

Table S1. Gene List of 83 Immune-related Genes

Pathway	Gene
EMT	CALD1
EMT	CDH1
EMT	CLDN3
EMT	CLDN4
EMT	CLDN7
EMT	EMP3
EMT	FBN1
EMT	FLNA
EMT	FN1
EMT	FOXC2
EMT	LOX
EMT	TNC
EMT	TWIST1
EMT	VIM
EMT	ZEB1
EMT	ZEB2
IPRES_eCD8T	ANGPT2
IPRES_eCD8T	AXL
IPRES_eCD8T	C10orf54
IPRES_eCD8T	CD200
IPRES_eCD8T	CD276
IPRES_eCD8T	CD28
IPRES_eCD8T	CD40
IPRES_eCD8T	CD80
IPRES_eCD8T	CD86
IPRES_eCD8T	CTLA4
IPRES_eCD8T	FLT1
IPRES_eCD8T	HAVCR2
IPRES_eCD8T	IKBKE
IPRES_eCD8T	IL10
IPRES_eCD8T	LOXL2
IPRES_eCD8T	ROR2
IPRES_eCD8T	STAT3
IPRES_eCD8T	TNFRSF14
IPRES_eCD8T	TNFRSF9
IPRES_eCD8T	TNFSF4
IPRES_eCD8T	VEGFC
PD	CD274
PD	PDCD1
Teff_interferon_gama	CCL5
Teff_interferon_gama	CCR5
Teff_interferon_gama	CD2
Teff_interferon_gama	CD27
Teff_interferon_gama	CD3D
Teff_interferon_gama	CD3E
Teff_interferon_gama	CD4
Teff_interferon_gama	CD74
Teff_interferon_gama	CD8A
Teff_interferon_gama	CIITA
Teff_interferon_gama	CMKLR1
Teff_interferon_gama	CXCL10
Teff_interferon_gama	CXCL11

Pathway	Gene
Teff_interferon_gama	CXCL13
Teff_interferon_gama	CXCL9
Teff_interferon_gama	CXCR6
Teff_interferon_gama	EOMES
Teff_interferon_gama	GZMA
Teff_interferon_gama	GZMB
Teff_interferon_gama	GZMK
Teff_interferon_gama	HLA-DQA1
Teff_interferon_gama	HLA-DRA
Teff_interferon_gama	HLA-DRB1
Teff_interferon_gama	HLA-E
Teff_interferon_gama	IDO1
Teff_interferon_gama	IFNG
Teff_interferon_gama	IL2RB
Teff_interferon_gama	IL2RG
Teff_interferon_gama	LAG3
Teff_interferon_gama	NKG7
Teff_interferon_gama	PDCD1LG2
Teff_interferon_gama	PRF1
Teff_interferon_gama	PSMB10
Teff_interferon_gama	PTPRC
Teff_interferon_gama	STAT1
Teff_interferon_gama	TAGAP
Teff_interferon_gama	TBX21
Teff_interferon_gama	TIGIT
TGF_Beta	ACTA2
TGF_Beta	COL4A1
TGF_Beta	SH3PXD2A
TGF_Beta	TAGLN
TGF_Beta	TGFB1
TGF_Beta	TGFBR2

Table S2_1. Summary of clinicopathological, molecular and tumor immune microenvironment parameters used in this study

sampl e_id	upid	TCGA _Gro up	Age	Tumo r_gr ade	Hist olog y	FIGO _sta ge	LVSI	Myomet rial_i nvasio n	Adjuv ant_t herap y	BMI	Recu rrence	Aneu ploidy_ core	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD score	HRD clus ter	puri ty	ploi dy	OS_s tatu s	OS	DFS	DFS_ statu s	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG210 05581 FFP	p99	MSI_ H	30	3	Endo metr ioid	I	Yes	No or superf icial	Radio thera py	18.7	No	11	7	Nega tive	9.97	-0.5	3	5	11	19	1_Hig h	0.55	2.28	0	89.8	89.8	0	1	1	0	2	0	3
SG210 04886 FFP	p16	MSI_ H	47	3	Endo metr ioid	III	Yes	Deep	Radio thera py	25.3	Yes	3	5	Nega tive	29.9	-0.3	3	3	19	25	1_Hig h	0.67	2.06	1	11.9	11.9	1	2	0	3	2	0	5
SG210 04691 FFP	p59	TP53 _m	49	3	Endo metr ioid	I	No	No or superf icial	Chemo thera py	25.8	Yes	21	13	Nega tive	12	-0.7	4	3	12	19	1_Hig h	0.67	1.85	1	32.3	21.8	1	4	0	0	0	0	0
SG210 05429 FFP	p93	TP53 _m	58	3	Clea r-cell	III	Yes	Deep	- radio thera py	26.6	Yes	12	12	Nega tive	7.98	-0.5	7	6	16	29	1_Hig h	0.29	1.94	1	12.3	12.3	1	0	2	4	3	0	6
SG210 05135 FFP	p79	TP53 _m	52	3	Endo metr ioid	I	No	No or superf icial	Chemo thera py	21.6	No	16	13	Nega tive	9.97	-0.7	5	6	19	30	1_Hig h	0.32	2.42	0	106	106	0	4	4	2	0	2	3
SG210 05261 FFP	p33	TP53 _m	61	3	Sero us	III	Yes	Deep	- radio thera py	21.7	Yes	11	18	Posi tive	12	-0.6	8	10	21	39	1_Hig h	0.3	2.26	1	24.8	7	1	2	4	0	6	0	0
SG210 09632 FFP	p128	TP53 _m	70	3	Sero us	III	No	Deep	Chemo thera py	28.4	No	23		Nega tive	9.97	-0.3	11	12	30	53	1_Hig h	0.45	1.93	0	16.6	16.6	0	0	6	3	0	5	2
SG210 09539 FFP	p118	TP53 _m	71	3	Sero us	III	Yes	Deep	- radio thera py	19.1	No	26		Nega tive	5.98	-0.3	7	9	40	56	1_Hig h	0.4	2.33	0	25.9	25.9	0	2	3	2	5	4	5
SG210 04754 FFP	p11	TP53 _m	62	3	Othe r	I	Miss ing	Deep	Radio thera py	30.1	Yes	36	59	Posi tive	15	-1.2	10	16	46	72	1_Hig h	0.53	6.24	1	102	24	1	6	10	8	3	5	4
SG210 04844 FFP	p66	TP53 _w	61	3	Endo metr ioid	III	Yes	Deep	- radio thera py	27.8	Yes	11	7	Nega tive	2.99	-0.2	7	4	8	19	1_Hig h	0.42	1.83	1	31	9.7	1	2	0	0	0	0	3
SG210 05572 FFP	p45	TP53 _w	59	3	Othe r	II	No	Deep	- radio thera py	17.5	Yes	21	11	Posi tive	13	-0.9	3	4	13	20	1_Hig h	0.48	2.85	0	7.1	2	1	2	4	1	0	0	0

