

## Supplemental Materials

**S1 Table.** mRNA selected and entered into the prognostic model

| mRNA associated with lymphatic invasion | Fold change | FDR   | OR (95% CI)         | Weight  |
|---|-------------|-------|---------------------|---------|
| HTR3A                                   | -1.61       | 0.014 | 1.35 (0.93-2.06)    | 0.2983  |
| PCP4                                    | 1.31        | 0.031 | 0.53 (0.30-0.80)    | -0.6302 |
| CAPN9                                   | 1.15        | 0.017 | 0.42 (0.20-0.76)    | -0.8574 |
| MASP1                                   | 1.11        | 0.020 | 0.49 (0.24-0.88)    | -0.7095 |
| CYP8B1                                  | -1.05       | 0.011 | 3.74 (1.77-10.48)   | 1.3189  |
| GDF5                                    | 1.02        | 0.015 | 0.61 (0.34-1.02)    | -0.4935 |
| AOAH                                    | -0.97       | 0.017 | 5.96 (1.43-29.79)   | 1.7850  |
| ADORA3                                  | -0.92       | 0.013 | 5.77 (1.60-28.78)   | 1.7531  |
| CLCNKB                                  | 0.90        | 0.029 | 0.62 (0.34-1.03)    | -0.4757 |
| EBI3                                    | -0.90       | 0.020 | 2.20 (0.84-6.95)    | 0.7888  |
| LILRB3                                  | -0.85       | 0.014 | 2.88 (1.01-8.93)    | 1.0577  |
| C16orf54                                | -0.84       | 0.014 | 6.70 (2.20-31.84)   | 1.9022  |
| PODNL1                                  | -0.82       | 0.029 | 1.71 (0.90-3.73)    | 0.5381  |
| DCN                                     | -0.77       | 0.026 | 16.30 (3.29-165.00) | 2.7914  |
| USH2A                                   | -0.75       | 0.017 | 1.74 (0.95-3.87)    | 0.5553  |
| FGD2                                    | -0.73       | 0.020 | 8.57 (1.75-69.85)   | 2.1488  |
| TNFAIP8L2                               | -0.71       | 0.029 | 0.00 (0.00-0.04)    | -5.9484 |
| SP140                                   | -0.71       | 0.030 | 0.37 (0.10-1.04)    | -1.0032 |
| WISP1                                   | -0.68       | 0.021 | 0.04 (0.00-0.26)    | -3.1931 |
| SH2D4B                                  | 0.67        | 0.026 | 0.45 (0.22-0.85)    | -0.7937 |
| RUNX1                                   | -0.67       | 0.016 | 0.14 (0.02-0.57)    | -1.9687 |

FDR, false discovery rate; OR, odds ratio; CI, confidence interval.