

**Table S1** Relationship between TROP2 expression (total and intensity) and survival outcomes

| Variables                | TROP2 total      |         |                  |         | TROP2 Intensity  |         |                  |         |
|--------------------------|------------------|---------|------------------|---------|------------------|---------|------------------|---------|
|                          | PFS              |         | OS               |         | PFS              |         | OS               |         |
|                          | HR (95% CI)      | P value | HR (95% CI)      | P value | HR (95% CI)      | P value | HR (95% CI)      | P value |
| Male (n=63)              | 1.18 (0.88–1.58) | 0.26    | 1.23 (0.89–1.70) | 0.20    | 1.33 (0.98–1.79) | 0.057   | 1.34 (0.95–1.88) | 0.08    |
| Female (n=92)            | 1.25 (0.99–1.59) | 0.059   | 1.53 (1.16–2.02) | 0.002   | 1.35 (1.06–1.72) | 0.012   | 1.55 (1.17–2.05) | 0.002   |
| Age<75 year (n=102)      | 1.11 (0.88–1.40) | 0.35    | 1.35 (1.03–1.76) | 0.025   | 1.23 (0.97–1.55) | 0.07    | 1.38 (1.05–1.82) | 0.016   |
| Age ≥75 years (n=53)     | 1.42 (1.04–1.93) | 0.024   | 1.44 (1.02–2.02) | 0.032   | 1.52 (1.11–2.09) | 0.008   | 1.55 (1.09–2.20) | 0.012   |
| Non-Smoking (n=89)       | 1.14 (0.89–1.46) | 0.29    | 1.30 (0.99–1.72) | 0.057   | 1.22 (0.96–1.57) | 0.10    | 1.33 (1.00–1.76) | 0.043   |
| Smoking (n=65)           | 1.28 (0.97–1.69) | 0.08    | 1.47 (1.07–2.03) | 0.016   | 1.43 (1.06–1.91) | 0.014   | 1.57 (1.11–2.23) | 0.007   |
| PS 0-1 (n=125)           | 1.17 (0.95–1.45) | 0.12    | 1.35 (1.06–1.71) | 0.013   | 1.29 (1.04–1.59) | 0.017   | 1.38 (1.08–1.76) | 0.007   |
| PS 2-4 (n=30)            | 1.33 (0.85–2.09) | 0.19    | 1.36 (0.83–2.22) | 0.20    | 1.19 (0.76–1.87) | 0.43    | 1.37 (0.80–2.33) | 0.22    |
| Biopsy (n=110)           | 1.20 (0.97–1.48) | 0.08    | 1.50 (1.17–1.92) | <0.001  | 1.25 (1.00–1.56) | 0.045   | 1.49 (1.14–1.95) | 0.002   |
| Stage IV (n=117)         | 1.29 (1.05–1.59) | 0.014   | 1.47 (1.17–1.85) | <0.001  | 1.32 (1.06–1.63) | 0.009   | 1.41 (1.11–1.80) | 0.003   |
| Recurrence (n=38)        | 0.86 (0.54–1.39) | 0.55    | 0.88 (0.46–1.71) | 0.72    | 1.06 (0.67–1.67) | 0.78    | 1.10 (0.60–2.01) | 0.75    |
| PD-L1 <1% (n=61)         | 1.72 (1.25–2.36) | <0.001  | 1.62 (1.16–2.24) | 0.003   | 1.84 (1.32–2.55) | <0.001  | 1.61 (1.15–2.25) | 0.004   |
| PD-L1 ≥1% (n=83)         | 1.03 (0.80–1.33) | 0.78    | 1.30 (0.98–1.73) | 0.07    | 1.15 (0.89–1.47) | 0.26    | 1.30 (1.01–1.84) | 0.034   |
| exon 19 deletion (n=76)  | 1.11 (0.84–1.47) | 0.45    | 1.38 (1.00–1.90) | 0.049   | 1.27 (0.96–1.67) | 0.09    | 1.40 (1.02–1.93) | 0.036   |
| L858R (n=74)             | 1.18 (0.91–1.54) | 0.20    | 1.33 (0.99–1.80) | 0.050   | 1.28 (0.98–1.67) | 0.06    | 1.43 (1.05–1.95) | 0.017   |
| CR+PR (n=91)             | 1.34 (1.05–1.73) | 0.019   | 1.60 (1.20–2.14) | 0.001   | 1.45 (1.11–1.88) | 0.004   | 1.60 (1.18–2.18) | 0.002   |
| SD+PD (n=40)             | 1.11 (0.80–1.55) | 0.51    | 1.27 (0.88–1.83) | 0.19    | 1.21 (0.86–1.69) | 0.26    | 1.34 (0.93–1.94) | 0.11    |
| Brain meta (n=56)        | 1.37 (1.00–1.90) | 0.047   | 1.32 (0.94–1.86) | 0.10    | 1.52 (1.08–2.12) | 0.011   | 1.42 (1.00–2.02) | 0.043   |
| Non-brain meta (n=99)    | 1.09 (0.87–1.38) | 0.43    | 1.39 (1.06–1.83) | 0.014   | 1.20 (0.95–1.51) | 0.12    | 1.43 (1.08–1.88) | 0.009   |
| Ple. meta (n=55)         | 1.31 (0.95–1.81) | 0.09    | 1.33 (0.94–1.87) | 0.10    | 1.53 (1.10–2.12) | 0.009   | 1.53 (1.07–2.17) | 0.015   |
| Non-Pleural meta (n=100) | 1.13 (0.92–1.45) | 0.19    | 1.43 (1.10–1.86) | 0.007   | 1.23 (0.98–1.54) | 0.07    | 1.41 (1.07–1.85) | 0.012   |
| Lung meta (n=60)         | 1.16 (0.85–1.58) | 0.32    | 1.13 (0.81–1.57) | 0.46    | 1.25 (0.91–1.71) | 0.15    | 1.22 (0.87–1.73) | 0.23    |
| Non-lung meta (n=95)     | 1.24 (0.98–1.56) | 0.07    | 1.60 (1.22–2.10) | <0.001  | 1.36 (1.07–1.72) | 0.010   | 1.60 (1.21–2.11) | <0.001  |
| Non-liver meta (n=140)   | 1.21 (0.99–1.47) | 0.054   | 1.38 (1.11–1.73) | 0.004   | 1.30 (1.07–1.58) | 0.008   | 1.39 (1.10–1.74) | 0.004   |
| Bone meta (n=66)         | 1.27 (0.97–1.68) | 0.08    | 1.62 (1.18–2.24) | 0.002   | 1.27 (0.95–1.69) | 0.09    | 1.59 (1.13–2.25) | 0.005   |
| Non-bone meta (n=89)     | 1.16 (0.90–1.49) | 0.24    | 1.24 (0.93–1.65) | 0.13    | 1.30 (1.01–1.67) | 0.035   | 1.31 (0.98–1.75) | 0.06    |
| Non-LC (n=137)           | 1.21 (0.99–1.47) | 0.051   | 1.37 (1.09–1.71) | 0.005   | 1.33 (1.09–1.63) | 0.004   | 1.42 (1.13–1.79) | 0.002   |

CR, complete response; HR, hazard ratio; LC, lymphangitic carcinomatosis; meta, metastasis; OS, overall survival; PD, progressive disease; PFS, progression-free survival; PR, partial response; PS, performance status; SD, stable disease; TROP2, trophoblast cell-surface antigen 2.