sample_id	upid	TCGA_Group	Age	Tumor_grade	Histology	FIGO_stage	LVI	Myometrial_invasion	Adjuvant_therapy	BMI	Recurrence	Aneuploidy_score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD_score	HRD_cluster	purity	ploidy	OS_status	OS	DFS	DFS_status	chr1-HRD	chr2-HRD	chr3-HRD	chr4-HRD	chr5-HRD	chr6-HRD
SG21009521 FFP	p115	TP53_w	51	3	Cleancell	IV	Yes	Deep	Chemotherapy	20.3	Yes	15		Negative	11	-1	10	9	26	45	1_High	0.74	2.17	0	26.1	12.8	1	4	2	4	3	6	2
SG21009725 FFP	p139	MSI_H	56	1	Endometroid	I	No	Deep	No	30.5	No	1		Negative	29.9	-0.6	0	1	1	2	2_Middle	0.78	2.04	0	13	13	0	2	0	0	0	0	0
SG21004766 FFP	p62	MSI_H	58	2	Endometroid	II	Yes	Deep	Missing	19.4	No	2	2	Negative	23.9	-0.4	1	0	1	2	2_Middle	0.3	2.02	0	37.8	37.8	0	0	0	0	0	0	0
SG21009602 FFP	p125	MSI_H	57	3	Endometroid	I	Yes	No or superficial	Chemotherapy	24.3	No	7		Negative	19.9	-0.5	0	1	1	2	2_Middle	0.37	2.14	0	8.2	8.2	0	2	0	0	0	0	0
SG21004796 FFP	p12	TP53_m	57	2	Endometroid	III	Yes	Deep	Chemotherapy	23.6	Yes	1	1	Negative	6.98	-0.6	0	0	2	2	2_Middle	0.29	2.02	1	44.6	24	1	0	2	0	0	0	0
SG21005504 FFP	p98	POLE	55	3	Other	I	Yes	Deep	Radiotherapy	30	No	0	2	Negative	295	-0.5	0	0	3	3	2_Middle	0.42	2.03	0	80	80	0	0	2	1	0	0	0
SG21004808 FFP	p65	POLE	47	3	Endometroid	II	No	Deep	No	20	No	2	1	Negative	142	-0.9	1	1	1	3	2_Middle	0.63	2.1	0	10.2	10.2	0	0	0	0	0	0	0
SG21005144 FFP	p30	MSI_H	64	3	Endometroid	II	Yes	Deep	Radiotherapy	20.7	No	0	1	Negative	48.9	-0.2	1	1	1	3	2_Middle	0.55	2	0	56.5	56.5	0	0	0	0	0	0	0
SG21005138 FFP	p29	MSI_H	60	1	Endometroid	I	No	No or superficial	No	28.2	No	1	4	Negative	35.9	-0.5	1	1	1	3	2_Middle	0.44	1.99	0	69.1	69.1	0	3	0	0	0	0	0
SG21009695 FFP	p134	MSI_H	57	2	Endometroid	I	No	No or superficial	No	25.7	No	2		Negative	34.9	-0.5	1	1	1	3	2_Middle	0.25	2.05	0	12.3	12.3	0	0	0	0	0	0	0
SG21005246 FFP	p85	MSI_H	53	1	Endometroid	I	No	No or superficial	Chemotherapy	33.9	No	1	3	Negative	32.9	-0.7	0	0	3	3	2_Middle	0.56	2.06	0	66	66	0	1	2	0	0	0	0
SG21009470 FFP	p108	MSI_H	60	2	Endometroid	I	Yes	No or superficial	Chemotherapy	29.3	No	6		Negative	22.9	-0.1	1	1	1	3	2_Middle	0.36	2.17	0	17.6	17.6	0	0	0	0	0	0	0

sample_id	upid	TCGA_Gro up	Age	Tumor_gr ade	Histolog y	FIGO _stage	LVI	Myomet rial_in vasion	Adjuv ant_thera py	BMI	Recu rrence	Aneu ploidy_ score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD score	HRD clus ter	puri ty	ploi dy	OS_s tatus	OS	DFS	DFS_ status	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG210 05084 FFP	p25	TP53 _w	77	2	Endo metr ioid	I	No	Deep	Radio thera py	22.8	No	1	1	Nega tive	15	-0.6	1	0	2	3	2_Mid dle	0.34	2.01	0	66.8	66.8	0	1	0	0	0	0	0
SG210 04772 FFP	p63	TP53 _m	60	3	Endo metr ioid	IV	Yes	Deep	Missi ng	28.7	Yes	1	3	Nega tive	8.97	-0.3	1	1	1	3	2_Mid dle	0.55	2	1	7.03	7.03	1	0	0	0	0	0	0
SG210 04583 FFP	p5	TP53 _w	44	3	Clea r-cell	issin	No	No or superf icial	No	22.6	No	8	3	Nega tive	6.98	-0.6	1	0	2	3	2_Mid dle	0.1	2.06	0	82.7	82.7	0	3	0	0	0	0	0
SG210 04928 FFP	p19	TP53 _w	51	1	Endo metr ioid	I	No	No or superf icial	No	26.8	No	2	1	Nega tive	6.98	-0.7	1	1	1	3	2_Mid dle	0.2	2.03	0	28.7	28.7	0	0	0	0	0	0	0
SG210 05129 FFP	p27	TP53 _w	61	2	Endo metr ioid	I	No	Deep	Radio thera py	23.6	No	1	2	Nega tive	3.99	-0.8	0	0	3	3	2_Mid dle	0.58	2.02	0	81.8	81.8	0	2	0	0	0	0	0
SG210 04907 FFP	p17	MSI_ H	40	2	Endo metr ioid	I	Yes	No or superf icial	Chemo thera py	21.9	No	6	2	Nega tive	59.8	-0.2	2	1	1	4	2_Mid dle	0.1	2.04	0	57.9	57.9	0	0	3	0	0	0	0
SG210 05614 FFP	p103	MSI_ H	62	2	Endo metr ioid	I	No	No or superf icial	No	22.8	No	1	1	Nega tive	21.9	-0.4	1	2	1	4	2_Mid dle	0.4	2.08	0	24.1	24.1	0	1	0	0	0	0	0
SG210 04523 FFP	p1	TP53 _w	44	2	Endo metr ioid	I	No	No or superf icial	Chemo thera py	19.3	No	7	5	Nega tive	17	-0.6	1	0	3	4	2_Mid dle	0.1	1.93	0	44.2	44.2	0	0	0	2	0	0	0
SG210 05102 FFP	p77	TP53 _w	66	1	Endo metr ioid	I	No	Deep	Radio thera py	25.6	No	0	2	Nega tive	8.97	-0.7	1	0	3	4	2_Mid dle	0.48	2	0	64.3	64.3	0	2	0	0	0	0	0
SG210 09569 FFP	p121	TP53 _w	56	1	Endo metr ioid	I	Yes	No or superf icial	No	24.8	No	11		Nega tive	5.98	-1	1	2	1	4	2_Mid dle	0.17	2.31	0	21.2	21.2	0	1	0	0	0	0	0
SG210 04919 FFP	p18	TP53 _w	47	2	Endo metr ioid	I	No	No or superf icial	No	27.2	No	1	6	Nega tive	3.99	-0.3	1	2	1	4	2_Mid dle	0.42	2.02	0	60.9	60.9	0	0	0	0	0	0	0
SG210 05168 FFP	p80	TP53 _w	46	2	Endo metr ioid	II	Yes	No or superf icial	Radio thera py	22.1	No	6	1	Nega tive	2.99	-0.8	1	2	1	4	2_Mid dle	0.48	2.15	0	32.2	32.2	0	0	0	0	0	0	0

