Description of Additional Supplementary Files

Supplementary Data 1. Feature summary of the lung adenocarcinoma specimens and single-cell RNA sequencing data.

Supplementary Data 2. List of canonical markers to assign the cell types and their references.

Supplementary Data 3. List of genes specific to the states (S1, S2, and S3) of malignant and normal epithelial cells including club cells and their functional categories. p-value for genes, two-sided Student's t-test; p-value for GO terms, one-sided Fisher's exact test.

Supplementary Data 4. List of genes specific to tL/B, mLN, mBrain, and metastasis samples. p-value, two-sided Student's t-test.

Supplementary Data 5. Tumor EC-specific gene lists identified at single-cell resolution and their functional categories. p-value for genes, two-sided Student's t-test; p-value for GO terms, one-sided Fisher's exact test.

Supplementary Data 6. List of genes specific to the states of monocytes/mo-Macs in lung tissues or lymph nodes. p-value, two-sided Student's t-test.

Supplementary Data 7. Full list of genes specific to the states of CD8+ T cells. p-value, two-sided Student's t-test.

Supplementary Data 8. Full list of ligand-receptor pairs used in the interaction analysis within tissues of each origin. One-sided p-value calculated from permutation test.