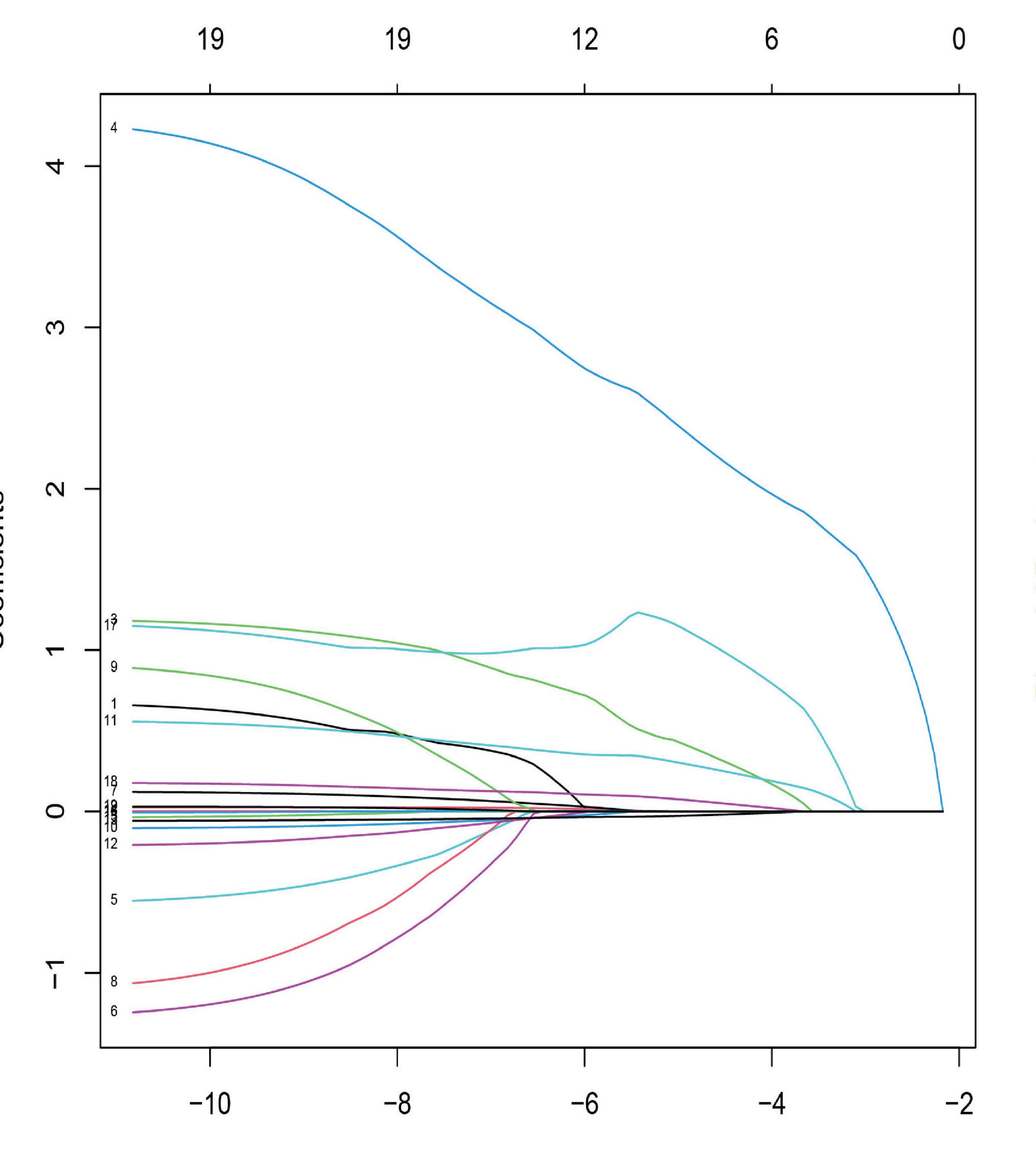
	Ą	Albumin	sebum_thickness	skin_to_lamina_thickness	Antibiotics	OP_times	АТ	Bender	WBC	PLT	ESR	Number_of_vertebral_bodies_spanned	Jumber_of_screws	Blood_transfusion	Status	Modic	Diabetes	Glucose	Age	ASA	
Hb	1	Q.5	-0.06	0.04	ح 0.01	0.1	ح 0.11	0.39	-0.23	0	ш -0.38	-0.12	-0.18	-0.08	-0.19	-0.21	0.03	0.06	⊲ -0.26	⊲	1
Albumin	0.5	1	-0.04	-0.03	-0.01	0.14	0.14	0.06	-0.25	0.1	-0.3	-0.16	-0.17	-0.13	-0.14	-0.18	0.03	0.09	-0.28	-0.07	
Sebum_thickness	-0.06	-0.04	1	0.41	0.06	0.06	0.03	-0.17	0.01	0	0.03	-0.01	0.02	0.15	0.2	0.12	0.11	0.1	0.11	0.05	0.8
Skin_to_lamina_thickness	0.04	-0.03	0.41	1	0	0.01	0.01	0.03	0.03	-0.04	-0.02	-0.01	-0.07	0.05	0.03	0	0.02	0	0.02	-0.03	
Antibiotics	0.01	-0.01	0.06	0	1	0.36	0.25	0.03	-0.06	-0.02	-0.02	0.25	0.31	0.22	0.07	0.06	0.05	0.05	0.03	0.03	0.6
OP_times	0.1	0.14	0.06	0.01	0.36	1	0.97	0.05	0.02	0	-0.09	-0.55	-0.39	-0.05	0.02	-0.02	0.06	0.04	-0.14	-0.02	
AT	0.11	0.14	0.03	0.01	0.25	0.97	1	0.05	0.01	0	-0.11	-0.63	-0.47	-0.12	-0.07	-0.06	0.03	0.01	-0.15	-0.02	0.4
Gender	0.39	0.06	-0.17	0.03	0.03	0.05	0.05	1	0.1	-0.1	-0.17	-0.03	-0.03	-0.09	-0.07	-0.07	0.05	0.05	-0.09	-0.01	
WBC	-0.23	-0.25	0.01	0.03	-0.06	0.02	0.01	0.1	1	0.03	0.13	-0.07	0.01	0	0.07	0.14	-0.02	0	-0.03	-0.06	0.2
