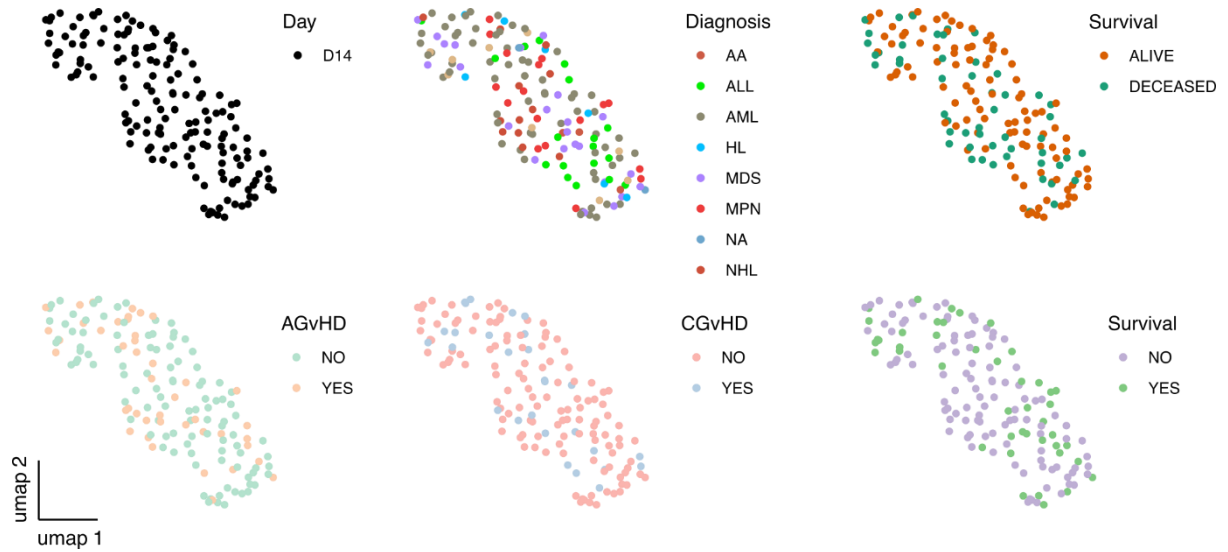
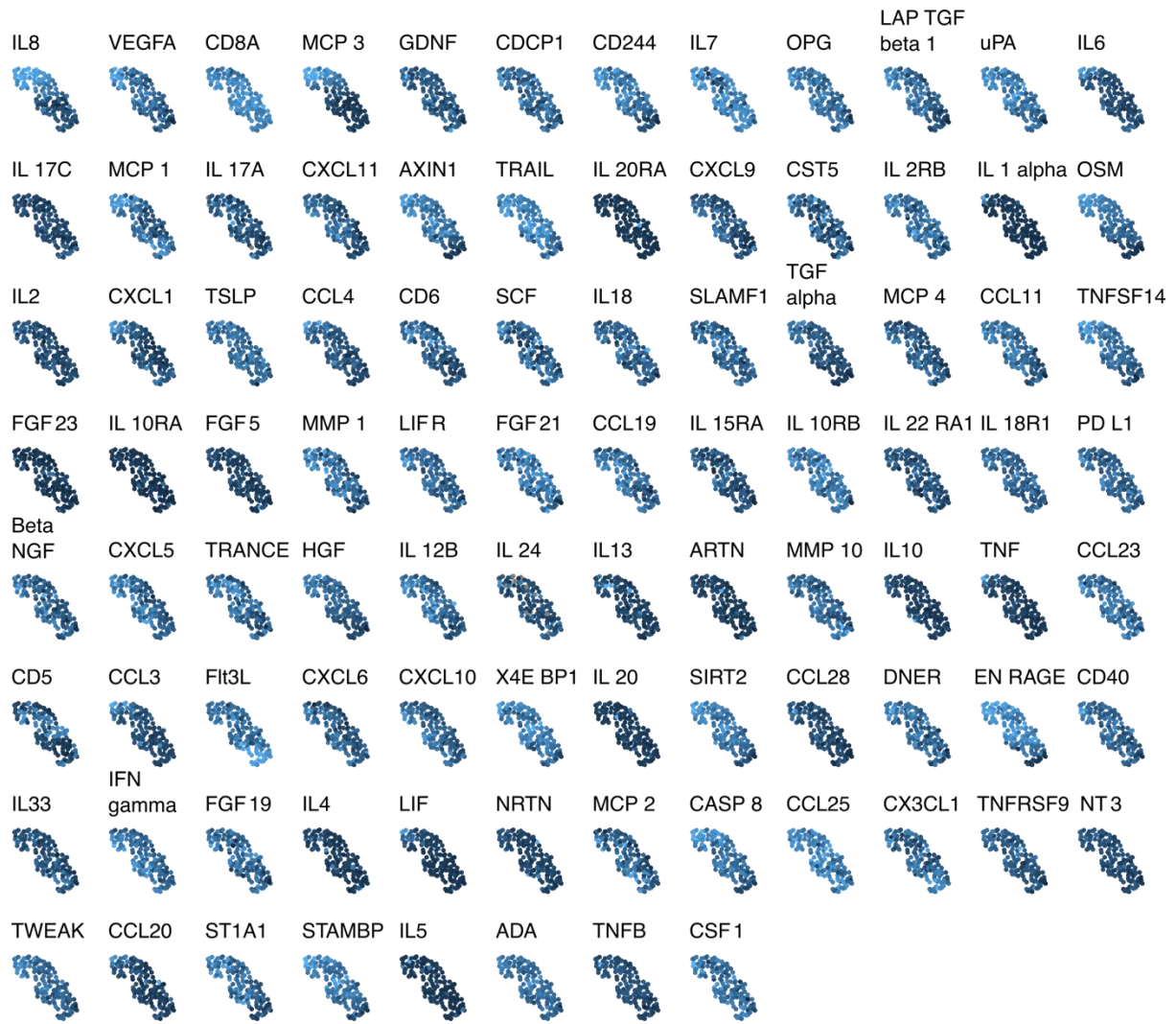


