

**Supplementary Table S1.** Summary of all significant and top three (if available, in bold) closest BCC “relatives” by cell type.

Cell Type	BCC score (median), Q1, Q3	BCC- “Relatives” score (median)	Q1	Q3	P-value
Th2	4.188E-18, 0, 0.01980129	<b>PRAD = 1.07E-17</b>	<b>0</b>	<b>0.01706565</b>	<b>0.6102</b>
		<b>KICH = 0.001056705</b>	<b>0</b>	<b>0.007381045</b>	<b>0.151</b>
		<b>KIRC = 2.23E-17</b>	<b>0</b>	<b>0.03051409</b>	<b>0.1368</b>
MSC	0.188433346, 0.08336783, 0.28205374	<b>SKCM = 0.16096867</b>	<b>0.07202425</b>	<b>0.25446426</b>	<b>0.3872</b>
Total CD8+	0.00445073, 0, 0.043739228	<b>GBM = 0.01048155</b>	<b>0</b>	<b>0.03021879</b>	<b>0.2741</b>
		<b>LGG = 0</b>	<b>0</b>	<b>0.01996548</b>	<b>0.05719</b>
Tgd	0, 0, 0.008231755	<b>THCA = 0</b>	<b>0</b>	<b>0.008063912</b>	<b>0.7752</b>
		<b>CHOL = 0</b>	<b>0</b>	<b>0.01282003</b>	<b>0.6099</b>
		<b>LIHC = 0</b>	<b>0</b>	<b>0.006720286</b>	<b>0.5979</b>
		KICH = 0	0	0.009986598	0.5525
		TGCT = 0	0	0.003538575	0.3495
		GBM = 0	0	0.001140639	0.244
		KIRC = 0	0	0.002117059	0.2002
		DLBC = 0	0	0.01388940	0.08334
		SARC = 0	0	0.002129824	0.07291
UCEC = 0	0	0	0.05902		
B-cells	0.04857795, 0.020757612, 0.086950544	<b>THYM = 0.055183104</b>	<b>0.03108108</b>	<b>0.08455359</b>	<b>0.3715</b>
		<b>GBM = 0.04815724</b>	<b>0.028318876</b>	<b>0.075344991</b>	<b>0.2374</b>
Total Lymphocytes	0.39140159, 0.3132104, 0.4688854	<b>SARC = 0.416998654</b>	<b>0.3124302</b>	<b>0.5153758</b>	<b>0.2290</b>
Macrophages	0.25033106, 0.1763854, 0.3784326	<b>ESCA = 0.2331247</b>	<b>0.1675734</b>	<b>0.3352133</b>	<b>0.5397</b>
		<b>KICH = 0.276729</b>	<b>0.1843325</b>	<b>0.3949821</b>	<b>0.4904</b>
		<b>BLCA = 0.2590653</b>	<b>0.16693727</b>	<b>0.33762817</b>	<b>0.3333</b>
		ACC = 0.2594566	0.2071582	0.3565666	0.3128
		STAD = 0.2654186	0.19623848	0.33075342	0.2366
		HNSC = 0.2748354	0.2069556	0.3561280	0.2252
Total NK	0.0325587, 0.005046464, 0.053041073	<b>DLBC = 0.2793964</b>	<b>0.18870890</b>	<b>0.33007984</b>	<b>0.08976</b>
		<b>THYM = 0.02682497</b>	<b>0.009408674</b>	<b>0.049124771</b>	<b>0.6696</b>
		<b>ESCA = 0.02523973</b>	<b>0.01152386</b>	<b>0.04604726</b>	<b>0.4214</b>
		<b>KIRP = 0.02878749</b>	<b>0.01382830</b>	<b>0.04874396</b>	<b>0.3381</b>
		UVM = 0.02839242	0.01406619	0.04997250	0.25
		READ = 0.02042911	0.003387114	0.041380355	0.2457
		UCS = 0.0360689	0.01366458	0.07025842	0.2434
		KIRC = 0.03447636	0.01423560	0.05709336	0.2311
		SARC = 0.02980665	0.01438558	0.04549609	0.1979
		BLCA = 0.03280019	0.01570095	0.05698518	0.1718
DLBC = 0.01879405	0.004128464	0.042910416	0.1221		

		PRAD = 0.03551566	0.01577075	0.05472112	0.09082
		LUSC = 0.02415559	0.01062867	0.03874510	0.07355
		CHOL = 0.04473911	0.02815367	0.06960667	0.05944
		COAD = 0.02242313	0.006309632	0.041589770	0.05544
		THCA = 0.03297953	0.01616638	0.05686914	0.0512
		SKCM = 0.02038228	0.006983169	0.040457560	0.05057
Tregs	0, 0, 0	<b>ACC = 0</b>	<b>0</b>	<b>0</b>	<b>0.9991</b>
		<b>LAML = 0</b>	<b>0</b>	<b>0.00315034</b>	<b>0.3533</b>
		<b>CHOL = 0.156189</b>	<b>0.1321129</b>	<b>0.1952696</b>	<b>0.6959</b>
		<b>SARC = 0.1562586</b>	<b>0.1154291</b>	<b>0.2083701</b>	<b>0.6334</b>
		<b>SKCM = 1412604</b>	<b>0.08728384</b>	<b>0.19168763</b>	<b>0.5715</b>
		UCS = 0.145859	0.08257441	0.22042976	0.5447
		THCA = 0.1411155	0.1003041	0.1867856	0.4649
Total CD4+	0.15296126,	LIHC = 0.1652248	0.1152202	0.2237863	0.4642
	0.1031139,	BLCA = 0.1649314	0.09478596	0.23077402	0.2715
	0.2082608	MESO = 0.1472571	0.11229869	0.18824632	0.2135
		CESC = 0.1667974	0.1167771	0.2087164	0.2112
		KICH = 0.1782413	0.12870279	0.22144281	0.17
		PAAD = 0.1700216	0.12820877	0.21796094	0.1254
		TGCT = 0.1730064	0.1346265	0.2090150	0.08706
		PCPG = 0.175342	0.13049092	0.23039868	0.08318