Supplementary Table 1. Demographics of the phenotyped population

Age group	<18 years	18-35 years	35-50 years	50-65 years	65+ years	All
n	40	90	100	123	54	638
Physical characteristics						
Median age (IQR)	9.0 (4.8-12.0)	26.0 (23.0-30.0)	43.3 (39.1-46.1)	58.2 (54.0-61.0)	70.2 (68.0-75.1)	46.0 (29.0-59.2)
Female, *n* (%)	23 (57.5%)	52 (57.8%)	61 (61.0%)	64 (52.0%)	22 (40.7%)	343 (53.8%)
Male, *n* (%)	16 (40.0%)	38 (42.2%)	39 (39.0%)	59 (48.0%)	32 (59.3%)	268 (44.8%)
BMI (IQR)	NA	22.0 (20.5-24.5)	24.0 (23.0-27.0)	25.0 (23.0-28.0)	27.0 (25.0-29.0)	24.0 (22.0-27.0)
BMI, *n*	0	43	60	89	21	213
Psychological scores						
Survey, *n*	0	44	58	96	37	235
Depression (IQR)	NA	1.0 (0.0 – 2.0)	1.0 (0.0 – 2.0)	2.0 (0.0 – 4.0)	5.0 (1.0 – 6.0)	1.0 (0.0 – 4.0)
Anxiety (IQR)	NA	4.0 (1.0 – 4.0)	3.0 (1.0 – 5.8)	3.0 (1.0 – 6.0)	4.0 (2.0 – 6.0)	3.0 (1.0 – 6.0)

Phenotypic descriptors for the whole cohort and split by age groups (<18, 18-35, 35-50, 50-65, >65). Median and interquartile ranges (IQR) are shown. Values do not add up to 100% due to missing data. BMI and psychological scores were only assessed in sub-cohorts.

Supplementary Table 2. Immune parameter definitions and summary statistics

Available as attached Excel spreadsheet

Definitions and characterisation for each immune parameter. Summary statistics for each immune parameter (R^2 values, *P* values, 95% confidence intervals)

Supplementary Table 3. Flow cytometry reagents

Target	Clone	Source
CCR7	3D12	eBiosciences
CD11c	3.9	eBiosciences
CD123	6H6	eBiosciences
CD14	61D3	eBiosciences
CD24	eBioSN3 (SN3 A5-2H10)	eBiosciences
CD27	O323	eBiosciences
CD3	SK7	eBiosciences
CD31	WM-59	eBiosciences
CD38	HIT2	eBiosciences
CD4	RPA-T4	eBiosciences
CD8α	RPA-T8	eBiosciences
CD19	HIB19	eBiosciences
CD45Ra	HI100	eBiosciences
CD56	MEM188	eBiosciences
CXCR5	IgG23	R&D
FOXP3	206D	Biolegend
$\gamma\delta$TCR	B1.1	eBiosciences
HLA-DR	LN3	eBiosciences
IFNγ	4S.B3	eBiosciences
IgE	IgE21	eBiosciences
IgM	MHM-88	eBiosciences
IL-17	eBio64DEC17	eBiosciences
IL-2	MQ1-17H12	eBiosciences
IL-4	8D4-8	eBiosciences
PD-1	eBioJ105	eBiosciences
$V_{\alpha}24J_{\alpha}18$	6B11	eBiosciences