Supplementary Materials

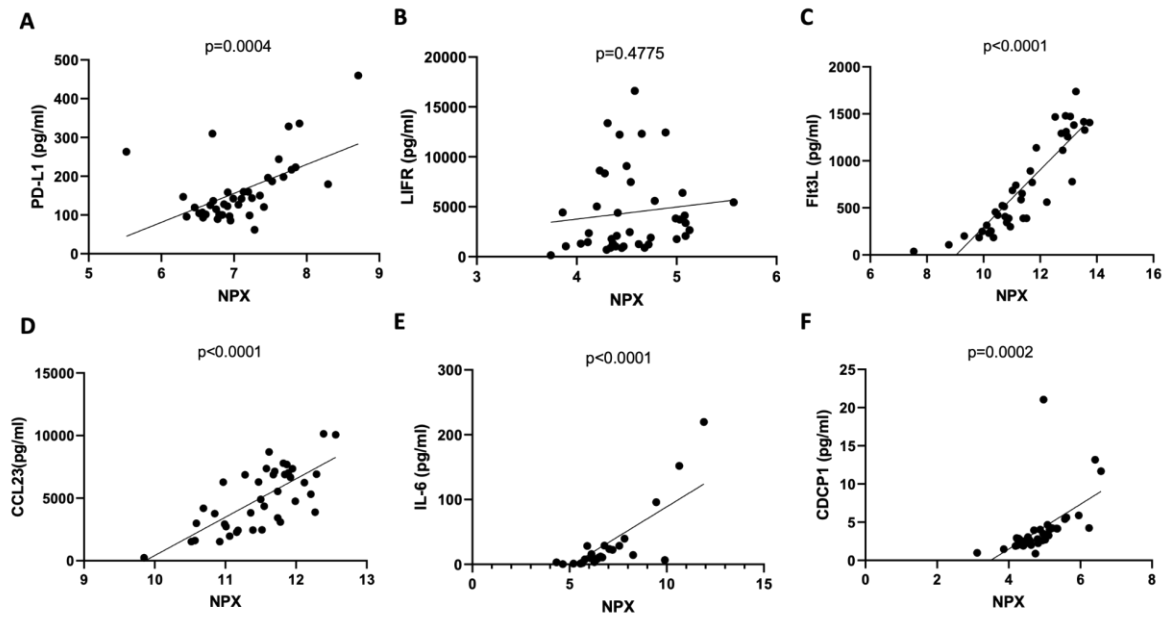
Supplementary Figure S1. Overview of Day 14 data in reduced dimensional space. UMAP of D14 sample NPX data overlaid with Diagnosis and clinical outcomes Survival, AGvHD, CGvHD and Relapse.