PLT	0	0.1	0	-0.04	-0.02	0	0	-0.1	0.03	1	0.2	0	-0.01	0.01	-0.01	-0.06	0	0.04	-0.07	0.01	
ESR	-0.38	-0.3	0.03	-0.02	-0.02	-0.09	-0.11	-0.17	0.13	0.2	1	0.13	0.14	0.13	0.15	0.14	-0.01	0.01	0.18	0.06	0
Number_of_vertebral_bodies_spanned	-0.12	-0.16	-0.01	-0.01	0.25	-0.55	-0.63	-0.03	-0.07	0	0.13	1	0.82	0.3	0.12	0.12	-0.04	0.02	0.15	0.05	
Number_of_screws	-0.18	-0.17	0.02	-0.07	0.31	-0.39	-0.47	-0.03	0.01	-0.01	0.14	0.82	1	0.26	0.14	0.14	0.02	0.06	0.23	0.07	-0.2
Blood_transfusion	-0.08	-0.13	0.15	0.05	0.22	-0.05	-0.12	-0.09	0	0.01	0.13	0.3	0.26	1	0.36	0.27	0.08	0.06	0.16	0.03	
Status	-0.19	-0.14	0.2	0.03	0.07	0.02	-0.07	-0.07	0.07	-0.01	0.15	0.12	0.14	0.36	1	0.52	0.25	0.25	0.16	0	-0.4
Modic	-0.21	-0.18	0.12	0	0.06	-0.02	-0.06	-0.07	0.14	-0.06	0.14	0.12	0.14	0.27	0.52	1	0.09	0.04	0.2	-0.04	
Diabetes	0.03	0.03	0.11	0.02	0.05	0.06	0.03	0.05	-0.02	0	-0.01	-0.04	0.02	0.08	0.25	0.09	1	0.71	0.1	0.09	-0.6
Glucose	0.06	0.09	0.1	0	0.05	0.04	0.01	0.05	0	0.04	0.01	0.02	0.06	0.06	0.25	0.04	0.71	1	0.14	0.12	
Age	-0.26	-0.28	0.11	0.02	0.03	-0.14	-0.15	-0.09	-0.03	-0.07	0.18	0.15	0.23	0.16	0.16	0.2	0.1	0.14	1	0.23	-0.8
ASA	-0.06	-0.07	0.05	-0.03	0.03	-0.02	-0.02	-0.01	-0.06	0.01	0.06	0.05	0.07	0.03	0	-0.04	0.09	0.12	0.23	1	-1

