BLCA	BRCA	COADREAD	GBM	HNSC	KIRC	KIRP	LIHC	LUAD	LUSC	OV	PAAD	PRAD	SKCM	STAD	UCEC
ESig3 ^{HI} ES	ESig3 ^{HI}	ES ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} ES	ESig3 ^{HI} E	ESig3 ^{HI}	ES ESig3 ^{HI} E	ESig3 ^{HI}	ESig3 ^{HI}
Stromal Fraction - Intratumor Heterogeneity - Leukocyte Fraction - Leuko	Stromal Fraction - Leukocyte Fraction - Lymphocyte Infiltration Signature Score	T Cells Regulatory Tregs - Lymphocyte Infiltration Signature Score - LAG3 - LAG	C10orf54 - Monocytes - CTA Score - CTA Score	Stromal Fraction - Leukocyte Fraction - Intratumor Heterogeneity	Stromal Fraction - Intratumor Heterogeneity - IL1B	TLR4 - HLA-DQA2 - Stromal Fraction - Stromal Fraction	Stromal Fraction - Leukocyte Fraction - TGFB1 - TGFB1	Leukocyte Fraction - Stromal Fraction - TCR Richness	Fraction Altered Stromal Fraction Number of Segments	Silent Mutation Rate Nonsilent Mutation Rate Stromal Fraction	Intratumor Heterogeneity Stromal Fraction Leukocyte Fraction	Stromal Fraction - CX3CL1 - HLA-A -	Stromal Fraction - CD27 - Leukocyte Fraction - CD27	Stromal Fraction - Leukocyte Fraction - TGFB1	TNFRSF9 - TIGIT - CTLA4 - TIGIT - TIGI
TNFRSF9 TNFRSF4 TNF	CD27 CCL5 SLAMF7	TNFRSF4 + HLA-DQB2 + CD27 + CD	Intratumor Heterogeneity - Stromal Fraction - TLR4 - TLR4	Macrophage Regulation ← ├── ├── ├── ├── ├── ├──	Leukocyte Fraction CD28 IL13	Leukocyte Fraction + HLA-DRA + HLA-D	SELP - Ly	ymphocyte Infiltration Signature Score Macrophage Regulation	Leukocyte Fraction ITGB2 CD28	Aneuploidy Score Intratumor Heterogeneity SNV Neoantigens	HLA-DPB1 CTLA4 SELP	C10orf54 - Leukocyte Fraction - NK Cells Resting -	Lymphocyte Infiltration Signature Score HLA-DQA2	SELP SELP CCL5	Homologous Recombination Defects Nonsilent Mutation Rate Stromal Fraction
TIGIT - ITGB2 - ICOSI G	GZMA	TCR Shannon CCL5 Stromal Fraction	IL12A TNFSF4	SELP	ICOS - ENTPD1 - CD40LG	SLAMF7 HLA-DQB2	Macrophage Regulation - CD27	Intratumor Heterogeneity HLA-DPA1	Macrophage Regulation SELP	PDCD1LG2 CTLA4 TIGIT	ICAM1	TLR4 - HLA-B - CD40 - C	C10orf54 TNFRSF18	Lymphocyte Infiltration Signature Score	Silent Mutation Rate - SNV Neoantigens - Leukocyte Fraction -
ICAM1 - HLA-DRB1 - CCI 5	HLA-DPB1 PRF1 TCR Richness	TCR Richness CD28 HLA-DPA1	Leukocyte Fraction HMGB1	BTLA - Lyr	TGF-beta Response	SNV Neoantigens	TCR Richness - TCR Shannon -	HLA-DPB1 HLA-B	Wound Healing ENTPD1	TGFB1	HLA-DRB1	T Cells CD4 Memory Resting - Fraction Altered - Proliferation	Macrophage Regulation	Number of Segments	Lymphocyte Infiltration Signature Score - Macrophage Regulation - PDCD1 - PDCD1
