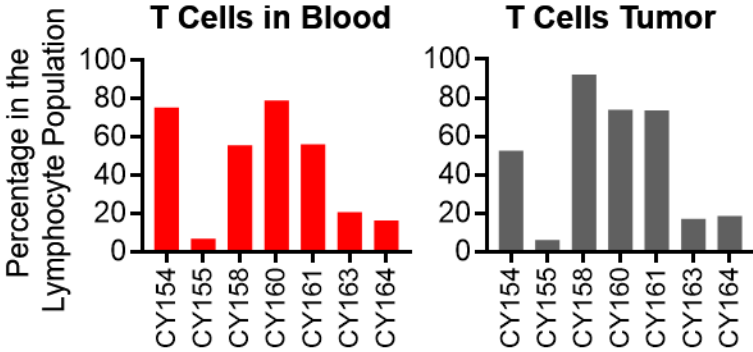
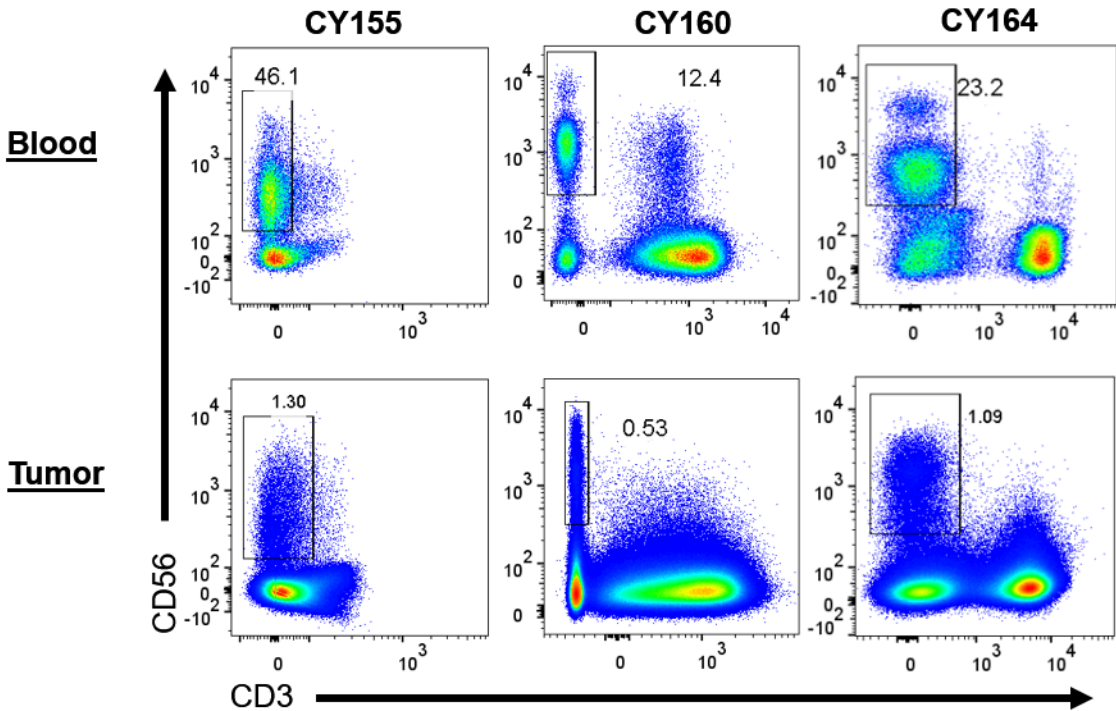


