**Supplementary Data 2**

Our study demonstrated that the 5-year survival rate was similar for the pSTAT1+ CD163- (n = 36) group and the pSTAT1+ CD163+ (n = 6) group. The pSTAT1+ cell count was greater than the CD163+ cell count in TAMs in all patients (36/36; 100%) in the pSTAT1+ CD163- group. In the 6 cases with pSTAT1+ CD163+ expression, a majority (4/6; 66.7%) had a higher pSTAT1+ cell count than CD163 cell count. The similar pSTAT1+/CD163+ cell count ratios, as well as the small number of patients, may have resulted in the lack of a statistically significant difference in the survival rate of the two groups. On the other hand, two previous studies reported that the detection of CD163+ pSTAT1+ co-expression can be used to identify M1 polarized macrophages.33,34 Our findings support the conclusions of the two previous studies and suggest that CD163 alone may not be an M2-specific marker. pSTAT1+ CD163+ co-expressing TAMs can be regarded as M1 polarized macrophages. Since our study is the first study focused on TAM polarization in pulmonary SqCC, further investigations are required to clarify the relationship between different markers and clinical outcomes.