Macrophage Regulation - HLA-DRB5	PDCD1 CTLA4 TIGIT	TNFRSF18 - PDCD1 - HLA-DRA - HLA-DRA	HLA-DRB1 Macrophage Regulation	CXCL9 CD27 Fraction Altered	TIGIT	PDCD1LG2 B Cells Memory HI A-DRB5	HLA-DPB1 - ENTPD1 -	CD28 - CD27 - CD	TGF-beta Response	Fraction Altered HRD SBS3	IL10 + + + + + + + + + + + + + + + + + + +	EDNRB - Lymphocytes - P. Colls Naive	TNF SELP	HLA-DPB1 TGF-beta Response	ICOS - SLAMF7 - HAVCR2 - HAVCR
IL1B - HLA-DRA - CXCL9	CD40LG ITGB2 BTLA	Leukocyte Fraction HLA-DPB1 BTLA	HLA-DRB5 Lym	HAVCR2	T Cells Follicular Helper	HLA-DPA1 VTCN1	SLAMF7 - IL2RA - C10orf54 - IL2RA	BTLA TIGIT Lym	mphocyte Infiltration Signature Score	KIR2DL3 TNFSF4	CD27	HLA-C - TIGIT	TIGIT - CCL5	HLA-DPA1 T Cells CD8	BTLA - GZMA - CD80 - CD
CXCL10 - ADORA2A	TGFB1	ADORA2A ICOS HLA-DQA2	ITGB2	IL2RA - HLA-DQB2 - Proliferation	TNF - SLAMF7 - CTI A4	HLA-DPB1 Proliferation	CCL5-HAVCR2-CD40I G	ENTPD1 T Cells Regulatory Tregs	TIGIT ICAM1	TNFSF9 SELP	PRF1 PDCD1LG2	BTN3A2 B Cells Memory	TNFRSF9 HLA-DRA	CD27 TNFRSF4	CXCL9 - PRF1 - TIL Regional Fraction - TIL Regional Fraction
PDCD1LG2 HAVCR2	CD40 - CXCL9 - HLA-DRA	SELP TGFB1 C10orf54	HLA-DQA1	TGF-beta Response	Aneuploidy Score Macrophage Regulation	CD28 HLA-C HARD Signature Score	ADORA2A - PDCD1 - TIGIT -	HLA-DRB5 HLA-DRA	Homologous Recombination Defects	HAVCR2	KIR2DL1	Vound Healing CD40LG VTCN1	HLA-DPA1 TCR Richness	C10orf54	CCL5 ITGB2 - CD27
LAG3 HLA-DPA1	Intratumor Heterogeneity TNFRSF4 TNFRSF9	CTLA4 - GZMA - TIGIT -	Macrophages M0 — — — — — — — — — — — — — — — — — —	T Cells CD4 Naive	TCR Shannon CD276	IL2RA IL13	HLA-DPA1 - TNFRSF18 -	BTN3A2 Macrophages M1	CTLA4 TNFRSF9	CD80	HLA-DQAT HLA-DQAT HLA-DPA1 BTLA T Colls Pogulatory Trops	Lymphocyte Infiltration Signature Score	HAVCR2	EDNRB	Indel Neoantigens - Mitotic Clock SBS1 - CXCL10 - CXCL10
IFNG - HLA-DQA1 - SI AME7	HLA-DQB1 CD28 ENTPD1	PRF1 SLAMF7 APOBEC SBS2	TIGIT HLA-DRA CD28	IL10 ICOS	dMMR SBS15	PRF1	GZMA - HLA-DRA - Mast Calla Pasting	IDO1 HLA-DQB1	HAVCR2 TGFB1	ADORA2A	ymphocyte Infiltration Signature Score Macrophage Regulation	ICAM1 - CD274 - CD274	ICOS LAG3	CXCL10 CXCL9 TCR Richness	IFNG - Macrophages M1 - IL2RA - IL2RA - IL2RA
CD28 CD27 CD27	C10orf54 HLA-DPA1 SNV Neoantigens	EDNRB - CX3CL1	Nonsilent Mutation Rate	HLA-DPB1 IFN-gamma Response	CD27	BTLA CTA Score	Mast Cells Resting - Mast Cells - CTLA4 - CTLA	ICOS HLA-A	HLA-DRA1	BCR Richness	TNF HAVCR2	SNV Neoantigens	PDCD1LG2	VEGFA LL10	Fraction Altered LAG3
