

## Supplementary

**Table S1** Baseline data of patients in the training and validation sets

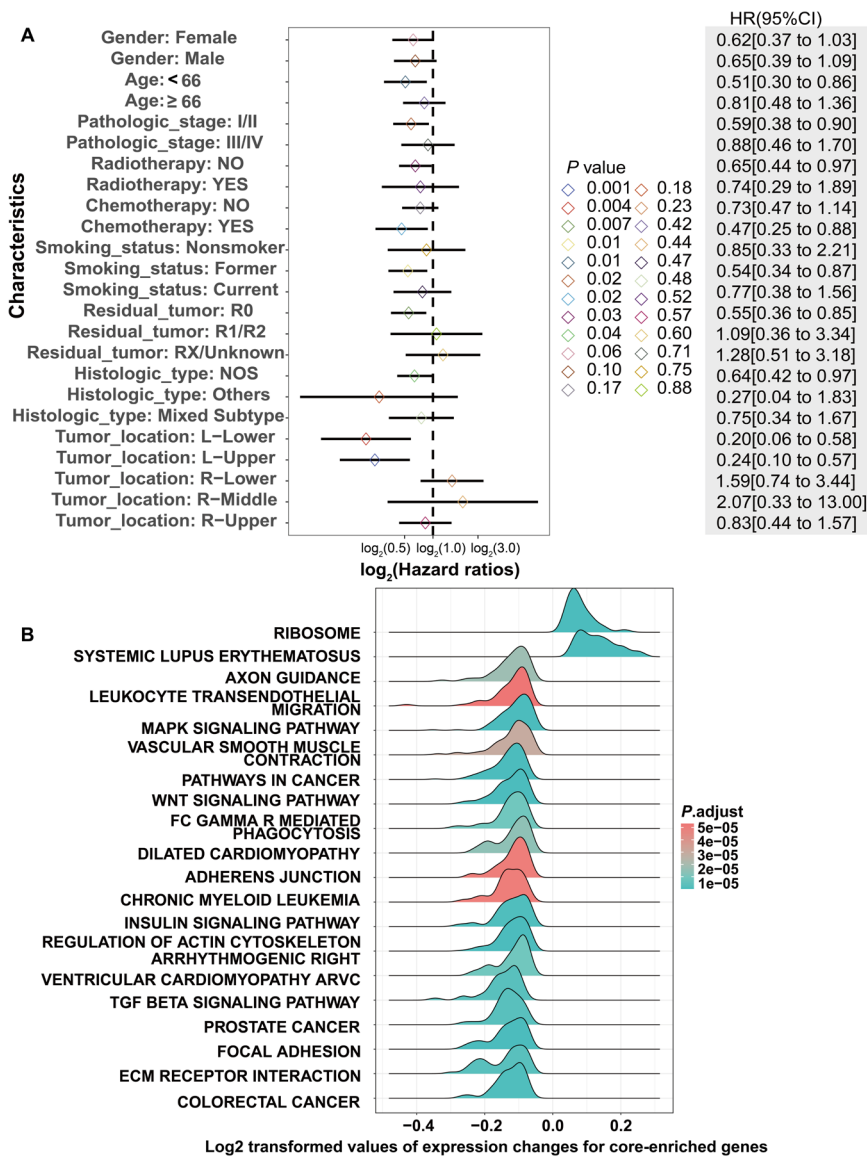
| Variables                  | Total (n=327)       | Train (n=229)       | Validation (n=98)    | P    |
|----------------------------|---------------------|---------------------|----------------------|------|
| TIGIT                      |                     |                     |                      | 1    |
| Low                        | 130 (40%)           | 91 (40%)            | 39 (40%)             |      |
| High                       | 197 (60%)           | 138 (60%)           | 59 (60%)             |      |
| Gender                     |                     |                     |                      | 0.74 |
| Female                     | 183 (56%)           | 130 (57%)           | 53 (54%)             |      |
| Male                       | 144 (44%)           | 99 (43%)            | 45 (46%)             |      |
| Age (years)                |                     |                     |                      | 0.38 |
| <66                        | 164 (50%)           | 119 (52%)           | 45 (46%)             |      |
| ≥66                        | 163 (50%)           | 110 (48%)           | 53 (54%)             |      |
| Pathologic_stage           |                     |                     |                      | 0.37 |
| I/II                       | 265 (81%)           | 189 (83%)           | 76 (78%)             |      |
| III/IV                     | 62 (19%)            | 40 (17%)            | 22 (22%)             |      |
| Radiotherapy               |                     |                     |                      | 0.09 |
| No                         | 293 (90%)           | 210 (92%)           | 83 (85%)             |      |
| Yes                        | 34 (10%)            | 19 (8%)             | 15 (15%)             |      |
| Chemotherapy               |                     |                     |                      | 0.58 |
| No                         | 219 (67%)           | 156 (68%)           | 63 (64%)             |      |
| Yes                        | 108 (33%)           | 73 (32%)            | 35 (36%)             |      |
| Smoking_status             |                     |                     |                      | 0.63 |
| Nonsmoker                  | 41 (13%)            | 30 (13%)            | 11 (11%)             |      |
| Current                    | 82 (25%)            | 60 (26%)            | 22 (22%)             |      |
| Former                     | 204 (62%)           | 139 (61%)           | 65 (66%)             |      |
| Residual_tumor             |                     |                     |                      | 0.77 |
| R0                         | 220 (67%)           | 151 (66%)           | 69 (70%)             |      |
| R1/R2                      | 13 (4%)             | 10 (4%)             | 3 (3%)               |      |
| RX/unknown                 | 94 (29%)            | 68 (30%)            | 26 (27%)             |      |
| Histologic_type            |                     |                     |                      | 0.41 |
| NOS                        | 204 (62%)           | 144 (63%)           | 60 (61%)             |      |
| Mixed subtype              | 67 (20%)            | 43 (19%)            | 24 (24%)             |      |
| Others                     | 56 (17%)            | 42 (18%)            | 14 (14%)             |      |
| Tumor_location             |                     |                     |                      | 0.83 |
| L-lower                    | 56 (17%)            | 42 (18%)            | 14 (14%)             |      |
| L-upper                    | 76 (23%)            | 55 (24%)            | 21 (21%)             |      |
| R-lower                    | 63 (19%)            | 43 (19%)            | 20 (20%)             |      |
| R-middle                   | 14 (4%)             | 9 (4%)              | 5 (5%)               |      |
| R-upper                    | 118 (36%)           | 80 (35%)            | 38 (39%)             |      |
| OS                         |                     |                     |                      | 1    |
| Alive                      | 213 (65%)           | 149 (65%)           | 64 (65%)             |      |
| Dead                       | 114 (35%)           | 80 (35%)            | 34 (35%)             |      |
| Median OS (Q1, Q3), months | 21.73 (14.48, 35.1) | 22.13 (14.67, 35.7) | 21.07 (14.12, 33.11) | 0.65 |