Supplementary Figure 1

A



B

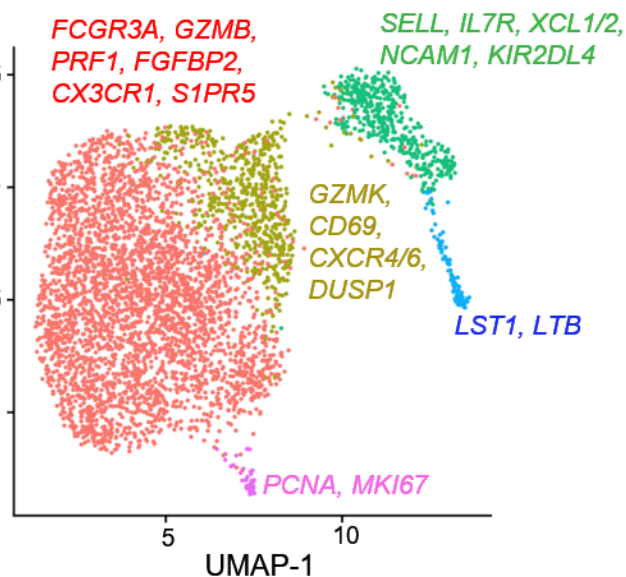
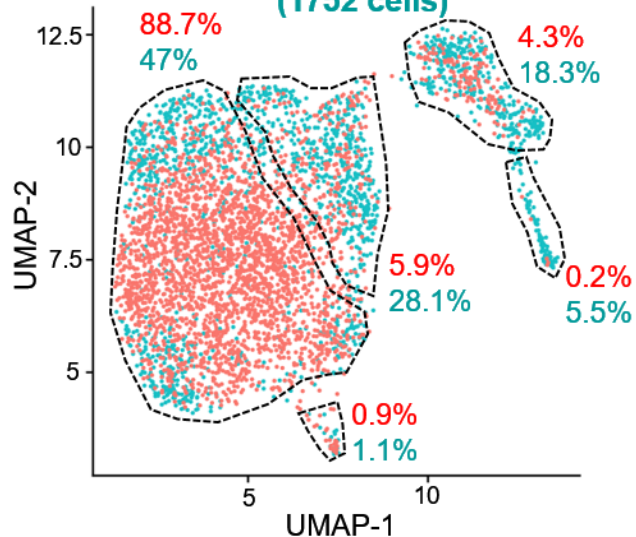


Supplementary Figure 2

A

CY155

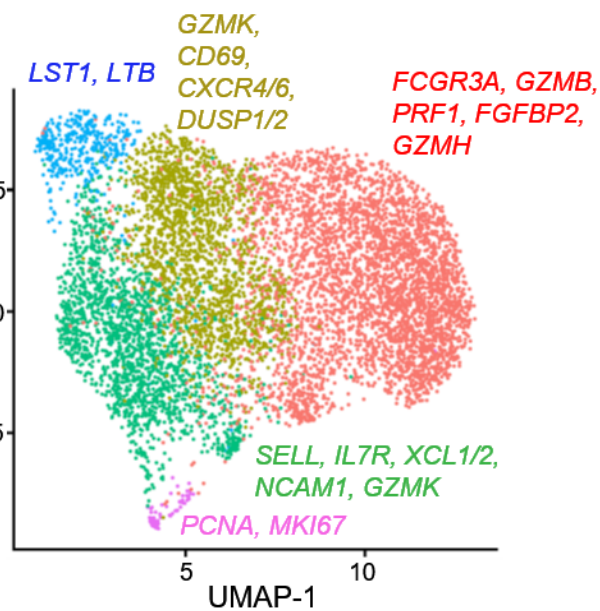
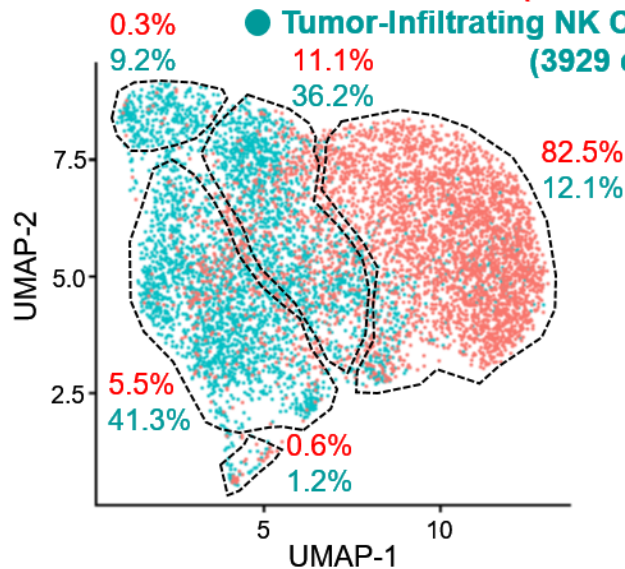
● **Blood NK Cells (2801 cells)**
● **Tumor-Infiltrating NK Cells (1752 cells)**