IL2RA CD80	PDCD1LG2 HLA-DRB1	CD40LG TNFRSF14 IL2RA	PDCD1	Number of Segments CD80 TNFRSE9	Fraction Altered CCL5	HLA-DQA1 B Cells Naive Fosinophils	HLA-DRB1 - HLA-DRB1 - HLA-DQA2 -	CXCL9 CD40	ADORA2A PDCD1	LAG3	TNFRSF9 TLR4	CD70 CCL5 CCL5 Macrophages M2	ICOSLG HLA-B	Macrophages M2 ITGB2	T Cells CD8 - IL1B - IL
TIL Regional Fraction	HLA-DQA1 + HLA-B + Nonsilent Mutation Rate + HLA-B	NK Cells Resting - Macrophage Regulation - HAVCR2 - HAVCR2	HLA-A CD40 BTN3A2	CCL5 ICAM1 HLA-DRA	Indel Neoantigens	Lymphocytes	Monocytes - TNF - IL10	TNFRSF14 - Fraction Altered TNFRSF4 - TNFRSF4	LAG3 HLA-DQB1	TNFRSF9	IL2RA IDO1	HLA-DRB1	HLA-DRB1 + PRF1 + HLA-DRB5 + HLA-DRB5	HLA-DRA CD28	Aneuploidy Score PDCD1LG2 Mast Cells Resting
ENTPD1 HLA-B	TIL Regional Fraction CX3CL1 Macrophages M2	CXCL9 VEGFA CD40	BTN3A1 Wound Healing CXCL9	HLA-DPA1	IFNG	C10orf54 Macrophages	ICAM1 - CD70 - T Cells Regulatory Tregs - CD70 - CD	GZMA LAG3	BCR Richness HLA-DRB5	T Cells CD8 Plasma Cells mphocyte Infiltration Signature Score	CD70 CD28	TNFRSF9 TNFRSF4 TGF-beta Response	CXCL9 + HLA-DQA1 + TNFRSF4 + TNFRSF4	TCR Shannon	HLA-DQAŽ - TNFSF9 - HLA-DPA1 - TNFSF9 -
CD40LG T Cells Regulatory Tregs	IL2RA IFNG Lymphocytes	Nonsilent Mutation Rate HRD SBS3 Silent Mutation Rate	CD27 Mast Cells ENTPD1	CD274 IL2 HLA-A	Plasma Cells ———————————————————————————————————	Macrophages M0 CD27 Nonsilent Mutation Rate	ICOS - HLA-DQB2 - HLA-A -	HLA-DQA1 CXCL10 BTN3A1	TNFSF4	Lymphocytes Homologous Recombination Defects Proliferation	TNFRSF4 NK Cells Resting	TGFB1 Plasma Cells Aneuploidy Score	TCR Shannon HLA-A	CD40 CD274 Lymphocytes	HLA-DQA1 TCR Richness ICAM1
VTCN1 - IL13 - I	TGF-beta Response SELP Silent Mutation Rate	ENTPD1 Lym	T Cells Follicular Helper	C10orf54	IFN-gamma Response	CD80	CD28	SNV Neoantigens SLAMF7 Nonsilent Mutation Rate	Smoking SBS4	CXCL9	IL12A HLA-C	TNFSF9	Lymphocytes - IFNG - TGFB1 - TGFB1	TNFRSF18	dMMR SBS15 TNFRSF4
BTN3A1 - I	ADORA2A LAG3	PDCD1LG2 HLA-DRB5 HLA-A HLA-A	HLA-DPA1	HLA-DRB1	HLA-DQA2 HLA-DRA HLA-DQA1 HLA-DQA1	APOBEC SBS2 Macrophages M2	IL2 - IL1B - IL1	TNFSF4 HLA-C Number of Segments	NK Cells Activated T Cells CD4 Naive	IL2RA	TNFSF4	PDCD1	BCR Shannon HLA-C	T Cells CD4 Memory Resting	Number of Segments - TGFB1
CD70 CD274 IL10	TLR4	APOBEC SBS13	TNFSF9	ITGB2	C10orf54 + + + + + + + + + + + + + + + + + + +	Dendritic Cells Activated CCL5 Dendritic Cells	Fraction Altered - VTCN1 - PDF1	HLA-DQA2 Mast Cells Activated IL2	TCR Richness	CD70	CD40LG + + + + + + + + + + + + + + + + + + +	HLA-DQB2 +	ENTPD1 IL10	HLA-DQA2 Macrophages T Cells CD4 Memory Activated T Cells CD4 Memory Activated	HLA-DRA - ADORA2A