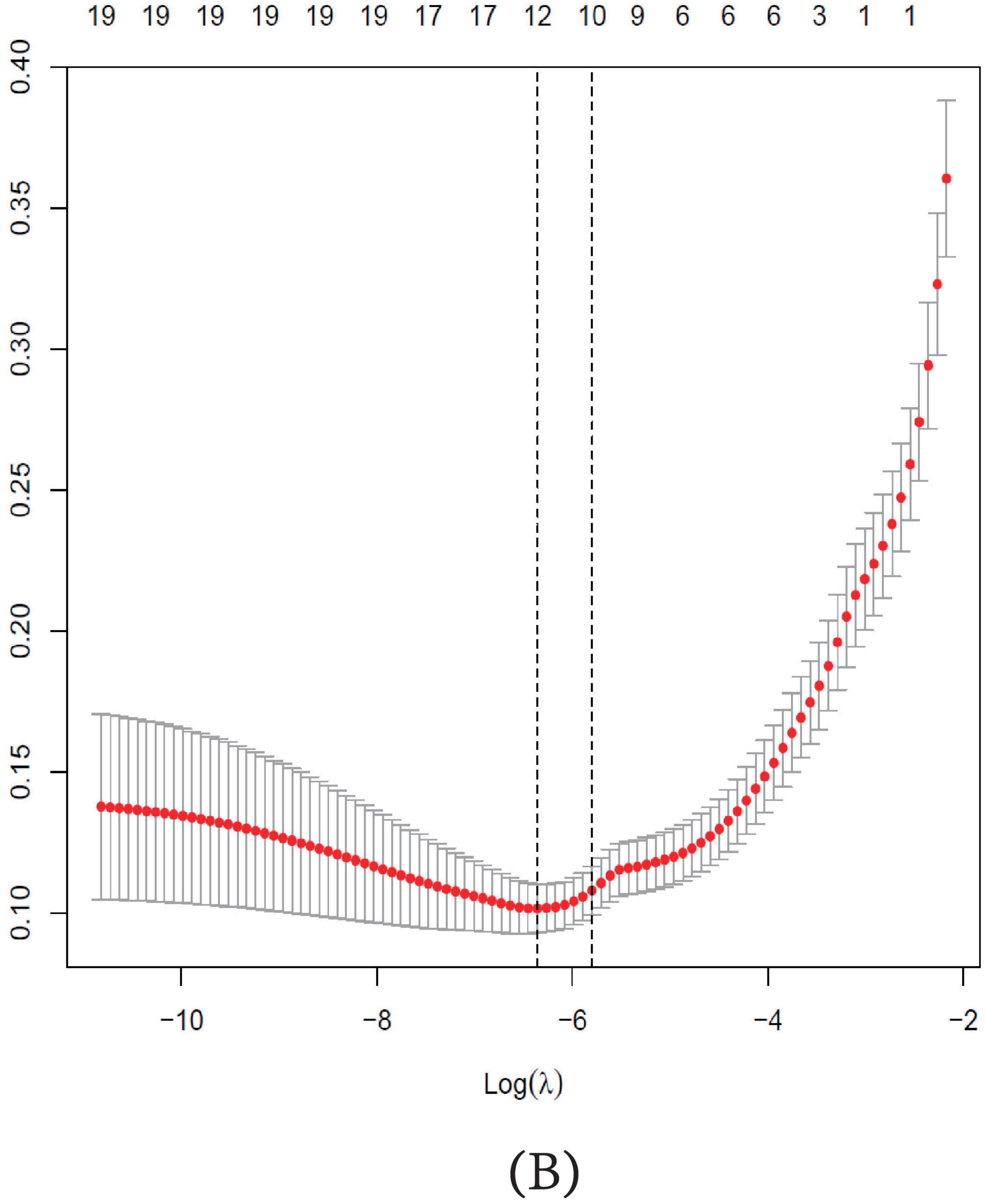
Supplementary Figure 1: Heatmap of the correlations between all the variables.