B

CY160

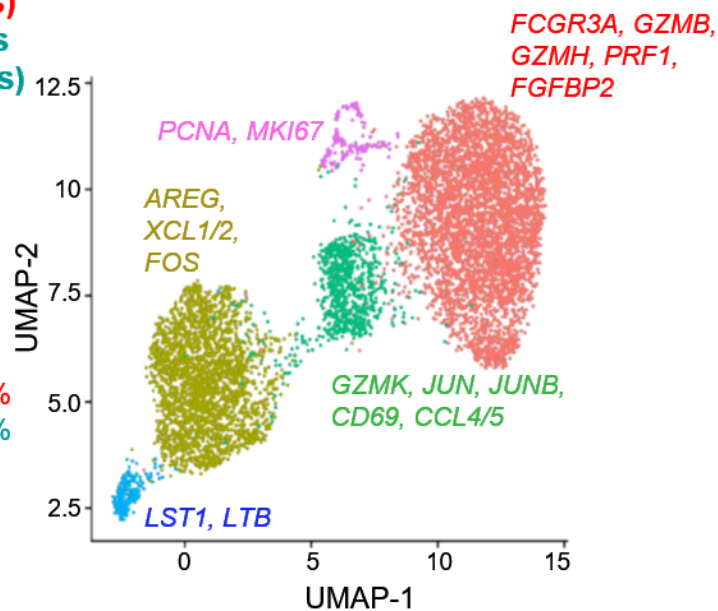
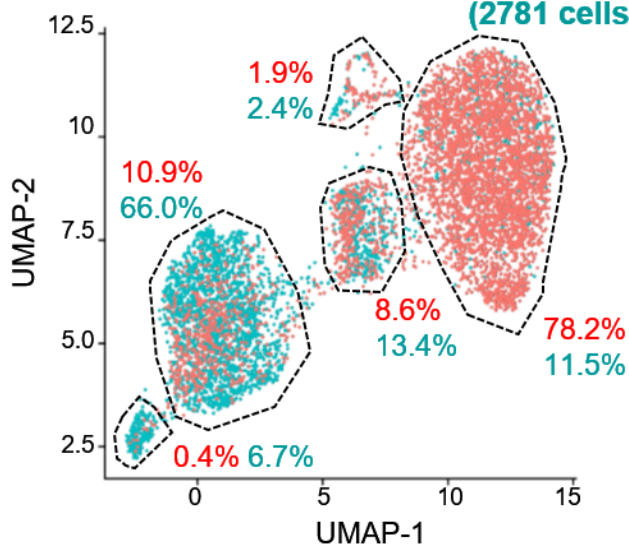
● **Blood NK Cells (3945 cells)**
● **Tumor-Infiltrating NK Cells (3929 cells)**