Macrophages M1	BCR Richness T Cells CD8	HLA-DQA1	APOBEC SBS2 HAVCR2	Macrophages M1	BCR Evenness TNFRSF4	TCR Richness TNFRSF9 TCR Shannon	TNFRSF14	IFNG CD70 Silent Mutation Rate	HLA-A IL10	Macrophages M1 TCR Evenness	CTA Score Fraction Altered	HLA-DPB1	CXCL10 SLAMF7 MICB	Monocytes	Intratumor Heterogeneity IL10 HLA-DPB1
IFN-gamma Response + + + + + + + + + + + + + + + + + + +	HLA-C - CXCL10	TO II ODAM	TNFRSF18 IL4	Smoking SBS4	Macrophages	GZMA	CTA Score Number of Segments	MICB PDCD1LG2 CX3CL1	TNFRSF14 PRF1	TCR Shannon Macrophage Regulation	TGF-beta Response	HLA-DQB1	BCR Richness KIR2DL3 CD70	CD70	TLR4 TNFSF4
SNV Neoantigens	T Cells Regulatory Tregs	Dendritic Cells Activated B Cells Naive	Dendritic Cells	HLA-DRB5 CD40 Indel Neoantigens	BCR Shannon HLA-DQB2	Silent Mutation Rate	T Cells CD4 Naive	Indel Neoantigens TGF-beta Response Smoking SBS4	BTN3A2 IL1B B Cells Naive	Dendritic Cells Activated HLA-B	TNFRSF18 Neutrophils	HLA-DRA	Number of Segments	IFNG	HLA-DQB2 - C10orf54 -
TCR Shannon Homologous Recombination Defects	T Cells Follicular Helper Mitotic Clock SBS1	CXCL10 T Cells Follicular Helper	ICOSLG I	IFNA1	NK Cells Resting TNFRSF9	HMGB1	TNFRSF4	TNFRSF9 PRF1 ICAM1	Mast Cells Resting TCR Shannon	T Cells Follicular Helper TNFRSF18	Macrophages M0 APOBEC SBS13	IL2RA KIR2DL1	.	Mast Cells Resting Macrophages M1 TNFSF9	Dendritic Cells Activated Lymphocytes
KIR2DL3 - IL12A - Il12	IL12A + HLA-DRB5 + HLA-DRB5	Mast Cells Resting KIR2DL1 Macrophages M0	ICOS HLA-B	T Cells Regulatory Tregs Mast Cells Activated	TGFB1 T Cells CD8 dMMR SBS26	TCR Evenness	BCR Shannon → ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	TNFRSF18 IL10 Dendritic Cells Activated	Nonsilent Mutation Rate Aneuploidy Score Intratumor Heterogeneity	TNFRSF14 PRF1	APOBEC SBS2 HLA-B ITGB2	IL1B -	IFN-gamma Response BTN3A2 Eosinophils	ADORA2A Macrophages M0 CX3CL1	T Cells Follicular Helper HLA-DQB1
HLA-DQB2 T T T T T T T T T T T T T T T T T T T	CTA Score BTN3A1 BCR Shannon IL10	HLA-C + + CD80 +	T Cells Regulatory Tregs T Cells CD8 TCR Shannon	T Cells Regulatory Tregs Mast Cells Activated Dendritic Cells Activated TCR Shannon Homologous Recombination Defects	HLA-DRB1	TNFSF4	Lymphocytes	TLR4 T Cells CD4 Memory Resting ADORA2A	Intratumor Heterogeneity T Cells Regulatory Tregs T Cells Follicular Helper GZMA	IL13 IL10 IL10 IL10 IL10 IL10 IL10 IL10 IL10	CX3CL1	TCR Richness	IL1B BTN3A1 T Cells CD8	PDCD1	Dendritic Cells Resting
