

**Additional file 7.** Model performance in the training (cross-validation) set for baseline FVC % predicted, DLCO % predicted and CPI.

	FVC % predicted		DL <sub>CO</sub> % predicted		CPI	
	RMSE	R <sup>2</sup>	RMSE	R <sup>2</sup>	RMSE	R <sup>2</sup>
<b>PLS</b>	11.43	0.16	11.43	0.16	11.11	0.11
<b>PLR</b>	16.60	0.07	14.39	0.11	11.16	0.11
<b>SVM</b>	16.33	0.07	14.23	0.11	11.03	0.12
<b>KNN</b>	16.51	0.05	14.83	0.04	11.23	0.10
<b>RPART</b>	16.67	0.07	14.68	0.06	10.94	0.13
<b>RF</b>	16.32	0.07	14.02	0.12	10.95	0.12

KNN, K-nearest neighbors; PLR, penalized logistic regression; PLS, partial least squares; RF, random forests; RMSE, root mean squared error; RPART, recursive partitioning; SVM, support vector machines.