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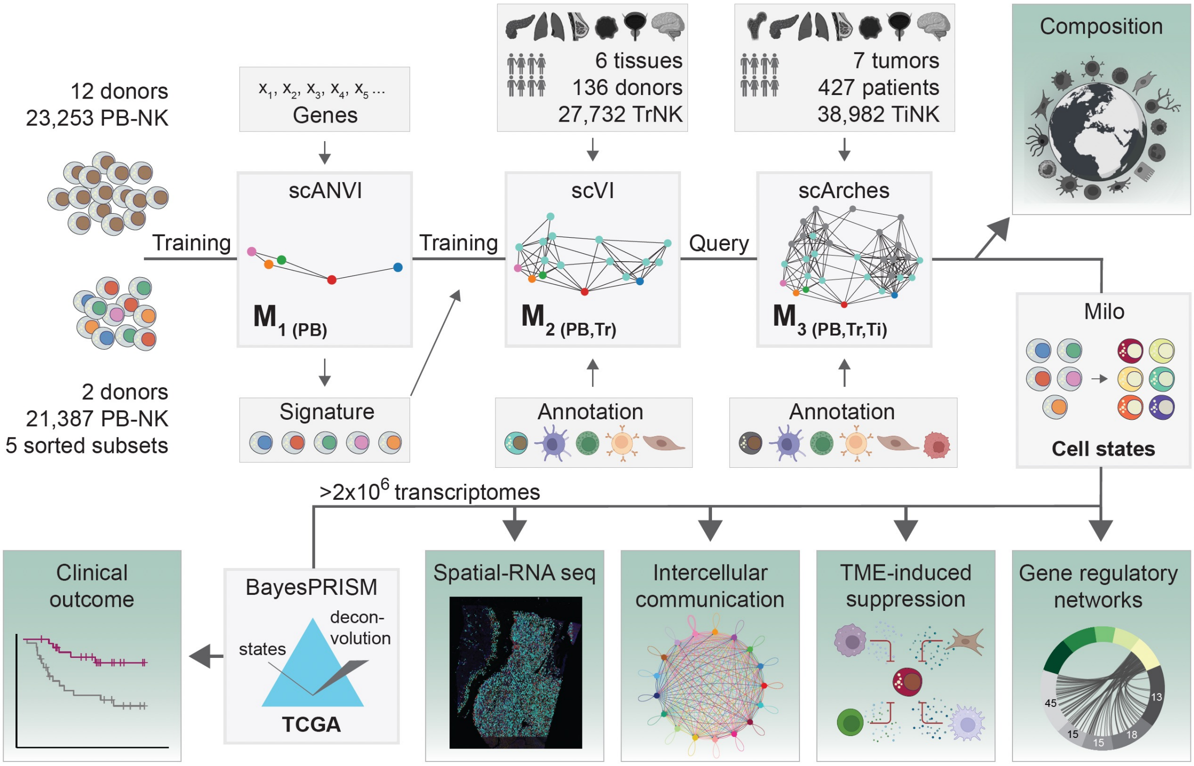
Pan-cancer profiling of tumor-infiltrating natural killer cells through transcriptional reference mapping



Supplementary Fig. 1: Graphical abstract.
Visualization of analysis workflow. The figure was partly generated using Biorender.

Supplementary tables

Supplementary table 1

Data containing NK cells from peripheral blood.

Dataset	Number of donors	Platform	Comment	Citation
Bulk PB NK cells	5	10x	Lab A in figure 1A	This manuscript
Sorted PB NK cells and bulk PB NK cells	2	10x	Lab B in figure 1A	This manuscript
Bulk PB NK cells	3	10x	Lab C in figure 1A	Crinier et al.[1]
Bulk PB NK cells	2	10x	Lab D ini figure 1A	Yang et al.[2]

Supplementary table 2

Data containing NK cells from normal tissue.