sampl e_id	upid	TCGA _Gro up	Age	Tumo r_gr ade	Hist olog y	FIGO _sta ge	LVSI	Myomet rial_i nvasio n	Adjuv ant_t herap y	BMI	Recu rrence	Aneu ploidy_ score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD score	HRD clus ter	puri ty	ploi dy	OS_s tatu s	OS	DFS	DFS_ statu s	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG210 09626 FFP	p126	MSI_ H	41	3	Endo metr ioid	III	Yes	Deep	Chemo - radio thera	26.6	No	7		Posi tive	41.9	-1.3	1	2	2	5	2_Mid dle	0.85	4.26	0	15.5	15.5	0	0	0	0	0	0	0
SG210 04448 FFP	p48	MSI_ H	51	3	Endo metr ioid	I	No	No or superf icial	Chemo thera py	20.7	No	1	2	Nega tive	36.9	-0.2	2	1	2	5	2_Mid dle	0.32	2.01	0	77.1	77.1	0	0	0	3	0	0	0
SG210 09473 FFP	p109	MSI_ H	46	2	Endo metr ioid	I	No	No or superf icial	No	21.7	No	0		Nega tive	22.9	-0.6	2	1	2	5	2_Mid dle	0.41	2	0	18.7	18.7	0	2	0	0	0	0	0
SG210 09479 FFP	p111	MSI_ H	63	2	Endo metr ioid	I	Yes	Deep	Chemo thera py	30.4	No	1		Nega tive	21.9	-0.2	0	1	4	5	2_Mid dle	0.23	2.09	0	13.8	13.8	0	3	0	0	0	0	0
SG210 04649 FFP	p53	TP53 _w	53	1	Endo metr ioid	II	No	No or superf icial	Radio thera py	25.1	Yes	6	2	Nega tive	16	-0.9	1	1	3	5	2_Mid dle	0.2	2.18	1	29.2	28.1	1	2	0	0	0	0	0
SG210 04937 FFP	p20	TP53 _w	49	2	Endo metr ioid	III	No	Deep	Chemo - radio thera	30.5	No	4	1	Nega tive	12	-0.7	1	1	3	5	2_Mid dle	0.57	2.23	0	16.2	16.2	0	0	0	2	0	0	0
SG210 09494 FFP	p113	TP53 _w	52	3	Othe r	issin	Yes	Deep	Chemo - radio thera	24	No	3		Nega tive	9.97	-0.7	0	2	3	5	2_Mid dle	0.73	2.12	0	29.2	29.2	0	1	0	0	0	0	0
SG210 05626 FFP	p104	TP53 _w	64	2	Endo metr ioid	I	No	No or superf icial	No	30.8	No	0	1	Nega tive	7.98	-0.5	2	1	2	5	2_Mid dle	0.27	2	0	64.9	64.9	0	2	0	0	0	0	0
SG210 09749 FFP	p143	TP53 _w	51	2	Endo metr ioid	II	No	No or superf icial	No	19.4	No	2		Nega tive	7.98	-0.8	1	2	2	5	2_Mid dle	0.1	2.05	0	15.7	15.7	0	2	0	0	0	0	0
SG210 04898 FFP	p69	MSI_ H	56	2	Endo metr ioid	I	Yes	Deep	Radio thera py	23.5	No	2	4	Nega tive	29.9	-0.3	0	0	6	6	2_Mid dle	0.69	2.04	0	94	94	0	0	2	1	0	0	0
SG210 04730 FFP	p60	TP53 _w	57	3	Endo metr ioid	IV	Miss ing	Deep	Chemo - radio thera	23.2	No	12	5	Nega tive	19.9	-0.7	1	2	3	6	2_Mid dle	0.16	2.43	0	78.9	78.9	0	0	4	0	0	0	0
SG210 05021 FFP	p22	TP53 _w	39	1	Endo metr ioid	I	No	No or superf icial	No	21.2	No	2	3	Nega tive	12	-0.7	1	1	4	6	2_Mid dle	0.6	2	0	86.9	86.9	0	1	2	0	0	0	0

sample_id	upid	TCGA_Group	Age	Tumor_grade	Histology	FIGO_stage	LVSI	Myometrial_invasion	Adjuvant_therapy	BMI	Recurrence	Aneuploidy_score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD_score	HRD_cluster	purity	ploidy	OS_status	OS	DFS	DFS_status	chr1-HRD	chr2-HRD	chr3-HRD	chr4-HRD	chr5-HRD	chr6-HRD
SG21005375 FFP	p91	TP53_w	58	1	Endometroid	III	Yes	Deep	Radiotherapy	27.9	No	1	5	Negative	12	-0.4	2	1	3	6	2_Middle	0.28	2.05	0	49.9	49.9	0	1	0	0	0	0	0
SG21005069 FFP	p74	TP53_w	57	2	Endometroid	III	Yes	Deep	Missing	29.3	No	16	4	Positive	6.98	-0.8	1	2	3	6	2_Middle	0.76	2.49	0	77.1	77.1	0	2	1	0	0	0	0
SG21005189 FFP	p82	TP53_w	61	2	Endometroid	III	No	Deep	Radiotherapy	20	No	9	5	Negative	7.98	-0.7	1	1	5	7	2_Middle	0.4	2.28	0	102	102	0	1	3	0	0	0	0
SG21005297 FFP	p35	TP53_w	57	2	Endometroid	I	No	No or superficial	No	28.8	No	8	7	Negative	7.98	-0.9	0	0	7	7	2_Middle	0.1	2.2	0	66	66	0	2	0	0	0	0	0
SG21005039 FFP	p24	MSI_H	63	2	Endometroid	I	No	Deep	Chemotherapy	25.6	No	1	3	Negative	34.9	-0.4	2	0	6	8	2_Middle	0.25	2.03	0	44.4	44.4	0	0	3	0	0	2	0
SG21005498 FFP	p39	TP53_w	51	1	Endometroid	I	No	No or superficial	No	34.3	No	2	4	Negative	7.98	-0.4	1	1	6	8	2_Middle	0.16	2.04	0	90.1	90.1	0	2	0	0	0	0	0
SG21009707 FFP	p136	MSI_H	68	3	Endometroid	III	Yes	Deep	Chemotherapy	24.1	No	7		Negative	37.9	-0.4	2	1	6	9	2_Middle	0.08	2.16	0	13.5	13.5	0	3	1	0	0	0	0
SG21004562 FFP	p3	MSI_H	58	3	Endometroid	II	Yes	Deep	Chemotherapy - radiotherapy	30.5	Yes	2	2	Negative	32.9	-0.5	2	3	4	9	2_Middle	0.49	2.1	1	13	6.97	1	5	0	0	0	0	0
SG21005027 FFP	p72	TP53_m	57	2	Endometroid	I	Yes	Deep	Chemotherapy	25.5	No	3	3	Negative	4.99	-0.9	3	3	3	9	2_Middle	0.4	2.07	0	38.8	38.8	0	3	0	0	0	0	0
SG21005075 FFP	p76	TP53_w	51	1	Endometroid	I	No	No or superficial	No	24.8	No	4	4	Negative	2.99	-0.4	1	3	5	9	2_Middle	0.41	2.06	0	68.1	68.1	0	2	0	0	0	0	0
SG21005549 FFP	p43	MSI_H	63	3	Endometroid	III	Yes	Deep	Chemotherapy - radiotherapy	27.6	No	1	3	Negative	49.9	-0.7	3	2	5	10	2_Middle	0.49	2	0	76.8	76.8	0	1	0	4	0	2	0
SG21009476 FFP	p110	TP53_m	65	1	Endometroid	I	No	Deep	Radiotherapy	33.3	No	3		Negative	7.98	-0.8	3	2	5	10	2_Middle	0.2	1.95	0	18.6	18.6	0	0	0	3	2	0	0