T Cells CD4 Naive BCR Shannon B Cells Memory	APOBEC SBS2	ARG1	Aneuploidy Score PRF1 HLA-DQB2	Aneuploidy Score	Dendritic Cells Activated BCR Richness	APOBEC SBS13 ARG1	T Cells gamma delta	TNF	Plasma Cells CXCL10 T Cells CD4 Memory Resting	NK Cells Resting VEGFB	TCR Richness IFN-gamma Response TIL Regional Fraction	MICB -	NK Cells Activated TLR4	HLA-DRB1 → → ■ → → NK Cells Resting ← ■ → ■ → ■ → ■ → ■ → ■ → ■ → ■ → ■ → ■	HLA-A CD274
Neutrophils	KIR2DL1 Dendritic Cells B Cells Memory ICAM1 Dendritic Cells Resting	HLA-B + + + + + + + + + + + + + + + + + + +	HLA-DQA2 Macrophages B Cells Memory	Mast Cells Resting Nonsilent Mutation Rate PRF1 PRF1	KIR2DL1	TNFRSF4	HMGB1 → → → → → → → → → → → → → → → → → → →	ICOSLG CD80 TCR Evenness	HLA-DQB2 Neutrophils	PDCD1 IL4 dMMR SBS15	Macrophages HRD SBS3	ICOS -	Macrophages M2 +	TNFRSF14	Mast Cells Activated dMMR SBS44
Mast Cells Activated Silent Mutation Rate KIR2DL1	Dendritic Cells Resting TNFRSF14	Fraction Altered TNFSF9	IFN-gamma Response	Macrophages M2	BTN3A2 B Cells Memory PRF1	Dendritic Cells Resting Intratumor Heterogeneity dMMR SBS26	dMMR SBS6 LAG3	SELP VTCN1	Mast Cells Activated Silent Mutation Rate	dMMR SBS6	IFNG	TIL Regional Fraction TNFRSF18	Dendritic Cells Activated KIR2DL1	KIR2DL1 - TNF - TN	KIR2DL1 - III - II
CD276 - L L L L L L L L L L L L L L L L L L	Neutrophils	dMMR SBS44 HMGB1	Plasma Cells TNFRSF14 Dendritic Cells Resting	dMMR SBS44	Lymphocytes T Cells Regulatory Tregs	POLD1+dMMR SBS20	ARG1	Aneuploidy Score TIL Regional Fraction	APOBEC SBS13 PDCD1LG2 T Cells CD4 Memory Activated	IFNG	T Cells gamma delta	T Cells CD4 Memory Activated	APOBEC SBS13	Neutrophils B Cells Naive	
MICB IL1A	Macrophages M1 ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ← ←	Macrophages M1 Number of Segments NK Cells Activated	T Cells gamma delta Silent Mutation Rate SNV Neoantigens	MICA	Macrophages M2 SELP IL12A	TNFRSF14 MICA IL4	HLA-C	T Cells CD4 Memory Activated NK Cells Resting Mitotic Clock SBS1	T Cells gamma delta	CX3CL1	CXCL9 CXCL10 BTN3A2	dMMR SBS21 - I-I-I-I-I-I-I-I-I-I-I-I-I-I-I-I-I-I-	TGF-beta Response Indel Neoantigens	TCR Evenness	MICA - I
BCR Richness SELP Dendritic Cells Activated	Plasma Cells ICOSLG	Lymphocytes	VEGFB Wast Cells Resting SLAMF7	TNFSF4	Neutrophils	ICAM1	Dendritic Cells Activated VEGFA	T Cells CD8	T Cells CD8	Eosinophils T Cells CD4 Naive Mast Cells Resting	Macrophages M1 SNV Neoantigens NK Cells Activated	ITĞB2	Proliferation Intratumor Heterogeneity	POLD1+dMMR SBS20 IL4 BTN3A2	TNFRSF14
