**SUPPLEMENTARY TABLES**

**Supplementary Table 1.** Relationshipbetween hormonal status of breast cancer and expression of Smad4 and GATA3

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter | N = 226 | Smad4 | GATA3 |
| Negative | Positive | Negative | Positive |
| ER |  |  |  |  |  |
|  Negative | 74 | 38 (51.4%) | 36 (48.6%) | 68 (91.9%) | 6 (8.1%) |
|  Positive | 152 | 62 (40.8%) | 90 (59.2%) | 42 (27.6%) | 110 (72.4%) |
| PR |  |  |  |  |  |
|  Negative | 102 | 50 (49%) | 52 (51%) | 78 (76.5%) | 24 (23.5%) |
|  Positive | 124 | 50 (40.3%) | 74 (59.7%) | 32 (25.8%) | 92 (74.2%) |
| HER2 |  |  |  |  |  |
|  Negative | 165 | 73(44.2%) | 92 (55.8%) | 72 (43.6%) | 93 (56.4%) |
|  Positive | 61 | 27 (44.3%) | 34 (55.7%) | 38 (62.3%) | 23 (37.7%) |
| ER, oestrogen receptor; PR, progesterone receptor; HER2, human epidermal growth factor receptor 2 |

**Supplementary Table 2.** Relapse-free and overall survival analyses according to Smad4 and GATA3 expression

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Relapse-free survival | Univariate significance\* | Multivariate significance**†** | Relative risk | 95% CI |
| Smad4- *vs*. Smad4+ | **0.004** | **0.017** | 2.118 | 1.145-3.918 |
| GATA3+ *vs*. GATA3- | **0.031** | 0.522 | 1.252 | 0.629-2.492 |
| Overall survival |  |  |  |  |
| Smad4- *vs*. Smad4+ | **0.038** | 0.258 | 1.447 | 0.763-2.742 |
| GATA3+ *vs*. GATA3- | 0.055 | 0.901 | 1.047 | 0.503-2.181 |
| \*Log-rank test**†**Adjusted for AJCC stage, histological grade, lymphatic and perineural invasion, and oestrogen receptor*p* < 0.05 shown in bold |

**Supplementary Table 3.** Relapse-free and overall survival analyses according to combined markers of Smad4 and GATA3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Relapse-free survival | Univariate significance\* | Multivariate significance**†** | Relative risk | 95% CI |
| Smad4-/GATA3+ *vs*. Smad4+/GATA3+ | **0.012** | 0.17 | 2.438 | 0.683-8.705 |
| Smad4-/GATA3+ *vs*. Smad4-/GATA3- | **0.044** | 0.533 | 1.706 | 0.318-9.139 |
| Smad4+/GATA3+ *vs*. Smad4+/GATA3- | 0.103 | 0.518 | 1.277 | 0.608-2.679 |
| Smad4-/GATA3- *vs*. Smad4+/GATA3- | 0.051 | 0.106 | 1.828 | 0.88-3.798 |
| Smad4+/GATA3+ *vs*. Smad4-/GATA3- | 0.556 | 0.072 | 2.415 | 0.924-6.311 |
| Overall survival |  |  |  |  |
| Smad4-/GATA3+ *vs*. Smad4+/GATA3+ | **0.002** | 0.054 | 7.478 | 0.968-57.744 |
| Smad4-/GATA3+ *vs*. Smad4-/GATA3- | **0.002** | 0.115 | 6.194 | 0.639-59.99 |
| Smad4+/GATA3+ *vs*. Smad4+/GATA3- | 0.656 | 0.435 | 0.715 | 0.308-1.659 |
| Smad4-/GATA3- *vs*. Smad4+/GATA3- | 0.704 | 0.993 | 1.004 | 0.466-2.161 |
| Smad4+/GATA3+ *vs*. Smad4-/GATA3- | 0.928 | 0.577 | 1.299 | 0.518-3.256 |
| \*Log-rank test**†**Adjusted for AJCC 7th, histological grade, lymphovascular and perineural invasion, and estrogen receptor*p* < 0.05 shown in bold |

**Supplementary Table 4.** Relapse-free and overall survival analyses according to combined markers of Smad4 and GATA3 in luminal A and luminal B HER2+ type

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Subtype | Relapse-free survival | Univariate significance\* | Multivariate significance**†** | Relative risk | 95% CI |
| Luminal A | Smad4-/GATA3+ *vs*. Smad4+/GATA3- | **0.02** | **0.022** | 6.303 | 1.31-30.33 |
| Luminal B HER2+ | Smad4-/GATA3+ *vs*. Smad4+/GATA3- | **0.043** | 0.548 | 24.212 | 0.001-8.0110 |
| Subtype | Overall survival |  |  |  |  |
| Luminal A | Smad4-/GATA3+ *vs*. Smad4+/GATA3- | 0.057 | 0.114 | 7.284 | 0.619-85.685 |
| Luminal B HER2+ | Smad4-/GATA3+ *vs*. Smad4+/GATA3- | 0.13 | 0.862 | 22.66 | 0-4.6416 |
| \*Log-rank test**†** Adjusted for AJCC 7th, histological grade, and lymphovascular and perineural invasion*p* < 0.05 shown in bold |