Supplementary Figure S2. Overview of 92 proteins serum expression at day 14 post SCT in reduced dimensional space. UMAP of 154 D14 sample NPX data overlaid with serum protein NPX.



Supplementary Figure S3. Correlation of relatively quantified Olink Normalised protein expression (NPX) data with absolute quantification of protein expression by ELISA in pg/ml for selected proteins. (A) PD-L1 (B) LIFR (C) FLt3L (D) CCL23 (E) IL-6 (F) CDCP1



**Supplementary Table 1 – Univariate regression estimates for all end-points
(attached in excel)**

Supplementary Table 2 – Multivariate regression estimates for GRFS

Variable	GvHD-free, relapse-free survival			
	Adj.HR	Adj.CI	P val.	PH test
Age at transplant / 10	1.09	(0.91 - 1.3)	0.34	0.519
HCT-CI 0				0.962
HCT-CI 1	1.27	(0.64 - 2.55)	0.50	0.962
HCT-CI 2	1.07	(0.6 - 1.91)	0.81	0.962
HCT-CI 3+	2.05	(1.16 - 3.6)	0.02	0.962
CCL23	1.3	(1.06 - 1.59)	0.01	0.632

Supplementary Table 3 – Multivariate regression estimates for OS

Variable	Overall survival			
	Adj.HR	Adj.CI	P val.	PH test
Age at transplant / 10	1.07	(0.81 - 1.4)	0.65	0.81
D. sex Matched				0.257
D. sex Mismatched	0.53	(0.28 - 0.99)	0.06	0.257
HCT-CI 0				0.729
HCT-CI 1	1.39	(0.46 - 4.17)	0.56	0.729
HCT-CI 2	1.61	(0.7 - 3.69)	0.27	0.729
HCT-CI 3+	1.71	(0.69 - 4.25)	0.26	0.729
RIC No				0.45
RIC Yes	0.44	(0.23 - 0.83)	0.02	0.45
PD-L1	1.41	(1.01 - 1.97)	0.05	0.623
CDCP1	1.28	(0.94 - 1.75)	0.13	0.614

Supplementary Table 4 – Multivariate regression estimates for RM and NRM

Variable	Relapse-related mortality				Non-relapse mortality			
	Adj. HR (SD)	Adj.CI	P val.	PH test	Adj. HR (SD)	Adj.CI	P val.	PH test
Age at transplant / 10	1.19	(0.69 - 2.06)	0.54	0.10	1.11	(0.69 - 1.8)	0.66	0.40
CD34+ dose	1.02	(0.82 - 1.26)	0.88	0.26	1.24	(1.02 - 1.49)	0.03	0.30
Diagnosis Lymphoid								
Diagnosis Myeloid	8.35	(1.87 - 37.32)	0.01	0.32	0.27	(0.1 - 0.73)	0.01	0.86
HCT-CI 0								
HCT-CI 1	1.24	(0.15 - 10.16)	0.85	0.39	0.83	(0.11 - 6.24)	0.86	0.50
HCT-CI 2	2.22	(0.37 - 13.42)	0.39	0.33	1.22	(0.31 - 4.87)	0.77	0.34
HCT-CI 3+	0.32	(0.03 - 3.96)	0.39	0.46	4.9	(1.17 - 20.59)	0.04	0.49
P. sex Female								
P. sex Male	1.7	(0.4 - 7.14)	0.47	0.30	0.94	(0.35 - 2.49)	0.90	0.49
TBI No								
TBI Yes	3.98	(0.51 - 30.76)	0.19	0.28	1.35	(0.39 - 4.7)	0.63	0.70
CCL23	1.94	(0.78 - 4.87)	0.16	0.28	1.11	(0.62 - 1.97)	0.73	0.92
CDCP1	2.41	(1.27 - 4.56)	0.01	0.50	1.26	(0.82 - 1.94)	0.29	0.60
CSF-1	0.93	(0.34 - 2.54)	0.88	0.12	1.57	(0.95 - 2.6)	0.08	0.09
CXCL10	0.57	(0.32 - 1.02)	0.06	0.08	1.29	(0.76 - 2.2)	0.34	0.97
IL6	0.47	(0.22 - 1)	0.05	0.07	1.5	(1 - 2.23)	0.05	0.46
LIF-R	1.48	(0.66 - 3.3)	0.35	0.31	0.47	(0.28 - 0.77)	0.00	0.19
PD-L1	0.6	(0.24 - 1.5)	0.28	0.35	1.35	(0.71 - 2.55)	0.36	0.06
TNFRSF9	2.39	(0.81 - 7.03)	0.11	0.12	0.75	(0.4 - 1.41)	0.37	0.28