B Cells Naive	Mast Cells Resting BCR Evenness Mast Cells		ARG1 ARG1	TNF CD70	MICA	T Cells Regulatory Tregs BCR Shannon TGF-beta Response MICB	Mast Cells Activated	MICA HMGB1 IL2RA	CD274 IFNA1 Dendritic Cells	CTA Score Number of Segments KIR2DL1	TCR Evenness Mitotic Clock SBS1	VEGFA CD276	TNFSF9 TIL Regional Fraction	dMMR SBS21	Eosinophils
dMMR SBS15 TNFSF9 Macrophages	Dendritic Cells Activated T Cells CD4 Memory Activated	Intratumor Heterogeneity Macrophages T Cells gamma delta	KIR2DL1 CX3CL1 Dendritic Cells Activated	VTCN1	KIR2DL3 IDO1 Macrophages M0	IL1B	Aneuploidy Score MICB CXCL9	Mast Cells Resting Macrophages M2 Dendritic Cells Resting	TCR Evenness CXCL9 CD40	CD276	TNFRSF14 SLAMF7 C10orf54	BCR Evenness - Indel Neoantigens - IFN-gamma Response	Plasma Cells IL12A	T Cells gamma delta	T Cells CD4 Memory Activated IL1A Wound Healing
T Cells CD4 Memory Resting T Cells CD4 Memory Activated CTA Score	T Cells CD4 Memory Resting Macrophages M0	Dendritic Cells Resting Indel Neoantigens TGF-beta Response	TGFB1 ICAM1 CD40LG	TGFB1 + + + + + + + + + + + + + + + + + + +	VTCN1	Number of Segments T Cells CD4 Memory Resting TGFB1	T Cells CD4 Memory Activated TNFRSF9	B Cells Memory EDNRB Eosinophils	APOBEC SBS2	MICB IL2	Lymphocytes	CTLA4	Mitotic Clock SBS1	HLA-C + HLA-C	B Cells Memory
Dendritic Cells T Cells gamma delta Fraction Altered Proliferation NK Cells Resting Wound Healing VEGFA TNFRSF18	MICB VEGFB IL13	TGF-beta Response Proliferation Mitotic Clock SBS1	CD40LG IFNA2 CCL5 CD274	Silent Mutation Rate Plasma Cells KIR2DL3	T Cells CD4 Memory Activated	Macrophages M1 ADORA2A VEGFA	ICOSLG	Plasma Čells ———————————————————————————————————	VTCN1 dMMR SBS15 NK Cells Resting	Dendritic Cells	Monocytes	IL10	Homologous Recombination Defects Dendritic Cells Macrophages M0	TLR4 IL2 ICOSLG	TGF-beta Response
NK Cells Resting Wound Healing	dMMR SBS26 TNFSF4 Homologous Recombination Defects	Dendritic Cells CTA Score	ADORA2A - - - - - - - - - -	dMMR SBS15	CD40	T Cells CD4 Naive HRD SBS3 Fraction Altered	Eosinophils Macrophages M0 Nonsilent Mutation Rate T Cells Follicular Helper	Macrophages M0 Dendritic Cells T Cells Follicular Helper	CTA Score Monocytes Dendritic Cells Activated	HLA-DOR1	IL1B IFNA2 CD276 B Cells Memory	Macrophage Regulation Intratumor Heterogeneity T Cells Follicular Helper APOBEC SBS13	├ Wound Healing ├ ├ │ ├	BTN3A1 Eosinophils	APOBEC SBS13
