

Table S1. Clinical information of the patients.

stereo-seq												
patients No.	MMR status	MSI status	pre-treatment	post-treatment TNM stage	treatment	aPD1 drug	pre/post-treatment	course of treatment	age	gender	response	label in this study
24	dMMR	MSI-H	cT4N1M0	pT0N0M0	aPD1	Pembrolizumab	post	4	69	F	CR	dCR
25	dMMR	MSI-H	cT4N2M0	pT0N0M0	aPD1	Pembrolizumab	post	8	34	M	CR	dCR
56	dMMR	MSI-H	cT4N2M1	pT4N2M1	NA	NA	pre	4	55	F	SD	dMMR
61	dMMR	MSI-H	cT4N2M0	pT1N0M0	aPD1	Camrelizumab	post	4	51	F	PR/nCR	dCR
95	dMMR	MSI-H	cT3N0M0	pT3N0M0	aPD1	Camrelizumab	post	4	71	M	SD/PR	dSD
99	dMMR	MSI-H	cT4N2M0	pT4N0M0	na	NA	pre	8	39	M	SD	dMMR
100	dMMR	MSI-H	cT4N2M0	pT3N0M0	na	NA	pre	0	55	M	SD	dMMR
104	dMMR	undetermined	cT3N1M0	pT3N0M0	aPD1	Sintilimab	post	4	53	F	SD/PD	dSD
107	dMMR	undetermined	cT4N1M0	pT3N0M0	NA	NA	pre	0	79	F	na	dMMR
112	dMMR	MSI-H	cT4N2M1	pT1N0M0	aPD1	Sintilimab	post	6	34	F	PR	dPR
50	pMMR	MSS	cT3N0M0	pT3N1M0	NA	NA	pre	0	57	F	na	pMMR
55	pMMR	MSS	cT3N0M0	pT2N2M0	NA	NA	pre	0	46	F	na	pMMR
59	pMMR	MSS	cT4N1M0	pT3N0M0	NA	NA	pre	0	74	F	na	pMMR
67	pMMR	MSS	cT3N0M0	pT3N1M0	NA	NA	pre	0	74	F	na	pMMR
71	pMMR	MSS	cT3N0M0	pT3N0M0	NA	NA	pre	0	51	M	na	pMMR

scRNA-seq												
patients No.	MMR status	MSI status	pre-treatment	post-treatment TNM stage	treatment	aPD1 drug	pre/post-treatment	course of treatment	age	gender	response	label in this study
146	dMMR	MSI-H	cT4N1M0	pT3N1M0	aPD1	Pembrolizumab	post	3	76	F	SD	dSD
147	dMMR	MSI-H	cT4N1M1	pT4N1M1	aPD1+chem	Nivolumab	post	6	38	M	SD	dSD
148	dMMR	MSI-H	cT4N2M0	pT3N1M0	aPD1	Tislelizumab	post	3	34	F	PR	dPR
99	dMMR	MSI-H	cT4N2M0	pT4N0M0	aPD1	Camrelizumab	post	8	39	M	SD	dSD
24	dMMR	MSI-H	cT4N1M0	pT0N0M0	aPD1	Pembrolizumab	post	4	69	F	CR	dCR
27	pMMR	MSS	cT3N1M0	pT3N1M0	NA	NA	naive	0	61	F	na	pMMR
30	pMMR	MSS	cT3N1M0	pT3N0M0	NA	NA	naive	0	67	M	na	pMMR
32	pMMR	MSS	cT3N0M0	pT3N0M0	NA	NA	naive	0	56	F	na	pMMR
34	pMMR	MSS	cT3N0M0	pT3N0M0	NA	NA	naive	0	70	M	na	pMMR
37	pMMR	MSS	cT3N0M0	pT3N1M0	NA	NA	naive	0	63	M	na	pMMR