TIGIT, T cell immunoreceptor with immunoglobulin and immunoreceptor tyrosine-based inhibitory motif domain; NOS, not otherwise specified; L, left; R, right; OS, overall survival.

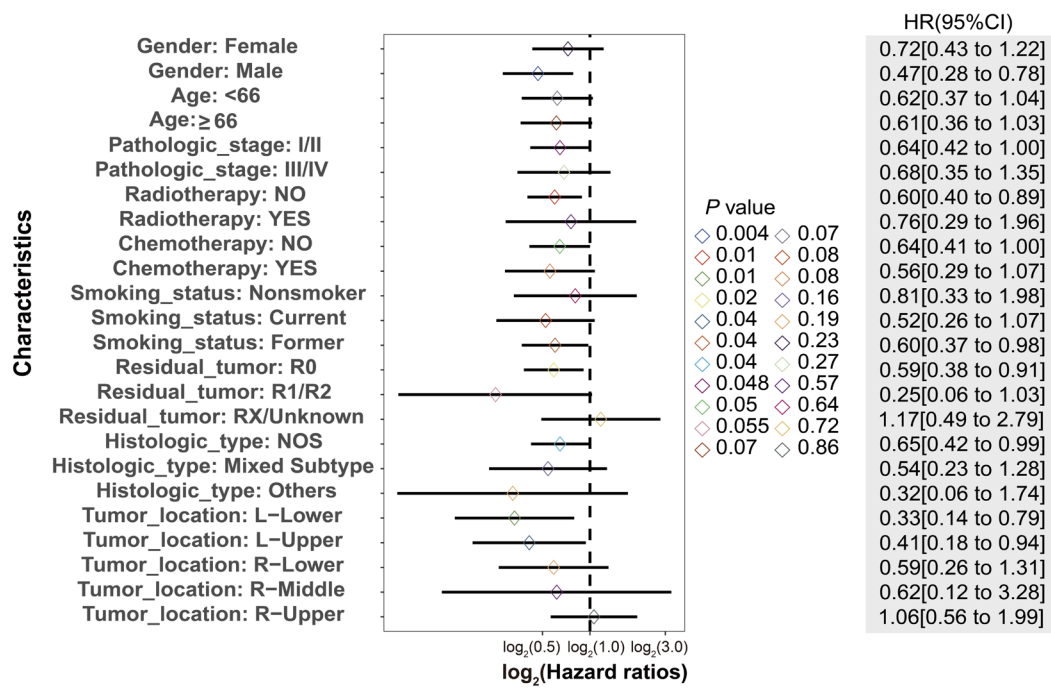
**Table S2** Clinical characteristics of different PS groups