Supplementary Table 5 – Multivariate regression estimates for AGvHD and death (any other cause)

Variable	AGvHD				Death (without AGvHD)			
	Adj. HR (SD)	Adj.CI	P val.	PH test	Adj. HR (SD)	Adj.CI	P val.	PH test
Age at transplant / 10	1.46	(1.03 - 2.08)	0.04	0.64	0.93	(0.68 - 1.29)	0.68	0.65
CD34+ dose	1.06	(0.88 - 1.27)	0.55	0.60	1	(0.88 - 1.14)	0.94	0.73
Diagnosis Lymphoid								
Diagnosis Myeloid	0.9	(0.37 - 2.21)	0.81	0.19	0.92	(0.39 - 2.2)	0.86	0.39
HCT-CI 0								
HCT-CI 1	1.22	(0.37 - 3.99)	0.74	0.19	0.75	(0.16 - 3.55)	0.72	0.35
HCT-CI 2	0.83	(0.25 - 2.71)	0.75	0.20	1.08	(0.37 - 3.18)	0.88	0.22
HCT-CI 3+	2.6	(0.97 - 6.95)	0.06	0.38	0.91	(0.24 - 3.37)	0.89	0.10
P. sex Female								
P. sex Male	1.08	(0.53 - 2.17)	0.84	0.91	1.01	(0.41 - 2.5)	0.98	0.59
TBI No								
TBI Yes	1.48	(0.66 - 3.34)	0.34	0.65	1.89	(0.54 - 6.6)	0.32	0.62
CCL23	1.66	(1.12 - 2.46)	0.01	0.74	0.65	(0.35 - 1.2)	0.17	0.03
CDCP1	0.93	(0.64 - 1.35)	0.70	0.96	1.37	(0.98 - 1.92)	0.07	0.23
CSF-1	0.95	(0.6 - 1.51)	0.83	0.42	1.13	(0.64 - 1.97)	0.68	0.77
CXCL10	0.89	(0.59 - 1.35)	0.60	0.45	1.04	(0.65 - 1.64)	0.88	0.65
IL6	1.13	(0.77 - 1.65)	0.54	0.07	0.89	(0.62 - 1.29)	0.55	0.73
PD-L1	0.87	(0.5 - 1.52)	0.62	0.39	1.19	(0.72 - 1.96)	0.51	0.50
TNFRSF9	0.99	(0.69 - 1.42)	0.95	0.43	1.36	(0.91 - 2.04)	0.13	0.20

Supplementary Table 6 – Multivariate regression estimates for CGvHD and death (any other cause)

