Supplementary Information

File S1. Data used for the plots of the variable selection
Fig S1. The optimal principal component
Fig S2: Variable selection. All three VIP cut off points are shown 0.8 (red), 1.0 (orange) and 1.5 (green). The vertical broken grey lines indicate $\left|\beta_{pls}\right| < 0.025$, the region within which the variables have less predictive power even if they have a higher VIP score.

covariate	VIP	Loadings	Coefficients	corr_cd4_r	corr_cd4_p
red_cells	0.857940555	-0.217343662	-0.165902182	0.1081	0
haematocrit	1.407822146	-0.024114176	0.049524278	0.2337	0
mcv	1.347440569	0.28572096	0.317800115	0.1698	0
mchc	0.885934469	0.013203523	0.096842018	0.097	0
rdw	0.234781831	-0.041171465	-0.211986424	-0.1332	0
platelet	1.107183251	0.094439854	0.092154341	0.155	0
neutrophils	0.609718532	0.04668982	0.116615391	0.126	0
lymphocytes	3.559955678	0.289071204	0.079860318	0.5421	0
monocytes	1.074237131	-0.139346301	0.037585607	0.1547	0
eosinophils	0.579917078	-0.029988494	-0.006988981	0.081	0
basophils	1.825638814	-0.11544204	-0.105041758	0.1353	0
ldl	0.454814315	-0.097840632	0.047573411	0.0786	0
triglycerides	0.632590412	-0.067611492	0.099628861	0.0399	0.014
glucose	0.963436822	0.333456917	0.167897992	-0.1233	0
alt_gpt	0.157007466	0.032415058	0.067195185	-0.0349	0.0315
ast_got	0.59307569	0.028853716	0.040535562	-0.1355	0
bilirubin	0.35681387	-0.093728911	-0.094900976	0.0467	0.004
alkaline_phos	1.35497892	0.200344397	0.267117091	0.1154	0
glutamyl_trans	0.27447196	-0.049780339	-0.041474026	-0.0601	0.0002
calcium	0.942787119	-0.266531174	-0.298540748	0.0288	0.0762
chloride	0.547690604	-0.145323495	-0.234395344	-0.0062	0.7049
magnesium	1.014386356	-0.247164696	-0.27363779	0.0724	0
potassium	1.085581902	-0.172445537	-0.156950175	0.1245	0
sodium	0.855535132	-0.232549416	-0.294388229	0.0348	0.0321
protein	1.060425525	0.081799092	0.158684273	-0.174	0
albumin	1.483055751	-0.099160787	-0.1658659	0.1694	0
lactate_dehyd	1.030964085	0.278172724	0.349802143	0.0569	0.0005
fe	0.284169435	0.069194108	0.161588711	0.0711	0
folate	1.01908559	-0.347761515	-0.395825412	-0.153	0
vitb12	0.68048255	0.210685065	0.250487898	0.0167	0.3042
urea	0.184117359	0.016735013	0.092672974	0.0232	0.1537
bp_systolic	0.360608237	-0.090954638	-0.030263888	0.054	0.0009
bp_diastolic	0.25862312	-0.052688697	-0.002816418	0.0187	0.2499
pulse_bpm	0.184233976	0.054743841	0.098897524	-0.0178	0.2729
axillary_temp	0.119267524	-0.040092546	-0.047470303	-0.0629	0.0001
waist_circum	0.48866493	0.072102588	0.272087378	0.1428	0
arm_right	0.298813158	0.019073876	0.181171301	0.1231	0
triceps_skin	0.637425969	0.175520358	0.269077759	0.1369	0
height_m	0.551861604	-0.006890821	0.085447599	0.0606	0.0002
bmi	0.40821976	0.091182126	0.229885639	0.1181	0