Dataset	Tissue type	# patients	Platform	Comment	Citation
Bulk tissue	Lung	7	10x	Tumor-adjacent normal lung samples, three from same patients as supplementary table 3	Lambrechts et al.[3]
Bulk tissue	Lung	4	10x	Tumor-adjacent normal lung samples, three from same patients as supplementary table 3	Chan et al.[4]
Bulk tissue	Lung	10	10x	Tumor-adjacent normal lung samples, same patients as supplementary table 3	Bischoff et al.[5]
Bulk tissue	Lung	7	10x	Tumor-adjacent normal lung samples, same patients as supplementary table 3	Goveia et al.[6]
Bulk tissue	Lung	11	10x	Tumor-adjacent normal lung samples, same patients as supplementary table 3	Kim et al.[7]
Bulk tissue	Lung	5	10x	Tumor-adjacent normal lung samples, same patients as supplementary table 3	He et al.[8]
Bulk tissue	Lung	42	10x	Tumor-adjacent normal lung samples, same patients as supplementary table 3	Leader et al.[9]
Bulk tissue	Pancreas	11	10x	3 cases of non-pancreatic tumor patients (e.g. bile duct tumors or duodenal tumors) and 8 cases of non-malignant pancreatic tumor patients (e.g. pancreatic cyst)	Peng et al.[10]
Bulk tissue	Pancreas	3	10x	adjacent/normal	Steele et al.[11]
Bulk tissue	Pancreas	3	10x	adjacent/normal	Chen et al.[12]
Bulk tissue	Prostate	10	10x		Tuong et al.[13]
Bulk tissue	Prostate	4	10x		Heidegger et al.[14]
Bulk tissue	Breast	10	10x	GEO: GSE161529	Bhat et al.[15]
Bulk tissue	Brain	4	10x		Siletti et al.[16]
Bulk tissue	Skin	3	10x	GEO: GSE169147	Damskey et al.[17]
Bulk tissue	Skin	6	10x	GEO: GSE193304	He et al.
Bulk tissue	Skin	3	10x	GEO: GSE160536	Mirizio et al.[18]
Bulk tissue	Skin	4	10x	GEO: GSE173205	Rindler et al.
Bulk tissue	Skin	4	10x	GEO: GSE138669	Xue et al.[19]

Supplementary table 3

Data containing NK cells from tumor tissue.

Dataset	Tumor type	# patients	Platform	Comment	Accession	Citation
Bulk TME	Lung (NSCLC)	8	10x		ArrayExpress: E-MTAB-6149 (5 patients) and E-MTAB-6653 (3 patients)	Lambrechts et al.[3]
Bulk TME	Lung (NSCLC)	7	inDrop		GEO: GSE127465	Zilionis et al.[20]
Bulk TME	Lung (NSCLC)	16	10x	HTAN		Chan et al.[4]
Bulk TME	Lung (NSCLC)	10	10x		DOI: 10.24433/CO.0121060.v1	Bischoff et al.[5]
Bulk TME	Lung (NSCLC)	49	10x	scRNA-seq and CITE-seq	GEO: GSE154826	Leader et al.[9]
Bulk TME	Lung (NSCLC)	5	10x		GSA: CRA001963	He et al.[8]
Bulk TME	Lung (NSCLC)	11	10x		SRA: PRJNA634159	Chen et al.[21]
Bulk TME	Lung (NSCLC)	8	10x		ArrayExpress: E-MTAB-6308	Goveia et al.[6]
Bulk TME	Lung (NSCLC)	11	10x		GEO: GSE131907	Kim et al.[7]
Bulk TME	Lung (NSCLC)	42	10x		GEO: GSE148071	Wu et al.[22]
Bulk TME	Pancreas (PDAC)	24	10x		GSA: CRA001160	Peng et al.[10]
Bulk TME	Pancreas (PDAC)	10	10x		GEO: GSE154778	Lin et al.[23]
Bulk TME	Pancreas (PDAC)	16	10x		GEO: GSE155698	Steele et al.[11]
Bulk TME	Pancreas (PDAC)	6	10x		GEO: GSE212966	Chen et al.[12]
Bulk TME	Melanoma	3	10x	Skin	GEO:GSE215120	Zhang et al.[24]
Bulk TME	Melanoma	8	10x	Skin		Smalley et al.[25]
Bulk TME	Glioblastoma (GBM)	4	10x		GEO: GSE162631	Xie et al.[26]
Bulk TME	Glioblastoma (GBM)	7	10x		Broad Insitute: SCP503	Richards et al.[27]
Bulk TME	Glioblastoma (GBM)	16	10x		GEO: GSE182109	Abdelfattah et al.[28]
Bulk TME	Glioblastoma (GBM)	7	10x		OSF: osf.io/4q32e/	Ravi et al.[29]
Bulk TME	Glioblastoma (GBM)	9	10x		GEO: GSE131928	Neftel et al.[30]
Bulk TME	Glioblastoma (GBM)	3	10x		GEO: GSE138794	Wang et al.[31]
Bulk TME	Glioblastoma (GBM)	3	10x		GEO: GSE139448	Wang et al.[32]