| Variables        | Total (n=327) | Low (n=130) | High (n=197) | P     |
|------------------|---------------|-------------|--------------|-------|
| Gender           |               |             |              | 0.03  |
| Female           | 183 (56%)     | 83 (64%)    | 100 (51%)    |       |
| Male             | 144 (44%)     | 47 (36%)    | 97 (49%)     |       |
| Age (years)      |               |             |              | 1     |
| <66              | 164 (50%)     | 65 (50%)    | 99 (50%)     |       |
| ≥66              | 163 (50%)     | 65 (50%)    | 98 (50%)     |       |
| Pathologic_stage |               |             |              | 0.048 |
| I/II             | 265 (81%)     | 98 (75%)    | 167 (85%)    |       |
| III/IV           | 62 (19%)      | 32 (25%)    | 30 (15%)     |       |
| Radiotherapy     |               |             |              | 1     |
| No               | 293 (90%)     | 116 (89%)   | 177 (90%)    |       |
| Yes              | 34 (10%)      | 14 (11%)    | 20 (10%)     |       |
| Chemotherapy     |               |             |              | 0.39  |
| No               | 219 (67%)     | 83 (64%)    | 136 (69%)    |       |
| Yes              | 108 (33%)     | 47 (36%)    | 61 (31%)     |       |
| Smoking_status   |               |             |              | 0.03  |
| Nonsmoker        | 41 (13%)      | 14 (11%)    | 27 (14%)     |       |
| Current          | 82 (25%)      | 24 (18%)    | 58 (29%)     |       |
| Former           | 204 (62%)     | 92 (71%)    | 112 (57%)    |       |
| Residual_tumor   |               |             |              | 0.21  |
| R0               | 220 (67%)     | 88 (68%)    | 132 (67%)    |       |
| R1/R2            | 13 (4%)       | 8 (6%)      | 5 (3%)       |       |
| RX/unknown       | 94 (29%)      | 34 (26%)    | 60 (30%)     |       |
| Histologic_type  |               |             |              | 0.11  |
| NOS              | 204 (62%)     | 74 (57%)    | 130 (66%)    |       |
| Mixed subtype    | 67 (20%)      | 34 (26%)    | 33 (17%)     |       |
| Others           | 56 (17%)      | 22 (17%)    | 34 (17%)     |       |
| Tumor_location   |               |             |              | 0.81  |
| L-lower          | 56 (17%)      | 23 (18%)    | 33 (17%)     |       |
| L-upper          | 76 (23%)      | 33 (25%)    | 43 (22%)     |       |
| R-lower          | 63 (19%)      | 21 (16%)    | 42 (21%)     |       |
| R-middle         | 14 (4%)       | 6 (5%)      | 8 (4%)       |       |
| R-upper          | 118 (36%)     | 47 (36%)    | 71 (36%)     |       |

PS, pathomics score; L, left; R, right; NOS, not otherwise specified.



**Figure S1** Univariate Cox regression subgroup analysis. (A) The effect of TIGIT high and low expression on the prognosis of patients in different subgroups of each covariate. (B) GSEA in the KEGG gene set. HR, hazard ratio; CI, confidence interval; NOS, not otherwise specified; TIGIT, T cell immunoreceptor with immunoglobulin and immunoreceptor tyrosine-based inhibitory motif domain; KEGG, Kyoto Encyclopedia of Genes and Genomes.



**Figure S2** The effect of PS high and low expression on the prognosis of patients in different subgroups of each covariate. HR, hazard ratio; CI, confidence interval; NOS, not otherwise specified; PS, pathomics score.