sample_id	upid	TCGA_Group	Age	Tumor_grade	Histology	FIGO_stage	LVI	Myometrial_invasion	Adjuvant_therapy	BMI	Recurrence	Aneuploidy_score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD_score	HRD_cluster	purity	ploidy	OS_status	OS	DFS	DFS_status	chr1-HRD	chr2-HRD	chr3-HRD	chr4-HRD	chr5-HRD	chr6-HRD
SG21004787FFP	p64	POLE	54	3	Other	issin	Yes	Deep	Missing	25.2	No	22	7	Positive	35.9	-1.1	1	4	7	12	2_Middle	0.75	5.98	0	76.4	76.4	0	0	0	0	0	0	
SG21009524FFP	p116	TP53_m	59	3	Serous	I	No	No or superficial	Chemotherapy	23.3	No	12		Negative	15	-0.6	2	0	10	12	2_Middle	0.25	1.88	0	26.3	26.3	0	0	0	0	0	0	
SG21005435FFP	p95	TP53_m	42	2	Endometrioid	I	No	No or superficial	No	27.6	No	12	6	Negative	8.97	-0.7	4	2	6	12	2_Middle	0.51	2.06	0	49	49	0	0	0	0	0	4	0
SG21005566FFP	p44	MSI_H	58	3	Endometrioid	I	No	No or superficial	Chemotherapy	27.3	No	5	4	Positive	136	-0.3	3	4	6	13	2_Middle	0.66	6.14	0	26.5	26.5	0	1	2	0	0	0	0
SG21005366FFP	p90	MSI_H	59	2	Endometrioid	I	No	No or superficial	No	26.3	Yes	3	5	Negative	14	-0.4	2	1	10	13	2_Middle	0.36	2.06	1	29.7	14	1	0	2	0	0	0	0
SG21004475FFP	p50	TP53_m	59	3	Other	III	Yes	No or superficial	Chemotherapy	23.3	Yes	13	8	Negative	11	-0.7	4	2	8	14	2_Middle	0.18	2.24	0	29.4	20.3	1	0	7	3	0	2	0
SG21009722FFP	p138	POLE	52	3	Endometrioid	I	No	Deep	No	22	No	0		Negative	443	-0.3	0	0	0	0	3_Low		2	0	11.5	11.5	0	0	0	0	0	0	0
SG21009548FFP	p119	POLE	47	3	Other	I	Yes	Deep	Chemotherapy	18.1	No	0		Negative	276	-0.2	0	0	0	0	3_Low		2	0	23.1	23.1	0	0	0	0	0	0	0
SG21004655FFP	p55	MSI_H	51	3	Endometrioid	I	No	Deep	Radiotherapy	24.2	Yes	0	0	Negative	172	-0.5	0	0	0	0	3_Low		2	0	66.7	33.2	1	0	0	0	0	0	0
SG21004889FFP	p68	MSI_H	48	3	Endometrioid	I	No	Deep	Radiotherapy	25.6	No	0	0	Negative	155	-0.1	0	0	0	0	3_Low		2	0	77.3	77.3	0	0	0	0	0	0	0
SG21005477FFP	p38	MSI_H	54	3	Endometrioid	II	Yes	Deep	Chemotherapy	22.2	No	0	0	Negative	125	-0.2	0	0	0	0	3_Low		2	0	30.3	30.3	0	0	0	0	0	0	0
SG21005396FFP	p37	MSI_H	52	1	Endometrioid	I	No	No or superficial	No	33.3	No	0	0	Negative	124	-0.4	0	0	0	0	3_Low		2	0	32.5	32.5	0	0	0	0	0	0	0

sample_id	upid	TCGA_Gro up	Age	Tumor_gr ade	Histolog y	FIGO _stage	LVI	Myomet rial_in vasion	Adjuv ant_thera py	BMI	Recu rrence	Aneu ploidy_s core	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD score	HRD clus ter	puri ty	ploi dy	OS_s tatus	OS	DFS	DFS_ status	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG210 09578 FFP	p124	MSI_ H	65	3	Endo metr ioid	I	Yes	No or superf icial	Chemo thera py Chemo - radio thera	22.6	No	0		Nega tive	95.7	-0.4	0	0	0	0	3_Low		2	0	19.4	19.4	0	0	0	0	0	0	0
SG210 05033 FFP	p23	MSI_ H	50	3	Endo metr ioid	II	No	Deep		25.5	No	0	0	Nega tive	90.7	-0.5	0	0	0	0	3_Low		2	0	66.8	66.8	0	0	0	0	0	0	0
SG210 09740 FFP	p142	POLE	60	2	Endo metr ioid	I	No	Deep	No	25.3	No	0		Nega tive	80.8	0.26	0	0	0	0	3_Low		2	0	1.87	1.87	0	0	0	0	0	0	0
SG210 04661 FFP	p8	MSI_ H	59	3	Endo metr ioid	I	No	No or superf icial	Chemo thera py	25.5	No	0	0	Nega tive	69.8	-0.2	0	0	0	0	3_Low		2	0	67.4	67.4	0	0	0	0	0	0	0
SG210 04670 FFP	p57	MSI_ H	49	3	Othe r	I	No	No or superf icial	Chemo thera py	30	No	0	0	Nega tive	69.8	0.03	0	0	0	0	3_Low		2	0	92.9	92.9	0	0	0	0	0	0	0
SG210 05489 FFP	p97	POLE	56	1	Endo metr ioid	I	No	No or superf icial	No	25.2	No	0	0	Nega tive	59.8	-0.3	0	0	0	0	3_Low		2	0	89.6	89.6	0	0	0	0	0	0	0
SG210 09701 FFP	p135	MSI_ H	49	2	Endo metr ioid	I	No	No or superf icial	No	27.3	No	0		Nega tive	58.8	-0.6	0	0	0	0	3_Low		2	0	13.7	13.7	0	0	0	0	0	0	0
SG210 05363 FFP	p89	POLE	55	2	Endo metr ioid	II	No	No or superf icial	Missi ng	30	No	0	0	Nega tive	56.8	-0.4	0	0	0	0	3_Low		2	0	55.7	55.7	0	0	0	0	0	0	0
SG210 04643 FFP	p52	MSI_ H	75	3	Othe r	III	Yes	Deep	Missi ng	30	No	0	0	Nega tive	51.8	-0.3	0	0	0	0	3_Low		2	0	103	103	0	0	0	0	0	0	0
SG210 05012 FFP	p21	MSI_ H	59	2	Endo metr ioid	I	No	Deep	Chemo thera py	25.2	No	0	0	Nega tive	46.9	-0.4	0	0	0	0	3_Low		2	0	30	30	0	0	0	0	0	0	0
SG210 05285 FFP	p86	MSI_ H	61	1	Endo metr ioid	I	No	No or superf icial	No	21.6	No	1	4	Nega tive	28.9	-0.4	0	0	0	0	3_Low	0.26	2.01	0	40.6	40.6	0	0	0	0	0	0	0
SG210 05519 FFP	p40	POLE	69	2	Endo metr ioid	I	No	No or superf icial	No	20.5	No	0	0	Nega tive	28.9	-0.3	0	0	0	0	3_Low		2	0	6.33	6.33	0	0	0	0	0	0	0