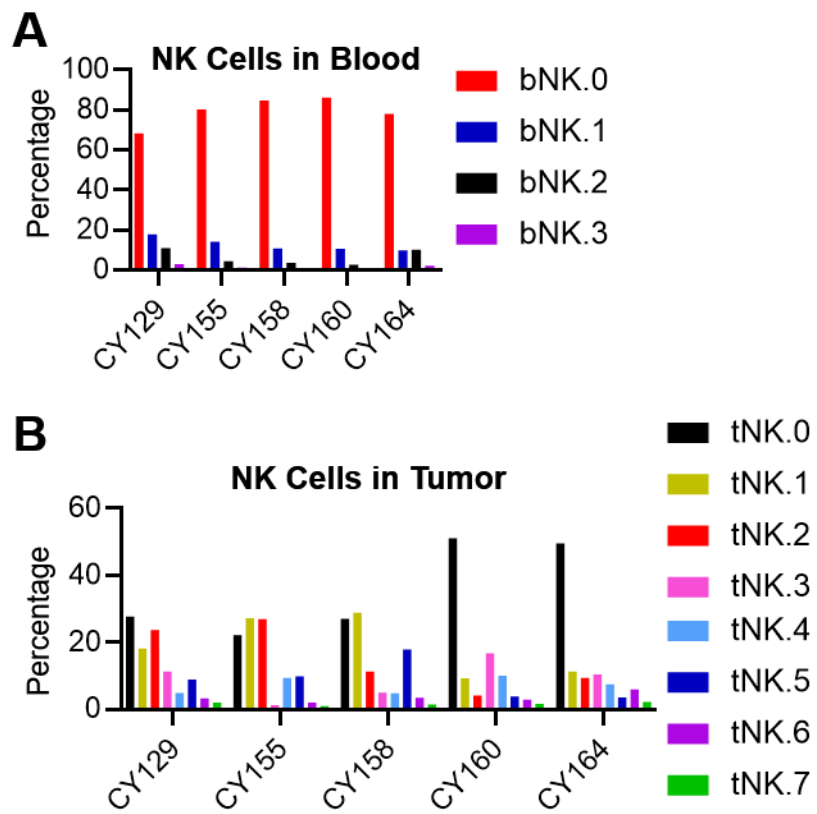
C

CY164

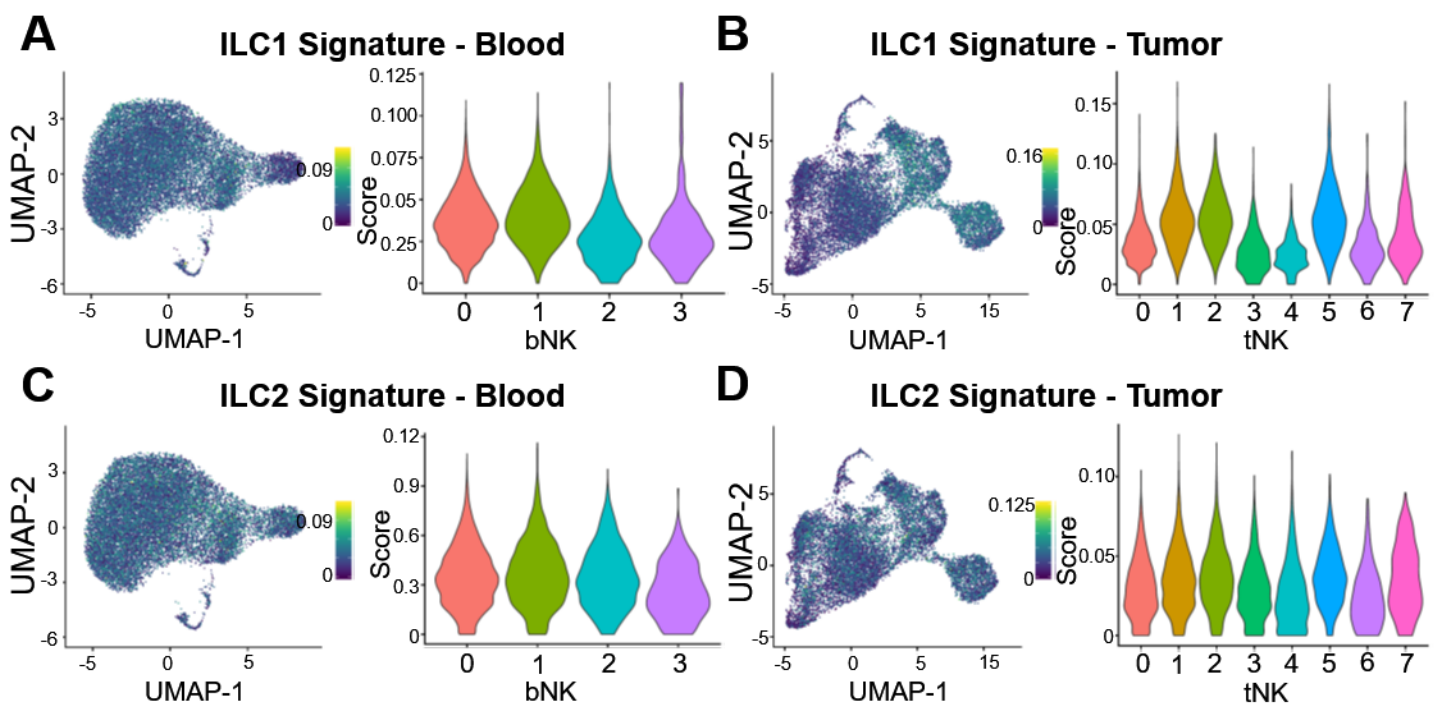
● **Blood NK Cells (4610 cells)**
● **Tumor-Infiltrating NK Cells (2781 cells)**



