Supplement Table1.Comparisons of different staging systems after excluding patients with chemotherapy.

|  |  |  |  |
| --- | --- | --- | --- |
| Endpoint | Staging system  | IDC cohort | ILC cohort |
|  |  | AIC | C-index | P for C-index | AIC | C-index | P for C-index |
| DSS |  |  |  |  |  |  |  |
|  | AS | 34505.23  | 0.8625 | <0.001 | 3409.928  | 0.8713 | 0.090 |
|  | PS | 33789.74  | 0.8802 |  | 3423.048  | 0.8591 |  |
| OS |  |  |  |  |  |  |  |
|  | AS | 98472.24  | 0.8007 | 0.003 | 10475.35  | 0.7901 | 0.027 |
|  | PS | 97916.33 | 0.8052 |  | 10493.56  | 0.7803 |  |

Abbreviations: IDC, invasive ductal carcinoma; ILC, invasive lobular carcinoma; DSS, disease-specific survival; OS, overall survival; CI, confidence interval; AS, anatomic staging system; PS, prognostic staging system; AIC, Akaike information criterion; C-index, concordance index

Supplement Table2.Comparisons of different staging systems among patients with ER-positve and HER2-negative tumors

|  |  |  |  |
| --- | --- | --- | --- |
| Endpoint | Staging system  | IDC cohort | ILC cohort |
|  |  | AIC | C-index | P for C-index | AIC | C-index | P for C-index |
| DSS |  |  |  |  |  |  |  |
|  | AS |  44883.96  | 0.8219 | P<0.001 |  6019.248  | 0.8345 | P=0.011 |
|  | PS |  44288.19  | 0.8370 |  |  6050.292  | 0.8169 |  |
| OS |  |  |  |  |  |  |  |
|  | AS |  103387.6  | 0.7667 | P<0.001 | 14002.89  | 0.7789 | P=0.070 |
|  | PS |  102966  | 0.7746 |  | 14021.42  | 0.7730 |  |

Abbreviations: IDC, invasive ductal carcinoma; ILC, invasive lobular carcinoma; DSS, disease-specific survival; OS, overall survival; CI, confidence interval; AS, anatomic staging system; PS, prognostic staging system; AIC, Akaike information criterion; C-index, concordance index

Supplement table 3 Comparisons of different scoring systems after excluding patients with chemotherapy(n=12552).

|  |  |  |  |
| --- | --- | --- | --- |
| Scoring system | AIC | C-index | P for C-index |
| AS | 3468.831 | 0.8214 | / |
| AS+G | 3464.273 | 0.8198 | 0.109 |
| AS+GEP | 3449.534 | 0.8302 | 0.262 |

Abbreviations: AS, anatomic stage; AS+G, anatomic stage plus grade; AS+GEP, anatomic stage plus grade plus estrogen receptor plus progesterone receptor; AIC, Akaike information criterion; C-index, concordance index

Supplement table 4 Comparisons of different scoring systems among patients with ER-positive and HER2-negative tumors(n=17381).

|  |  |  |  |
| --- | --- | --- | --- |
| Scoring system | AIC | C-index | P for C-index |
| AS | 6134.929 | 0.8362 | / |
| AS+G | 6134.638 | 0.8310 | 0.152 |
| AS+GEP | 6116.453 | 0.8356 | 0.456 |

Abbreviations: AS, anatomic stage; AS+G, anatomic stage plus grade; AS+GEP, anatomic stage plus grade plus estrogen receptor plus progesterone receptor; AIC, Akaike information criterion; C-index, concordance index