 | 0.416 | 5.084 |
| Visceral metastasis, yes vs. no | 0.068 | 2.375 | 0.938 | 6.017 |
| PSA, high vs. low | 0.117 | 2.061 | 0.835 | 5.089 |
| ALP, high vs. low | 0.446 | 1.412 | 0.581 | 3.43 |
| LDH, high vs. low | 0.161 | 1.938 | 0.769 | 4.885 |

B, Multivariate model 1

| Variable | P-value | HR | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.008 | 3.938 | 1.428 | 10.858 |
| ECOG PS score, 1 vs. 0 | 0.032 | 2.750 | 1.090 | 6.935 |

C, Multivariate model 2

| Variable | P-value | HR | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.011 | 4.154 | 1.382 | 12.491 |
| ECOG PS score, 1 vs. 0 | 0.038 | 2.878 | 1.063 | 7.793 |
| Visceral metastasis, yes vs. no | 0.810 | 0.876 | 0.297 | 2.582 |

D, Multivariate model 3

| Variable | P-value | HR | 95% CI Lower | 95% CI Upper |
|---|---|---|---|---|
| CTC$^+$/OCT4$^+$ vs. CTC$^+$/OCT4$^-$ or CTC$^-$ | 0.008 | 3.938 | 1.428 | 10.858 |
| ECOG PS score, 1 vs. 0 | 0.032 | 2.750 | 1.090 | 6.935 |

Low and high levels of PSA, ALP, and LDH were classified by median value. Model 1 included factors with P<0.05, model 2 included factors with P<0.1 and model 3 included all factors in the univariate model and the backward elimination method was used. HR, hazards ratio; CI, confidence interval; OCT4, octamer-binding transcription factor 4; CTC, circulating tumor cell; ECOG PS, Eastern Cooperative Oncology Group Performance Status; PSA, prostate-specific antigen; ALP, alkaline phosphatase; LDH, lactate dehydrogenase.