



Supplementary Fig. S2. Neighborhood analysis of all patients (A), responders before treatment (B), responders after treatment (C), non-responders before treatment (D) and non-responders after treatment (E). Each block represents clusters in the X axis that are surrounded (colored in red) or avoided (colored in blue) by clusters in the Y axis. Clusters in X and Y axis correspond to clusters shown in Supplemental Table 4. Green boxes and horizontal dash lines represents cluster changes in responders with treatment. Red boxes and vertical dash lines represent differences clusters and spatial relationship between responders and non-responders. Horizontal black dash line showing epithelial cells or cancer cells (Cluster 3) in responders avoided by most immune population (cluster 17-24) on Day 1, but surrounded by these immune cells after treatment. Horizontal blue dash line showing CD8 T cells (cluster 23) in responders surrounded by CD15+ neutrophils (cluster 27) on Day 1, but avoided on Day 17. Vertical blue dash line showing non-responders having some immune populations surrounding epithelial cells or cancer cells (cluster 3) on Day 1 before treatment.