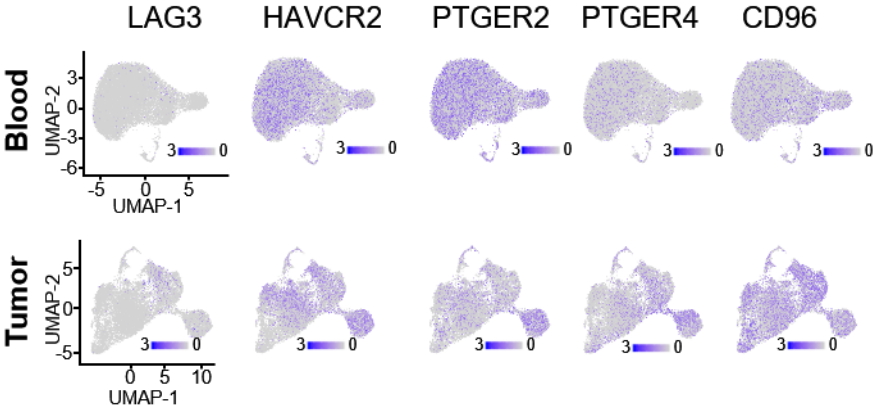
Supplementary Figure 3



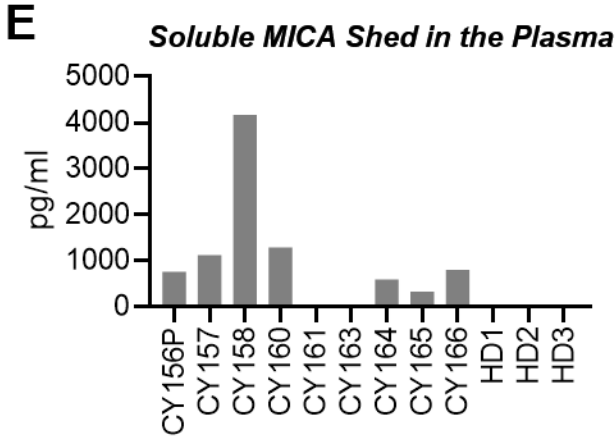
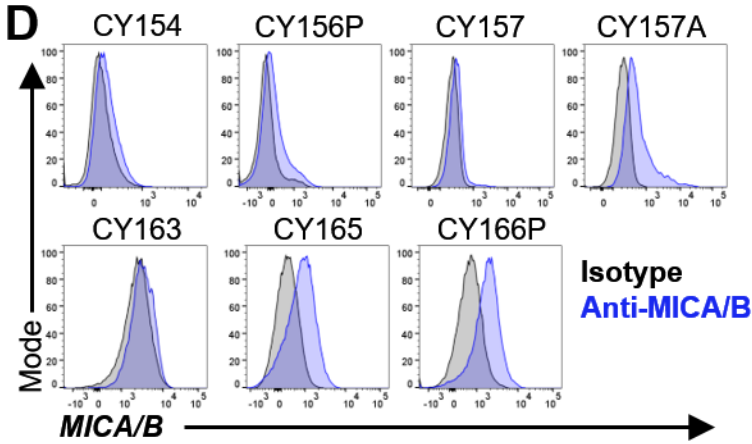
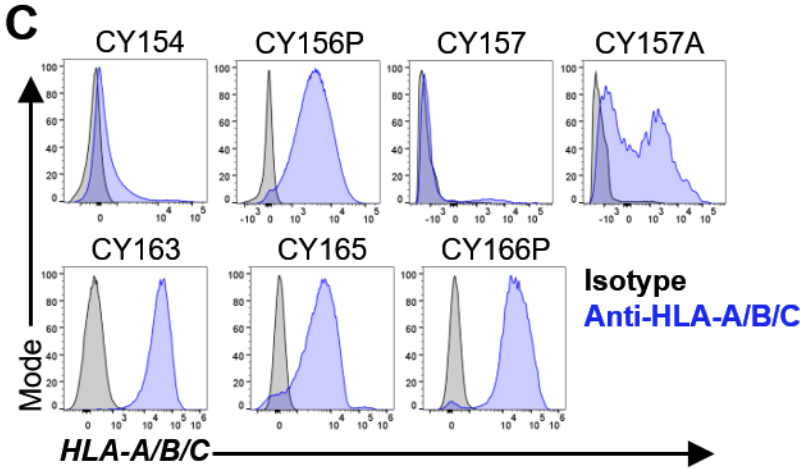
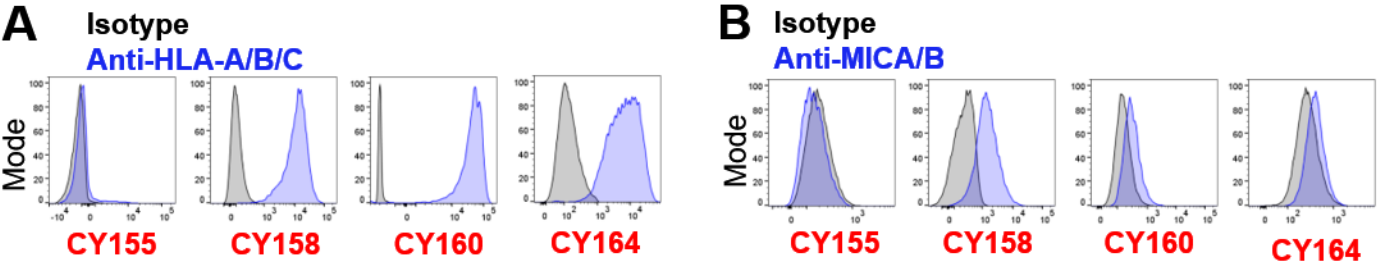
Supplementary Figure 4



