**Supplementary Table S2. Relapse-free survival of gene signature and single genes according to hormone status.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **RFS (Not****censored)** | **Cases** | ***n*** | **Low-expression****cohort (months)** | **High-expression****cohort (months)** | ***P* value****(¥ Log-rank)** | **FC** |
| **Signature** | All\_BC | 1764 | 46 | 18 | **1E-16 ¥\*** | **-61** |
| *ATF4* | 3951 | 55 | 36 | **2.7E-5 ¥\*** | **-34** |
| *TGFBR1* | 1764 | 39 | 28 | 0.054 | -27 |
| *SMAD4* | 1764 | 23 | 44 | **2.9E-11 ¥\*** | **95** |
| *PIK3CA* | 3951 | 217 | 184 | **2.1E-9 ¥\*** | **-15** |
| *RICTOR* | 1764 | 25 | 41 | **6.1E-9 ¥\*** | **62** |
| *RPTOR* | 1764 | 27 | 41 | **0.0005 ¥\*** | **51** |
| *EIF4EBP1* | 3951 | 217 | 163 | **1E-16 ¥\*** | **-25** |
| *NDRG1* | 3951 | 217 | 160 | **1E-16 ¥\*** | **-26** |
| **Signature** | ER– | 347 | 171 | 32 | **4.7E-8 ¥\*** | **-81** |
| *ATF4* | 801 | 161 | 126 | **0.005 ¥\*** | **-22** |
| *TGFBR1* | 801 | 171 | 58 | **0.015 ¥** | **-66** |
| *SMAD4* | 347 | 171 | 63 | 0.15 | -63 |
| *PIK3CA* | 801 | 30 | 29 | 0.1594 | -3 |
| *RICTOR* | 347 | 18 | 29 | 0.2407 | 58 |
| *RPTOR* | 347 | 171 | 58 | 0.0529 | -66 |
| *EIF4EBP1* | 801 | 145 | 171 | 0.2061 | 19 |
| *NDRG1* | 801 | 171 | 123 | **0.0005 ¥\*** | **-28** |
| **Signature** | ER+ | 762 | 107 | 55 | **0.0006 ¥\***† | **-49** |
| *ATF4* | 2061 | 81 | 56 | **0.0032 ¥\*** | **-31** |
| *TGFBR1* | 762 | 59 | 110 | **0.0008 ¥\*** | **87** |
| *SMAD4* | 762 | 61 | 110 | **0.0054 ¥** | **81** |
| *PIK3CA* | 2061 | 217 | 229 | 0.0761 | 6 |
| *RICTOR* | 762 | 65 | 92 | 0.0514 | 41 |
| *RPTOR* | 762 | 111 | 60 | **0.0023 ¥\*** | **-46** |
| *EIF4EBP1* | 2061 | 217 | 152 | **4.3E-10 ¥\*** | **-30** |
| †*NDRG1* | 2061 | 217 | 184 | **0.0002 ¥\***† | **-15** |
| **Signature** | TNBC | 161 | 57 | 16 | **1E-5 ¥\***† | **-72** |
| *ATF4* | 255 | 36 | 22 | **0.0234 ¥** | **-40** |
| *TGFBR1* | 161 | 55 | 29 | 0.1861 | -47 |
| *SMAD4* | 161 | 26 | 36 | 0.2227 | 39 |
| *PIK3CA* | 255 | 25 | 36 | 0.2273 | 46 |
| *RICTOR* | 161 | 18 | 43 | **0.0081 ¥\*** | **143** |
| *RPTOR* | 161 | 57 | 22 | **0.0252 ¥** | **-61** |
| *EIF4EBP1* | 255 | 36 | 22 | **0.035 ¥** | **-39** |
| †*NDRG1* | 255 | NA | NA | **0.0001 ¥**† | **NA** |
| **RFS:** relapse free survival. **ER:** estrogen receptor. **All\_BC:** all types of breast cancer. **TNBC:** triple negative breast cancer. **FC:** fold change. **NA:** not available. **\*** Significant with multivariate analysis. **†** Does not meet leave-one-out cross-validation. |