

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: An independent cohort of 1027 patients with metastatic gastric cancer from Zhejiang Cancer Hospital.

File Name: Supplementary Data 2

Description: Clinical information of 18 patients in this study.

File Name: Supplementary Data 3

Description: Estimated number of cells and genes in each sample by cellranger.

File Name: Supplementary Data 4

Description: Differential expression genes (DEGs) between primary malignant cells and primary non-malignant cells ($p_val_adj < 0.05$ and $|avg_log2FC| > 0.25$). Wilcoxon rank sum test followed by Bonferroni's multiple-comparison test.

File Name: Supplementary Data 5

Description: DEGs between metastases malignant cells and primary malignant cells ($p_val_adj < 0.05$ and $|avg_log2FC| > 0.25$). Wilcoxon rank sum test followed by Bonferroni's multiple-comparison test.

File Name: Supplementary Data 6

Description: DEGs between ovarian metastases malignant cells and primary malignant cells ($p_val_adj < 0.05$ and $|avg_log2FC| > 0.25$). Wilcoxon rank sum test followed by Bonferroni's multiple-comparison test.

File Name: Supplementary Data 7

Description: The seven meta-programs represented distinct functional signatures annotated by the shared genes.

File Name: Supplementary Data 8

Description: DEGs on fibroblasts between ovarian metastases and primary tumors ($p_val_adj < 0.05$ and $|avg_log2FC| > 0.25$).

File Name: Supplementary Data 9

Description: Key resources.