sample_id	upid	TCGA_Group	Age	Tumor_grade	Histology	FIGO_stage	LVSI	Myometrial_invasion	Adjuvant_therapy	BMI	Recurrence	Aneuploidy_score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD_score	HRD_cluster	purity	ploidy	OS_status	OS	DFS	DFS_status	chr1-HRD	chr2-HRD	chr3-HRD	chr4-HRD	chr5-HRD	chr6-HRD
SG21004682 FFP	p58	MSI_H	53	2	Missing	I	No	No or superficial	No	22.6	No	0	0	Negative	23.9	-0.1	0	0	0	0	3_Low		2	0	93.6	93.6	0	0	0	0	0	0	0
SG21005216 FFP	p83	TP53_w	49	1	Endometroid	I	Yes	Deep	Chemotherapy	23.7	No	0	0	Negative	22.9	-0.5	0	0	0	0	3_Low		2	0	77.7	77.7	0	0	0	0	0	0	0
SG21005584 FFP	p100	MSI_H	54	2	Endometroid	I	No	No or superficial	No	26.4	No	0	0	Negative	21.9	-0.4	0	0	0	0	3_Low		2	0	29.3	29.3	0	0	0	0	0	0	0
SG21004553 FFP	p2	MSI_H	63	2	Endometroid	I	Yes	No or superficial	Chemotherapy	31.1	No	0	0	Negative	20.9	-0.3	0	0	0	0	3_Low		2	0	41.4	41.4	0	0	0	0	0	0	0
SG21004451 FFP	p49	MSI_H	54	1	Endometroid	III	Yes	Deep	Chemotherapy	26	No	0	0	Negative	19.9	-0.4	0	0	0	0	3_Low		2	0	73.1	73.1	0	0	0	0	0	0	0
SG21005465 FFP	p96	MSI_H	78	3	Endometroid	I	No	No or superficial	Radiotherapy	28.2	No	0	0	Negative	18.9	-0.4	0	0	0	0	3_Low		2	0	70.7	70.7	0	0	0	0	0	0	0
SG21005432 FFP	p94	MSI_H	59	1	Endometroid	I	No	No or superficial	No	23.2	No	0	0	Negative	15	-0.6	0	0	0	0	3_Low		2	0	77.5	77.5	0	0	0	0	0	0	0
SG21005237 FFP	p32	TP53_w	48	2	Endometroid	I	No	No or superficial	No	27	No	0	0	Negative	14	-0.8	0	0	0	0	3_Low		2	0	76.6	76.6	0	0	0	0	0	0	0
SG21009683 FFP	p132	TP53_w	52	2	Endometroid	III	Yes	Deep	Chemotherapy	25.3	No	0		Negative	14	-0.6	0	0	0	0	3_Low		2	0	4.27	4.27	0	0	0	0	0	0	0
SG21009755 FFP	p145	TP53_w	47	1	Endometroid	I	No	Deep	No	25.7	No	0		Negative	13	-0.5	0	0	0	0	3_Low		2	0	8.37	8.37	0	0	0	0	0	0	0
SG21004841 FFP	p14	TP53_w	60	2	Endometroid	I	No	Deep	Chemotherapy	28.8	No	0	0	Negative	12	-0.5	0	0	0	0	3_Low		2	0	67.9	67.9	0	0	0	0	0	0	0
SG21005384 FFP	p36	TP53_w	43	1	Endometroid	I	No	No or superficial	No	37.3	No	0	0	Negative	11	-0.6	0	0	0	0	3_Low		2	0	31.9	31.9	0	0	0	0	0	0	0

sampl e_id	upid	TCGA _Gro up	Age	Tumo r_gr ade	Hist olog y	FIGO _sta ge	LVI	Myomet rial_i nvasio n	Adjuv ant_t herap y	BMI	Recu rren ce	Aneu ploidy_s core	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD scor e	HRD clus ter	puri ty	ploi dy	OS_s tatu s	OS	DFS	DFS_ statu s	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD	
SG210 05132 FFP	p28	TP53 _w	56	1	Endo metr ioid	I	No	Deep	Radio thera py	30.2	No	0	0	Nega tive	9.97	-0.7	0	0	0	0	3_Low		2	0	85.7	85.7	0	0	0	0	0	0	0	0
SG210 05596 FFP	p46	TP53 _w	54	1	Endo metr ioid	I	No	No or superf icial	No	27.5	No	0	0	Nega tive	9.97	-0.5	0	0	0	0	3_Low		2	0	64.9	64.9	0	0	0	0	0	0	0	0
SG210 09452 FFP	p106	TP53 _w	37	2	Endo metr ioid	I	No	No or superf icial	No	29.7	No	4	1	Nega tive	9.97	-0.6	0	0	0	0	3_Low	0.43	2.1	0	15.3	15.3	0	0	0	0	0	0	0	0
SG210 05096 FFP	p26	TP53 _w	64	1	Endo metr ioid	I	Miss ing	Deep	Radio thera py	32.7	No	0	0	Nega tive	8.97	-0.5	0	0	0	0	3_Low		2	0	64.7	64.7	0	0	0	0	0	0	0	0
SG210 09689 FFP	p133	TP53 _w	70	3	Clea r-cell	I	No	No or superf icial	Chemo thera py	24.4	No	0		Nega tive	8.97	0.19	0	0	0	0	3_Low	1	2.01	0	3.17	3.17	0	0	0	0	0	0	0	0
SG210 04595 FFP	p6	TP53 _w	44	1	Endo metr ioid	I	No	No or superf icial	No	27	No	0	0	Nega tive	7.98	-0.7	0	0	0	0	3_Low		2	0	92.6	92.6	0	0	0	0	0	0	0	0
SG210 04862 FFP	p15	TP53 _w	63	1	Endo metr ioid	I	No	Deep	Chemo thera py	34.3	No	0	0	Nega tive	7.98	-0.6	0	0	0	0	3_Low		2	0	32.6	32.6	0	0	0	0	0	0	0	0
SG210 05192 FFP	p31	TP53 _w	47	2	Endo metr ioid	I	No	No or superf icial	No	26.2	No	0	0	Nega tive	7.98	-0.5	0	0	0	0	3_Low		2	0	42.6	42.6	0	0	0	0	0	0	0	0
SG210 05525 FFP	p42	TP53 _w	41	2	Endo metr ioid	I	No	No or superf icial	No	27.4	No	0	0	Nega tive	7.98	-0.9	0	0	0	0	3_Low		2	0	54.9	54.9	0	0	0	0	0	0	0	0
SG210 09674 FFP	p131	TP53 _w	37	1	Endo metr ioid	I	No	No or superf icial	No	47.1	No	0		Nega tive	7.98	-0.4	0	0	0	0	3_Low		2	0	13.2	13.2	0	0	0	0	0	0	0	0
SG210 09731 FFP	p140	TP53 _w	45	2	Endo metr ioid	I	No	No or superf icial	Radio thera py	24.2	No	0		Nega tive	7.98	-0.9	0	0	0	0	3_Low		2	0	9.57	9.57	0	0	0	0	0	0	0	0
SG210 05072 FFP	p75	TP53 _w	36	2	Endo metr ioid	I	No	Deep	Chemo thera py	29.3	No	0	0	Nega tive	6.98	-0.5	0	0	0	0	3_Low		2	0	78.7	78.7	0	0	0	0	0	0	0	0