Dataset	Tumor type	# patients	Platform	Comment	Accession	Citation
Bulk TME	Glioblastoma (GBM)	5	10x		Synapse: syn22257780	Johnson et al.[33]
Bulk TME	Glioblastoma (GBM)	5	10x		GEO: GSE163108	Mathewson et al.[34]
Bulk TME	Glioblastoma (GBM)	13	10x		GEO: GSE163120	Pombo et al.[35]
Bulk TME	Glioblastoma (GBM)	35	10x		GEO: GSE154795	Lee et al.[36]
Bulk TME	Glioblastoma (GBM)	10	10x		GEO: GSE173278	LeBlanc et al.[37]
Bulk TME	Breast cancer	26	10x		GEO: GSE176078	Wu et al.[38]
Bulk TME	Breast cancer	34	10x		GEO: GSE161529	Pal et al.[39]
Bulk TME	Breast cancer	1	GEXSCOPE		GEO: GSE158399	Xu et al.[40]
Bulk TME	Breast cancer	5	GEXSCOPE		GEO: GSE180286	Xu et al.[41]
Bulk TME	Breast cancer	31	10x	treatment-naive pre-treatment	biokey. lambrechtslab.org	Bassez et al.[42]
Bulk TME	Prostate cancer	4	10x		GEO: GSE193337	Heidegger et al.[14]
Bulk TME	Prostate cancer	13	10x		GEO: GSE141445	Chen et al.[43]
Bulk TME	Prostate cancer	10	10x			Tuong et al.[13]
Bulk TME	Sarcoma	11	10x	Osteosarcoma	GEO: GSE152048	Zhou et al.[44]
Bulk TME	Sarcoma	6	10x	Osteosarcoma	GEO: GSE162454	Liu et al.[45]
Bulk TME	Sarcoma	4	10x	Osteosarcoma (TIL)	GEO: GSE198896	Cillo et al.

Supplementary table 4

Overview of number of cells from the various sources, including number of lymphoid cells and number of NK cells.

Dataset	Total cells in dataset	Lymphoid cell	NK cells
Peripheral blood			46303
Lung tumor	738416	344691	21608
Breast tumor	445376	147061	5130
Glioblastoma	782101	96838	5741
Pancreas tumor	124380	32614	1182
Sarcoma	150851	16328	1688
Prostate	66890	13131	549
Melanoma	28834	10754	3084
Lung normal	334072	119277	25137
Breast normal	46314	12125	646
Pancreas normal	38996	12584	673
Prostate normal	20717	6029	288
Brain normal		3236	718
Skin normal	137683	12112	270
——-	———	———	———
Total	2176214	826780	113017

Supplementary table 5

Overview of the spatial transcriptomics data sets used

Dataset	Staining Method	Link
Melanoma	IF	https://www.10xgenomics.com/datasets/human-melanoma-if-stained-ffpe-2-standard
Lung tumor	H&E	https://www.10xgenomics.com/datasets/human-lung-cancer-ffpe-2-standard
Glioblastoma	IF	https://www.10xgenomics.com/datasets/gene-and-protein-expression-library-of-human-glioblastoma-cytassist-ffpe-2-standard

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