Variable	CGvHD				Death (without CGvHD)			
	Adj. HR (SD)	Adj.CI	P val.	PH test	Adj. HR (SD)	Adj.CI	P val.	PH test
Age at transplant / 10	1.03	(0.76 - 1.41)	0.83	0.38	1.02	(0.71 - 1.48)	0.91	0.71
CD34+ dose	1.07	(0.87 - 1.3)	0.53	0.91	1.11	(0.98 - 1.26)	0.10	0.20
Diagnosis Lymphoid								
Diagnosis Myeloid	0.91	(0.35 - 2.33)	0.84	0.26	1	(0.42 - 2.4)	1.00	0.43
HCT-CI 0								
HCT-CI 1	1.01	(0.2 - 5.02)	0.99	0.50	1.03	(0.31 - 3.41)	0.96	0.70
HCT-CI 2	0.94	(0.3 - 2.97)	0.92	0.32	1.05	(0.3 - 3.6)	0.94	0.23
HCT-CI 3+	0.67	(0.17 - 2.64)	0.57	0.44	2.35	(0.89 - 6.19)	0.09	0.38
TBI No								
TBI Yes	1.73	(0.5 - 5.98)	0.38	0.77	1.19	(0.42 - 3.34)	0.74	0.83
CCL23	1.14	(0.79 - 1.64)	0.50	0.58	1.06	(0.65 - 1.72)	0.83	0.60
CDCP1	0.9	(0.59 - 1.38)	0.64	0.12	1.26	(0.88 - 1.81)	0.21	0.85
CSF.1	0.7	(0.39 - 1.24)	0.22	0.18	1.37	(0.83 - 2.26)	0.22	0.39
CXCL10	0.96	(0.64 - 1.42)	0.83	0.12	0.9	(0.6 - 1.35)	0.63	0.49
IL6	1.14	(0.75 - 1.71)	0.54	0.56	1.02	(0.74 - 1.4)	0.90	0.71
PD-L1	1.5	(0.8 - 2.82)	0.20	0.07	1.08	(0.67 - 1.74)	0.74	0.25
TNFRSF9	0.85	(0.53 - 1.36)	0.50	0.11	1.09	(0.52 - 2.25)	0.82	0.40

Supplementary Table 7 – Multivariate regression estimates for relapse and NRM

Variable	Relapse				Non-relapse mortality			
	Adj. HR (SD)	Adj.CI	P val.	PH test	Adj. HR (SD)	Adj.CI	P val.	PH test
Age at transplant / 10	1.04	(0.77 - 1.4)	0.80	0.55	1.13	(0.7 - 1.81)	0.62	0.41
CD34+ dose	1.07	(0.93 - 1.23)	0.35	0.34	1.21	(1 - 1.46)	0.05	0.31
Diagnosis Lymphoid								
Diagnosis Myeloid	2.3	(1 - 5.26)	0.05	0.05	0.24	(0.08 - 0.7)	0.01	0.78
HCT-CI 0								
HCT-CI 1	1.43	(0.36 - 5.57)	0.61	0.41	1	(0.12 - 8.31)	1.00	0.59
HCT-CI 2	1.63	(0.7 - 3.79)	0.26	0.53	1.24	(0.3 - 5.12)	0.77	0.34
HCT-CI 3+	0.55	(0.18 - 1.67)	0.29	0.35	4.62	(1.01 - 21.26)	0.06	0.18
P. sex Female								
P. sex Male	0.78	(0.38 - 1.61)	0.50	0.52	0.95	(0.35 - 2.6)	0.93	0.59
TBI No								
TBI Yes	0.67	(0.21 - 2.16)	0.50	0.11	1.38	(0.42 - 4.55)	0.60	0.48
CCL23	1.42	(0.87 - 2.31)	0.16	0.76	1.16	(0.65 - 2.08)	0.61	0.93
CDCP1	1.29	(0.91 - 1.84)	0.16	0.88	1.26	(0.82 - 1.95)	0.29	0.56
CXCL10	0.66	(0.48 - 0.9)	0.01	0.47	1.49	(0.89 - 2.5)	0.13	0.97
IL6	0.72	(0.5 - 1.04)	0.08	0.37	1.54	(1.04 - 2.28)	0.03	0.47
LIF-R	1.04	(0.73 - 1.48)	0.82	0.83	0.48	(0.28 - 0.82)	0.01	0.16
PD-L1	0.9	(0.49 - 1.65)	0.72	0.67	1.44	(0.79 - 2.63)	0.23	0.07
TNFRSF9	1.15	(0.6 - 2.23)	0.67	0.10	0.86	(0.49 - 1.51)	0.61	0.37