sample_id	upid	TCGA_Gro up	Age	Tumor_gr ade	Histolog y	FIGO_ stage	LVI	Myomet rial_in vasio n	Adjuvant_ therapy	BMI	Recurrence	Aneuploidy_ score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD score	HRD cluster	purity	ploidy	OS_status	OS	DFS	DFS_ status	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG21005599 FFP	p101	TP53_w	56	1	Endometrioid	I	No	No or superficial	No	22.4	No	0	0	Negative	6.98	-0.7	0	0	0	0	3_Low		2	0	93.5	93.5	0	0	0	0	0	0	0
SG21009482 FFP	p112	TP53_w	52	1	Endometrioid	I	No	No or superficial	No	23.2	Yes	0		Negative	6.98	-0.8	0	0	0	0	3_Low		2	0	68.6	28.7	1	0	0	0	0	0	0
SG21009629 FFP	p127	TP53_w	39	3	Endometrioid	II	No	Deep	Chemotherapy	20.7	No	0		Negative	6.98	-0.4	0	0	0	0	3_Low		2	0	14.9	14.9	0	0	0	0	0	0	0
SG21009710 FFP	p137	TP53_w	53	1	Endometrioid	I	No	No or superficial	No	31.9	No	0		Negative	6.98	-0.5	0	0	0	0	3_Low		2	0	13.3	13.3	0	0	0	0	0	0	0
SG21005486 FFP	p105	TP53_w	46	1	Endometrioid	II	No	No or superficial	Radiotherapy	25.5	No	0	0	Negative	5.98	-0.5	0	0	0	0	3_Low		2	0	36.9	36.9	0	0	0	0	0	0	0
SG21009644 FFP	p129	TP53_w	50	3	Endometrioid	II	No	No or superficial	Chemotherapy	34.9	No	0		Negative	5.98	-0.2	0	0	0	0	3_Low		2	0	17.3	17.3	0	0	0	0	0	0	0
SG21004604 FFP	p51	TP53_w	37	2	Endometrioid	I	No	No or superficial	No	25.4	No	0	0	Negative	4.99	-0.7	0	0	0	0	3_Low		2	0	56.9	56.9	0	0	0	0	0	0	0
SG21004637 FFP	p7	TP53_w	45	2	Endometrioid	I	No	No or superficial	Chemotherapy	28.2	No	0	0	Negative	4.99	-0.8	0	0	0	0	3_Low		2	0	40	40	0	0	0	0	0	0	0
SG21004679 FFP	p9	TP53_w	52	2	Endometrioid	I	No	No or superficial	No	23	No	0	0	Negative	4.99	-0.7	0	0	0	0	3_Low		2	0	90.9	90.9	0	0	0	0	0	0	0
SG21005408 FFP	p92	TP53_w	36	2	Endometrioid	I	Yes	No or superficial	No	37.7	No	0	0	Negative	4.99	-0.8	0	0	0	0	3_Low		2	0	50.6	50.6	0	0	0	0	0	0	0
SG21005605 FFP	p102	TP53_w	56	2	Endometrioid	I	No	No or superficial	No	25.1	No	0	0	Negative	4.99	-0.8	0	0	0	0	3_Low		2	0	60.6	60.6	0	0	0	0	0	0	0
SG21004736 FFP	p10	TP53_m	61	3	Endometrioid	I	No	Deep	No	21.2	No	0	0	Negative	3.99	-0.6	0	0	0	0	3_Low		2	0	35.7	35.7	0	0	0	0	0	0	0

sample_id	upid	TCGA_Group	Age	Tumor_grade	Histology	FIGO_stage	LVI	Myometrial_invasion	Adjuvant_therapy	BMI	Recurrence	Aneuploidy_score	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD_score	HRD_cluster	purity	ploidy	OS_status	OS	DFS	DFS_status	chr1-HRD	chr2-HRD	chr3-HRD	chr4-HRD	chr5-HRD	chr6-HRD
SG21004757 FFP	p61	TP53_w	59	1	Endometroid	I	No	No or superficial	No	28.4	No	0	0	Negative	3.99	-0.7	0	0	0	0	3_Low		2	0	38.5	38.5	0	0	0	0	0	0	0
SG21004658 FFP	p56	TP53_m	73	2	Endometroid	I	Yes	Deep	Radiotherapy	28.9	No	0	0	Negative	2.99	-0.6	0	0	0	0	3_Low		2	0	64.7	64.7	0	0	0	0	0	0	0
SG21004829 FFP	p13	TP53_m	47	1	Other	III	No	No or superficial	Chemotherapy	23	No	0	0	Negative	2.99	-0.3	0	0	0	0	3_Low		2	0	4	4	0	0	0	0	0	0	0
SG21004850 FFP	p67	TP53_w	37	1	Endometroid	I	No	No or superficial	No	32.7	No	0	0	Negative	2.99	-0.8	0	0	0	0	3_Low		2	0	67.6	67.6	0	0	0	0	0	0	0
SG21005288 FFP	p87	TP53_w	48	1	Endometroid	I	No	Deep	No	25.9	No	0	0	Negative	2.99	-0.7	0	0	0	0	3_Low		2	0	32.4	32.4	0	0	0	0	0	0	0
SG21005354 FFP	p88	TP53_m	69	3	Serous	III	No	No or superficial	Chemotherapy	23.6	No	0	0	Negative	2.99	-0.4	0	0	0	0	3_Low		2	0	32.8	32.8	0	0	0	0	0	0	0
SG21004652 FFP	p54	TP53_m	59	3	Serous	IV	No	Deep	Chemotherapy - radiotherapy	25.9	Yes	0	0	Negative	1.99	-0.4	0	0	0	0	3_Low		2	0	50.8	50.8	1	0	0	0	0	0	0
SG21009572 FFP	p122	TP53_m	55	3	Other	III	No	No or superficial	Chemotherapy	30.7	No	3		Negative	12	-0.5	0	0	1	1	3_Low	0.1	2.03	0	18.2	18.2	0	0	0	0	0	0	0
SG21009575 FFP	p123	TP53_w	60	1	Endometroid	I	No	No or superficial	No	29	No	3		Negative	11	-0.7	0	0	1	1	3_Low	0.16	2.04	0	21.2	21.2	0	0	0	0	0	0	0
SG21009503 FFP	p114	TP53_w	55	2	Endometroid	I	No	No or superficial	No	22.2	No	4		Negative	9.97	-1.1	0	1	0	1	3_Low	0.98	2.16	0	28.5	28.5	0	1	0	0	0	0	0
SG21004904 FFP	p70	TP53_w	47	2	Endometroid	I	Yes	Deep	Chemotherapy	29.4	No	6	1	Negative	6.98	-0.7	0	0	1	1	3_Low	0.42	2.18	0	67.1	67.1	0	0	0	0	1	0	0
SG21009758 FFP	p144	TP53_w	50	2	Endometroid	I	No	No or superficial	No	32.2	No	1		Negative	6.98	-1.1	0	0	1	1	3_Low	0.48	2.09	0	2.83	2.83	0	1	0	0	0	0	0

