

Description of Additional Supplementary Files:

Supplementary Data 1: Summary of ST platform assays

Supplementary Data 2: Panel Gene lists of ST platforms

Supplementary Data 3: Overlapped target genes and negative control probes

Supplementary Data 4: Quality control metrics of ST platforms

Supplementary Data 5: Percentages and number of segmented cells that co-expressed disjoint genes.

Supplementary Data 6: Pathologists' Evaluations