Figure S1. Analytical procedure of mIS and mSIA based on tumor-infiltrating immune cell density in the present study. (A) Analytical procedure of mIS in the present study. The number of $CD8^+$ and $CD3^+$ immune cells per unit area (mm^2) was converted to a percentile, and the average was defined as the mIS. The cut-off value was set at 25%, and the CRC cohort in the present study was divided into two groups: High mIS and low mIS. (B) Analytical procedure of mSIA in the present study. The mSIA ratio based on the number of tumor-infiltrating $CD8^+$ and $CD163^+$ immune cells per unit area (mm^2) was calculated using the formula shown in the upper panel. The mSIA ratio was converted to a percentile as the mSIA percentile. The cut-off value of mSIA was set at 51.9%, determined by ROC analysis for recurrence, and the CRC cohort in the present study was divided into two groups: High mSIA and low mSIA. mIS, modified Immunoscore; mSIA, modified signature of immune activation; CT, central tumor; IM, invasive margin; CRC, colorectal cancer; ROC, receiver operating characteristics.

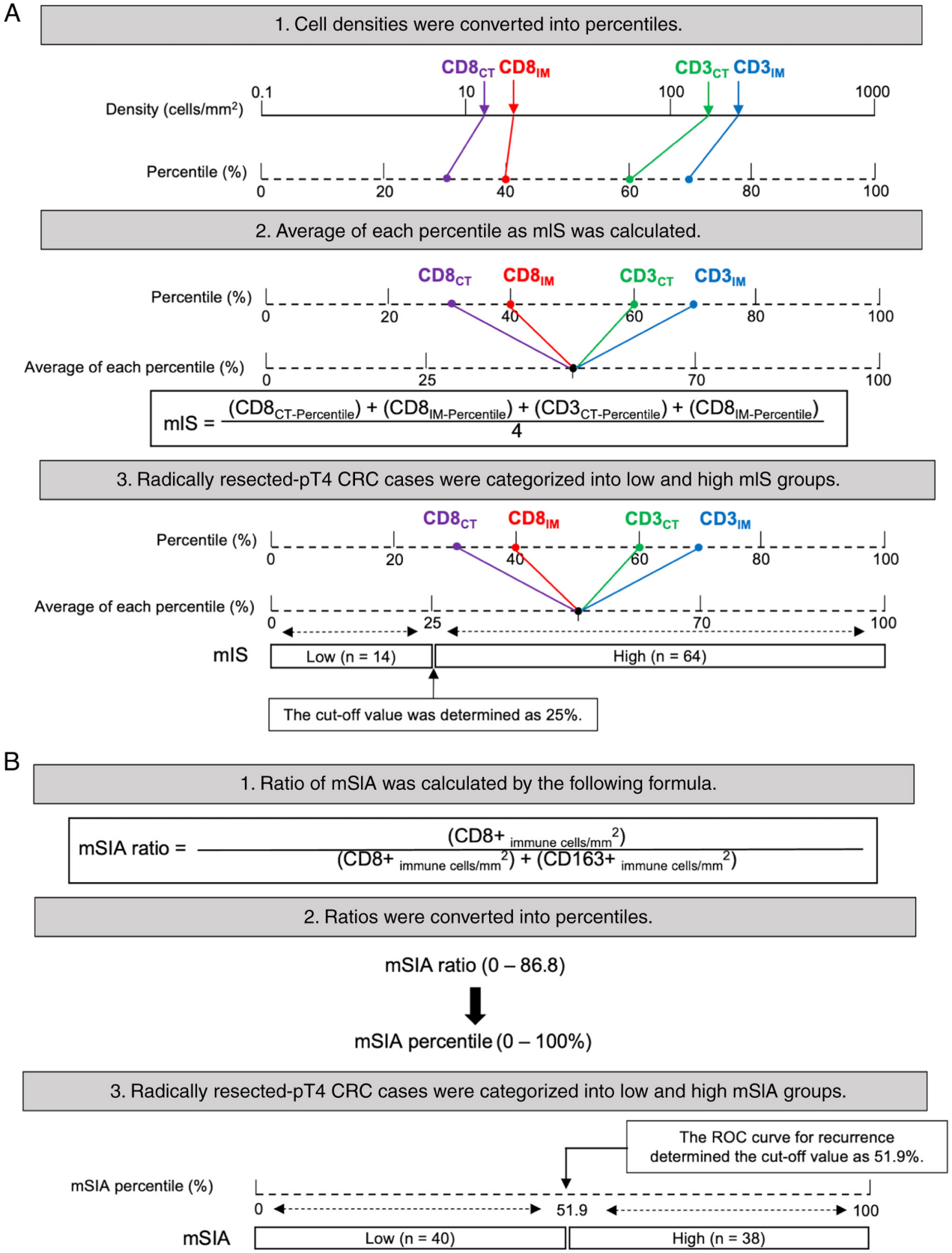

Figure S2. $CD8^+$, $CD3^+$ and $CD163^+$ immune cell density at the central tumor and invasive margin. Distribution of $CD8^+$, $CD3^+$ and $CD163^+$ immune cells in the central tumor and invasive margin of radically resected pT4 colorectal cancer tissues (n=78). $^*P<0.05$. ns, not significant.