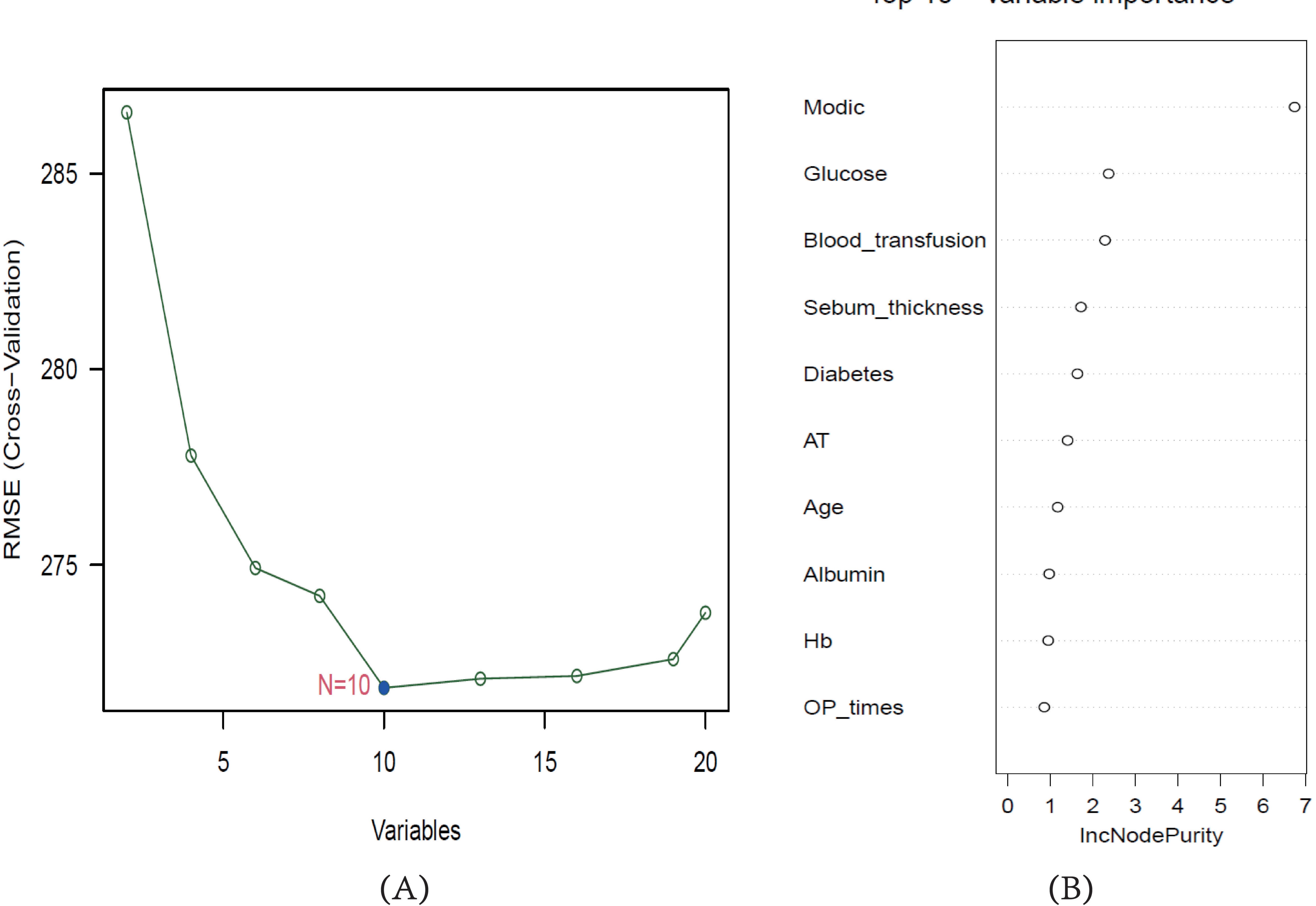


Supplementary Figure 2: LASSO coefficient profiles of the factors, using cross-validation to determine the optimal penalty parameter lambda. (A) The results of the LASSO regression analysis of dependent variables. (B) The 12 factors that exhibited significant differences between the patients with SSI and those without SSI.

Log Lambda

A)





Supplementary Figure 3: (A) The ten factors were selected as diagnostic models after SVM-RFE calculation. (B) The 10 most important factors calculated using the random forest algorithm 'IncNodePurity'.

## Top 10 – variable importance