sampl e_id	upid	TCGA _Gro up	Age	Tumo r_gr ade	Hist olog y	FIGO _sta ge	LVSI	Myomet rial_i nvasio n	Adjuv ant_t herap y	BMI	Recu rren ce	Aneu ploi dy_s core	SCIN	WGD	TMB	GEP	LOH	TAI	LST	HRD scor e	HRD clus ter	puri ty	ploi dy	OS_s tatu s	OS	DFS	DFS_ stat us	chr1 -HRD	chr2 -HRD	chr3 -HRD	chr4 -HRD	chr5 -HRD	chr6 -HRD
SG210 09563 FFP	p120	TP53 _w	44	2	Endo metr ioid	I	No	No or superf icial	No	30.6	No	2		Nega tive	4.99	-0.7	0	0	1	1	3_Low	0.23	1.97	0	47	47	0	0	0	0	0	0	0
SG210 05174 FFP	p81	TP53 _w	45	1	Endo metr ioid	I	Miss ing	No or superf icial	No	23.6	No	3	0	Nega tive	3.99	-0.8	0	0	1	1	3_Low	0.24	2.06	0	68.3	68.3	0	0	0	1	0	0	0
SG210 05234 FFP	p84	TP53 _w	61	2	Endo metr ioid	I	No	Deep	Radio thera py	31.8	Yes	4	1	Nega tive	3.99	-0.7	0	1	0	1	3_Low	0.09	2.11	0	77.9	24	1	0	0	0	0	0	0
SG210 09737 FFP	p141	MSI_ H	54	2	Endo metr ioid	I	No	Deep	Chemo thera py	23.8	No	1		Nega tive	21.9	-0.2	0	1	1	2	3_Low	0.49	2.01	0	14.7	14.7	0	0	0	0	0	0	2
SG210 05030 FFP	p73	MSI_ H	65	2	Endo metr ioid	I	Yes	No or superf icial	No	28.1	No	6	5	Nega tive	20.9	-0.2	0	0	2	2	3_Low	0.09	2.17	0	36.6	36.6	0	0	0	0	0	0	0
SG210 04436 FFP	p47	TP53 _w	38	3	Endo metr ioid	I	No	Deep	Radio thera py	27.6	No	3	3	Nega tive	7.98	-0.6	0	0	2	2	3_Low	0.21	2.03	0	70.6	70.6	0	0	0	0	0	0	2
SG210 09671 FFP	p130	TP53 _w	63	2	Endo metr ioid	I	No	No or superf icial	No	24.4	No	2		Nega tive	3.99	-0.8	0	0	2	2	3_Low	0.22	2.03	0	15.6	15.6	0	0	0	0	0	2	0
SG210 05522 FFP	p41	TP53 _w	48	2	Endo metr ioid	I	Yes	No or superf icial	Chemo thera py	27.4	No	7	3	Nega tive	3.99	-0.6	0	1	3	4	3_Low	0.08	2.18	0	24.1	24.1	0	0	0	0	0	0	2
SG210 05009 FFP	p71	POLE	53	2	Endo metr ioid	I	No	No or superf icial	No	29.7	No	0	1	Nega tive	41.9	-0.3	2	0	3	5	3_Low	0.25	2	0	55	55	0	0	0	1	0	0	2
SG210 05114 FFP	p78	MSI_ H	53	1	Endo metr ioid	III	No	No or superf icial	Chemo - radio thera	20.4	No	0	0		18	-0.3	0		1			2	0	39.2	39.2	0	0	0	0	0	0	0	
SG210 09533 FFP	p117	TP53 _m	53	2	Endo metr ioid	III	No	No or superf icial	No	31.7	No	0			5.98	-0.1	0		1			2	0	25.3	25.3	0	0	0	0	0	0	0	

Table S2 2. Summary of clinicopathological, molecular and tumor immune microenvironment parameters used in this study

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sampl e_id	chr7 -HRD	chr8 -HRD	chr9 -HRD	chr1 0- HRD	chr1 1- HRD	chr1 2- HRD	chr1 3- HRD	chr1 4- HRD	chr1 5- HRD	chr1 6- HRD	chr1 7- HRD	chr1 8- HRD	chr1 9- HRD	chr2 0- HRD	chr2 1- HRD	chr2 2- HRD	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro	tumo	stro												
																	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r	r_r_	ma_r
																	CD8_	_CD8_P	CD3_	_CD3_P	PDL1	_PDL1_P	PD1_	_PD1_P	CD16	_CD16_P	CD3_	_CD3_P	CD56	_CD56_P	CD8_	_CD8_PP	CD3_	_CD3_PP	CD56	_CD56_PP	CD8_	_CD8_PP	CD3_	_CD3_PP	CD56	_CD56_PP	CD8_	_CD8_PP	CD3_	_CD3_PP	CD56	_CD56_PP
SG210 04907 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2.46	10.4	4.2	23.3	0.44	0.38	0.18	1.22	13.5	3.89	4.82	0.93	3.1	5.29	0.04	0.56	0.16	1.18														
05614 FFP SG210	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1.24	10	2.44	21	5.11	8.76	0.13	1.93	9.55	7.66	0.19	1.36	2.16	0.52	0	0.35	0.04	1.47														
04523 FFP SG210	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2.2	2.32	1.23	9.59	11	8.68	1.66	0.64	5.04	12.6	0.51	10.1	4.39	0.86	0.46	0.2	0.33	0.62														
05102 FFP SG210	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2.26	8.17	2.68	25.5	2.81	7.78	0.35	4.39	12.6	22.8	1.11	4.85	0.95	0.37	0.1	0.49	0.28	3.68														
09569 FFP SG210	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0.95	3.35	0.96	6.98	0.2	1.9	1.57	0.8	8.22	17.6	0.37	3.6	0.16	0.22	0.05	0.01	0.02	0.06														
04919 FFP SG210	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4.88	9.29	6.67	17.5	0.82	0.34	0.23	0.15	8.91	13.3	6.49	13.4	1.45	9.44	0.05	0.04	0.21	0.12														
05168 FFP SG210	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0.26	1.57	0.5	4.55	16.3	0.76	0.31	0.99	2.16	12.3	0.33	4.16	0.98	5.35	0.03	0.03	0.04	0.36														
09626 FFP SG210	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0.68	14.6	0.71	26.1	0.21	7.42	0.1	6.15	1.77	16	0.2	3.34	6.16	2.75	0.04	2.48	0.08	5.44														
04448 FFP SG210	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	6.77	4.77	7.36	17.3	2.39	5.69	1.67	4.23	7.21	23.9	0.51	5.78	0.48	0.77	0.84	0.61	1.2	3.1														
09473 FFP SG210	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	6.04	6.2	7.16	39.8	1	7.96	0.99	3.51	24.9	53.5	1.47	4.69	3.78	0.53	0.45	0.57	0.94	3.31														
09479 FFP SG210	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3.66	11.6	5.71	17.9	5.37	1.53	0.24	1.81	10.1	7.48	0.28	0.96	28.1	6.7	0.01	0.59	0.17	1.36														
04649 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	1.86	6.22	2.09	17.1	5.73	15.5	0.47	4.2	11.7	23.4	1.46	4.53	0.57	0.65	0.05	0.39	0.19	2.97														
04937 FFP SG210	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	4.31	5.94	5.06	12.1	0.85	1.03	0.18	0.31	13	2.46	1.33	1.54	0.64	3.29	0.01	0.03	0.15	0.21														
09494 FFP	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1.12	8.49	1.41	17.3	3.76	11.4	0.01	0.08	16.8	8.53	1.29	3.84	0.14	1.68	0	0.01	0	0.04														