Supplementary Figure 5



Supplementary Figure 6



Patient	Gender	Age	Site of tumor sample (metastasis or primary)	Mutation status (BRAF, NRAS)	Prior therapy (anti-PD1, anti-CTLA4)	Time elapsed since last treatment with systemic therapy	Any other prior treatment (chemo)
CY129.2	M	65	Lymph node (metastasis)	BRAF ^{wt} NRAS ^{wt}	Nivolumab + Pembrolizumab	Tumor removed during Pembrolizumab	n/a
CY155	F	66	lymph node, axillary (metastasis)	unknown	Pembrolizumab	<14 days	n/a
CY158	F	58	small bowel, jejunum (metastasis)	BRAF V600E	Ipilimumab	20 months	n/a
CY160	M	67	lymph node, axillary (metastasis)	BRAF G469K (oncopanel)	none	n/a	n/a
CY164	F	58	lymph node, femoral (metastasis)	Unknown	Pembrolizumab + TVEC	Pembrolizumab: 22 months TVEC: 15 months	n/a
CY154	F	38	lymph node, femoral (metastasis)	MAP2K1 D67N MAP2K1 P124R (oncopanel)	Nivolumab	18 days	n/a
CY156P	M	61	skin, arm (primary)	not BRAF V600E (others not tested)	none	n/a	n/a
CY157	M	69	lymph node, axillary (metastasis)	NRAS G13D JAK2 V617F (oncopanel)	none	n/a	n/a
CY161	M	59	lymph node, femoral (metastasis)	BRAF V600E	Pembrolizumab + TVEC *BRAF + MEK inhibitors	Pembrolizumab + TVEC: 2 months *BRAF + MEK inhibitor: 4 weeks	*BRAF + MEK inhibitor
CY163	M	70	soft tissue, arm (metastasis)	NRAS G13C NF1 Q531* NF1 Q2616* PI3KCA R818C (oncopanel)	Pembrolizumab	10 days	n/a
CY165	F	84	lymph node, axillary (metastasis)	NRAS G12A (oncopanel)	Pembrolizumab *prior Pembrolizumab + Epcadostat trial (blinded)	Pembrolizumab: 15 days	n/a
CY166P	F	63	skin, back (primary)	not BRAF V600E (others not tested)	none *patient immunosuppressed for renal transplant	n/a	n/a
CY166	F	63	skin, back (metastasis, in-transit)	not BRAF V600E (others not tested)	none *patient immunosuppressed for renal transplant	n/a	n/a