	Wound Healing TNFRSF18 TNFRSF18	IL1B +	KIR2DL3 IFNA1 T Cells CD4 Memory Resting	IL12A ICOSLG ICOSLG ICOSLG	Number of Segments VEGFB NK Cells Activated	CTLA4 BCR Richness T Cells gamma delta	NK Cells Activated	B Cells Naive HRD SBS3 Hamalagous Pasambination Defeats	Macrophages M1 TNFRSF18	C10orf54 Smoking SBS4 CD274 Mast Cells Mast Cells Activated Macrophages M0 Macrophages M0	TCR Shannon TNFSF9 Mast Cells Resting	APOBEC SBS2	B Cells Memory T Cells gamma delta	BCR Shannon Dendritic Cells	Proliferation ————————————————————————————————————
EDNRB T Cells Follicular Helper NK Cells Activated TNFRSF14 Lymphocytes TGFB1 MICA HMGB1	MICA IL1B Number of Segments	BCR Shannon Aneuploidy Score	Macrophages M2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Lymphocytes ————————————————————————————————————	Silent Mutation Rate APOBEC SBS2 Eosinophils	Monocytes PDCD1 PDCD1	Macrophages CD274 Wound Healing	Homologous Recombination Defects	Lymphocytes Dendritic Cells Resting	IL IB +	Mast Cells Resting T Cells Follicular Helper BCR Shannon Mast Cells	dMMR SBS15	VTCN1 + I	HMGB1	Macrophages M2 dMMR SBS21 Macrophages TNFRSF18 B Cells Naive VEGFA T Cells gamma delta Monocytes
NK Cells Activated TNFRSF14 Lymphocytes	VICN1 IL1A Monocytes	Wound Healing VEGFB	BCR Richness PDCD1LG2 MICB	VEGFB	T Cells gamma delta TNFSF9	CD40 - - - - - - - - - -	Dendritic Cells Resting BTN3A1	IL4 IL1B Macrophages BCR Evenness Wound Healing Monocytes	Eosinophils Macrophages M0	HLA-DPA1 BTN3A2 Monocytes B Cells Naive	B Cells Naive HMGB1 BCR Richness	Mitotic Clock SBS1 CTA Score TNFSF4	CX3CL1	HMGB1 Plasma Cells BCR Richness Silent Mutation Rate APOBEC SBS2 T Cells Follicular Helper Aneuploidy Score SNV Neoantigens B Cells Memory	T Cells gamma delta Monocytes
MICA HMGB1	Aneuploidy Score Eosinophils ARG1	- IFNG	Lymphocytes Number of Segments T Cells CD4 Naive Mast Cells Activated	BCR Evenness TNFRSF4 T Cells CD8	HAVCR2 Mitotic Clock SBS1	IFNA1	IL12A	NK Cells Activated +	CD276 MICA IFNG	B Cells Naive B Cells Memory IFN-gamma Response Wound Healing	IFNA1	Dendritic Cells Activated Nonsilent Mutation Rate HMGB1	dMMR SBS15 BCR Evenness	Aneuploidy Score SNV Neoantigens	IFNA2
Macrophages M0 Dendritic Cells Resting	EDNRB Indel Neoantigens TCR Evenness	T Cells CD8	BCR Shannon I	T Cells CD4 Memory Activated Monocytes KIR2DL1	HLA-DRB5 HLA-C	ICOSLG - - - - - - - - - -	Macrophages M1 Indel Neoantigens KIR2DL1	BCR Richness CTA Score CD276 Proliferation	ARG1 Mast Cells Indel Neoantigens	HLA-DPB1	Aneuploidy Score Mast Cells Activated VEGFA	T Cells CD8	Dendritic Cells Resting	IVIICA	T Cells CD4 Naive -