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sampl e_id	chr7 -HRD	chr8 -HRD	chr9 -HRD	chr1 0- HRD	chr1 1- HRD	chr1 2- HRD	chr1 3- HRD	chr1 4- HRD	chr1 5- HRD	chr1 6- HRD	chr1 7- HRD	chr1 8- HRD	chr1 9- HRD	chr2 0- HRD	chr2 1- HRD	chr2 2- HRD	tumo r_r_ CD8_ P	stro ma_r_ _CD8 _P	tumo r_r_ CD3_ P	stro ma_r_ _CD3 _P	tumo r_r_ PDL1 _P	stro ma_r_ _PDL _P	tumo r_r_ PD1_ P	stro ma_r_ _PD1 _P	tumo	stro	tumo	stro	tumo r_r_ CD56 _P	stro ma_r_ _CD5 _P	tumo	stro	tumo	stro				
																									r_r_ CD16	ma_r_ _CD1	r_r_ CD16	ma_r_ _CD1			tumo	stro	tumo	stro				
																									3.CD 68_N P	63.C D68_ NP	3.CD 68_P P	63.C D68_ PP			r_r_ CD56 _P	ma_r_ _CD5 _P	r_r_ CD8. PD1_ PP	ma_r_ _CD8 _PP	r_r_ CD3. PD1_ PP	ma_r_ _CD3 _PP		
SG210																																						
05096 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.75	10.7	3.5	18.9	1	11	0.13	0.18	4.8	15	2.8	32.7	0.47	3.07	0.02	0.02	0.1	0.08				
09689 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.13	16.3	5.13	39.9	1.34	10.1	0.23	5.58	11.1	21.4	0.97	3.44	0.18	0.56	0.01	1.09	0.12	3.44				
04595 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.14	11.9	4.14	20	0.53	3.84	0.06	0.25	2.92	2.57	0.74	2.22	46.8	13.9	0	0.08	0.03	0.21				
04862 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.97	3.35	9.8	12.6	2.16	1.94	0.09	0.09	8.94	2.83	0.8	0.25	6.17	26.2	0.03	0	0.08	0.08				
05192 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																						
05525 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.47	0.09	0.67	0.78	1.82	2.39	0.01	0	3.19	11.6	0.19	0.33	19.9	4.94	0.01	0	0	0				
09674 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.53	5.43	1.24	13.1	4.03	19.1	0.2	1.94	9.35	27.2	1.48	11.5	0.49	0.32	0.02	0.3	0.15	1.67				
09731 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.96	1.73	2.06	18.5	1.12	10.9	0.05	0.14	21.9	21.4	0.5	2.71	0.34	0.37	0	0.01	0.03	0.07				
05072 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.67	8.64	3.2	19.4	2.93	11.6	0.72	4.78	11.2	15.7	1.71	6.86	0.56	4.91	0.24	1.75	0.6	4.21				
05599 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.35	4.15	3.48	8.06	17.8	3.51	1.09	2.29	4.27	4.21	0.01	0.5	0	2.36	0.06	0.18	0.4	1.18				
09482 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.94	7.61	2.44	10.1	2.93	8.59	0.03	0.59	5.4	7.8	0.47	0.77	1.91	0.12	0	0.18	0.01	0.47				
09629 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8	4.62	1.58	12.9	0.48	3.91	1.12	2.84	8.07	6.77	1.06	2.75	0.34	3.2	0.65	1.02	0.76	2.05				
09710 FFP SG210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.94	3.65	2.64	20.6	0.67	4.7	0.41	0.88	4.97	15.5	0.44	2.63	0.09	0.44	0.01	0.06	0.4	0.84				
05486 FFP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.27	8.56	8.55	18.6	4.48	7.5	0.68	1.3	9.61	8.94	0.89	1.51	1.44	1.75	0.15	0.14	0.57	1.01				

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Table S3. Multivariate Cox Models.

	Variable	HR (exp(coef))	Coef	SE	Z	p-value	95% CI Lower	95% CI Upper
DFS	HRD group (<12 vs >=12)	0.054	-2.923	0.6083	-4.805	1.55E-06	0.016	0.178
	Age	1.013	0.0125	0.03125	0.401	0.68814	0.953	1.077
	FIGO stage II vs I	9.528	2.254	0.8143	2.768	0.00564	1.931	47.005
	FIGO stage III vs I	3.845	1.347	0.848	1.588	0.11224	0.73	20.264
	FIGO stage IV vs I	14.02	2.641	0.8161	3.236	0.00121	2.832	69.411
	FIGO stage Missing	3.64E-08	-17.13	5818	-0.003	0.99765	0	inf
	LVSI: No vs Missing	1.054	0.05224	1.13	0.046	0.96313	0.115	9.654
	LVSI: Yes vs Missing	1.037	0.03621	1.169	0.031	0.9753	0.105	10.253
OS	HRD group (<12 vs >=12)	0.04764	-3.044	0.8406	-3.621	0.000293	0.009	0.247
	Age	0.9953	-0.004758	0.04578	-0.104	0.917209	0.91	1.089
	FIGO stage II vs I	22.46	3.112	1.236	2.518	0.011816	1.992	253.229
	FIGO stage III vs I	7.816	2.056	1.266	1.624	0.104318	0.654	93.46
	FIGO stage IV vs I	10.59	2.36	1.348	1.751	0.080023	0.754	148.709
	FIGO stage Missing	3.65E-08	-17.13	8529	-0.002	0.998398	0	inf
	LVSI: No vs Missing	0.6488	-0.4326	1.354	-0.32	0.749328	0.046	9.218
	LVSI: Yes vs Missing	1.095	0.09035	1.478	0.061	0.951243	0.06	19.839

Table S4. Representative Cases by HRD Subtype.

sample_id	upid	TCGA_group	age	Histology	FIGO_stage	Adjuvant_therapy	HRD_cluster	Recurrence
SG21004829FFP	p13	TP53_m	47	uterine serous carcinoma	III	Chemo-radiotherapy	HRD-Low	No
SG21009572FFP	p122	TP53_m	55	uterine serous carcinoma	III	Chemo-radiotherapy	HRD-Low	No
SG21004475FFP	p50	TP53_m	59	uterine serous carcinoma	III	Chemo-radiotherapy	HRD-Middle	Yes
SG21005261FFP	p33	TP53_m	61	uterine serous carcinoma	III	Chemo-radiotherapy	HRD-High	Yes
SG21009683FFP	p132	TP53_w	52	endometrioid carcinoma	III	Chemo-radiotherapy	HRD-Low	No
SG21004844FFP	p66	TP53_w	61	endometrioid carcinoma	III	Chemo-radiotherapy	HRD- High	Yes
SG21004886FFP	p16	MSI_H	47	endometrioid carcinoma	III	Chemo-radiotherapy	HRD- High	Yes
SG21009707FFP	p136	MSI_H	68	endometrioid carcinoma	III	Chemo-radiotherapy	HRD-Middle	No
SG21004451FFP	p49	MSI_H	54	endometrioid carcinoma	III	Chemo-radiotherapy	HRD-Low	No

Table S5. Pairwise comparisons of recurrence rates among HRD subtypes and TCGA molecular groups.

Group1	Group2	p_value	p_adjusted
MSI_H	TP53_m	0.0131	0.0394
MSI_H	TP53_w	1	1
MSI_H	POLE	1	1
TP53_m	TP53_w	0.00364	0.0219
TP53_m	POLE	0.0317	0.0634
TP53_w	POLE	1	1
Group1	Group2	p_value	p_adjusted
1_High	2_Middle	0.000197	0.000295
1_High	3_Low	0.00000348	0.0000104
2_Middle	3_Low	0.317	0.317