Supplementary Table 4. The multivariate regression of selected variables on leukocytes, erythrocytes, and platelet counts in healthy controls and patients with anorexia using the orthogonal partial least squares model

Variable	Controls (n=20)			Anorexia nervosa (n=59)		
	Leukocytes	Erythrocytes	Platelets	Leukocytes	Erythrocytes	Platelets
	VIP values			VIP values		
Free thyroxine	**1.52**	0.43	**1.23**	0.76	0.84	0.83
Femoral neck *z* score	**1.31**	0.57	0.63	**1.10**	0.52	0.35
Estradiol	**1.26**	0.96	0.89	**1.22**	**1.07**	**1.08**
Alkaline phosphatase	0.98	**1.11**	0.68	**1.07**	**1.53**	**1.66**
IGF-1	0.82	0.75	0.40	**1.13**	**1.19**	0.92
Body fat %	0.75	0.98	**1.33**	**1.03**	**1.39**	**1.28**
PINP	0.44	**1.36**	**1.10**	**1.27**	**1.15**	**1.23**
CTX	0.10	**1.39**	**1.30**	0.48	0.07	0.47
Amenorrhea duration	NA	NA	NA	0.62	0.25	0.23
	Model description					
Components (P; O)	1; 1	1;1	1;1	1;0	1;0	1;0
R^2X	0.39	0.51	0.47	0.45	0.31	0.27
R^2Y	0.64	0.52	0.43	0.25	0.13	0.11
Q^2	0.50	0.24	0.03	0.05	-0.01	-0.02
Permutation-test R^2Y intercept	0.25	0.27	PTNP	PTNP	PTNP	PTNP
Permutation-test Q^2 intercept	-0.59	-0,60				

IGF-1, insulin-like growth factor-1; PINP, amino-terminal propeptide of human procollagen type I; CTX, carboxy-terminal telopeptide of type I collagen; R^2X, variance; R^2Y, variance; Q^2, predictability; PTNP, permutation test not performed

VIP, variable importance in the projection, summarizes the overall importance of each X-variable in the model, VIP values ≥ 1 are considered influential in driving the regression relationship with Y, those with low VIP scores (<0.5) contribute little to the model; P, predictive; O, orthogonal; R^2X and R^2Y are measures of goodness of fit, R^2X shows the fraction of variation in X (= variation explained in the predictors) and R^2Y shows variation in Y (= variation explained in the blood count outcome) explained by the model; Q^2, a measure of goodness of prediction, indicates the predictive ability of the model, calculated via cross-validation. A Q^2 ≥ 0.5 generally indicates a good predictive model.

In healthy controls, all three OPLS models included one predictive and one orthogonal component. For leukocytes, the model explained 64% of the outcome variance (R^2Y = 0.64) with acceptable predictivity (Q^2 = 0.50). FT4, femoral neck z score, and estradiol had VIP values ≥1. The erythrocyte and platelet models explained 52% and 43% of outcome variance, respectively, but showed limited cross-validated predictivity (Q^2 = 0.24 and 0.03, respectively). Permutation testing yielded low R2Y and negative Q^2 intercepts for both fitted models (leukocyte and erythrocyte counts), suggesting favorable permutation diagnostics. However, the erythrocyte model showed limited cross-validated predictivity and therefore did not meet the stated criteria for acceptable predictive performance.

In patients with anorexia nervosa, all three models included one predictive component and several variables had VIP values ≥1. However, models showed poor explanatory performance (25%, 10%, and 8%, respectively) and low or even negative Q^2 values (0.04, -0.01, and -0.02, respectively). Because neither patient model met the acceptability criteria, we did not perform validation using a permutation test.