Aneuploidy Score TCR Evenness Number of Segments	NK Cells Resting HMGB1 B Cells Naive	BCR Richness	LAG3	T Cells Follicular Helper T Cells gamma delta	Homologous Recombination Defects Wound Healing	Aneuploidy Score Mast Cells Resting	IL13	ARG1 +	VEGFA TOTAL	HLA-DQB2 ARG1	MICA IL4	Macrophages M1	Aneuploidy Score	ARG1 Nonsilent Mutation Rate dMMR SBS15 Mitotic Clock SBS1	APOBEC SBS2 + + +
Mitotic Clock SBS1 +	HRD SBS3	POLD1+dMMR SBS20 +	NK Cells Resting Indel Neoantigens CD80	Mitotic Clock SBS1	Proliferation TCR Evenness	Mast Cells Activated Indel Neoantigens Mitotic Clock SBS1	Dendritic Cells T Cells CD4 Memory Resting Macrophages M2	Lymphocytes APOBEC SBS13 VEGFA VEGFB	BCR Evenness KIR2DL1 HMGB1	T Cells gamma delta	Macrophages M2 Dendritic Cells Resting	IFNG IFNA1 HLA-DQA2	CTA Score	HLA-A BCR Evenness TIL Regional Fraction	VTCN1 + + + + + + + + + + + + + + + + + + +
Mast Cells — — — — — — — — — — — — — — — — — —	T Cells gamma delta Proliferation	MICA	T Cells CD4 Memory Activated TCR Evenness TNFRSF4	SNV Neoantigens NK Cells Resting Neutrophils	SNV Neoantigens CX3CL1 Nonsilent Mutation Rate	IFNA2 IDO1 CD276	Silent Mutation Rate CXCL10	T Cells gamma delta IFNA1 BCR Shannon	Macrophages M2 Mitotic Clock SBS1 MICB	Dendritic Cells Resting HLA-DQA1 BTN3A1	Homologous Recombination Defects Number of Segments	Eosinophils ————————————————————————————————————	TNFRŠF14 — — — — — — — — — — — — — — — — — — —	APOBEC SBS13 CTA Score MICB Wound Healing IL1B	Neutrophils — — — — — — — — — — — — — — — — — — —
CD40 Mast Cells Monocytes T Cells CD8 Indel Neoantigens Macrophages M2 BCR Evenness	T Cells CD4 Naive	Plasma Cells TLR4	NK Cells Activated BCR Evenness	Macrophages	Macrophages M1 Dendritic Cells Resting	Mast Cells	B Cells Memory BCR Evenness Neutrophils	Mast Cells KIR2DL1 APOBEC SBS2	TIL Regional Fraction CX3CL1 Macrophages	NK Cells Activated T Cells CD4 Memory Resting	Silent Mutation Rate	Dendritic Cells	T Cells CD4 Memory Activated Nonsilent Mutation Rate Neutrophils	HI A-B +	Neutrophils Dendritic Cells ARG1 T Cells CD4 Memory Resting TCR Evenness POLD1+dMMR SBS20
-4 -2 0 -Log ₁₀ (PVal) ×sign(ch	-8 -4 0 -Log ₁₀ (PVal) ×sign(c	Macrophages M2 -3 -2 -1 0 1 -bit -Log ₁₀ (PVal) ×sign(chi	-2 -1 0 1 2 -Log ₁₀ (PVal) ×sign(ch	-8 -4 0 -Log ₁₀ (PVal)×sign(ch	-4 -2 0 -Log ₁₀ (PVal) ×sign(cha	-2 -1 0 1 -Log ₁₀ (PVal) ×sign(ch	-6 -3 0 -Log ₁₀ (PVal) ×sign(cha	-5.0-2.50.0 2.5 -Log ₁₀ (PVal) ×sign(cha	-4 0 4 -Log ₁₀ (PVal) ×sign(ch	-4 -2 0 -Log ₁₀ (PVal) ×sign(ch	-4 -2 0 -Log ₁₀ (PVal) ×sign(ch	-5.0-2.5 0.0 h: -Log ₁₀ (PVal) ×sign(-10- 0 .55. 0 2.50.02.5 ch: -Log ₁₀ (PVal) ×sign(ch	-4 -2 0 -Log ₁₀ (PVal) ×sign(c	-6 -3 0 3 h: -Log ₁₀ (PVal) ×sign(c