

Supplementary Table 2. Detailed formulas of of NGS-based age prediction models.

<i>n</i> of target CpGs	7	16	10	9	9	11
<i>n</i> of cryptic CpGs	0	5	26	9	12	18
Modeling	LR	SLR	SLR	Las	Ela	Rid
	intercept 42.6414	intercept 147.2449	intercept 150.4725	intercept 138.8775	intercept 105.9722	intercept 97.8797
	chr1:154179209 -14.7133	chr1:154179209 11.0432	chr1:154179209 6.3531	chr3:12815282 -13.0311	chr9:22005565 17.2336	chr7:143316521 -11.4651
	chr1:229433354 -3.6950	chr1:229433354 -37.8105	chr1:229433354 -18.9269	chr7:143316521 -23.3704	chr19:10636467 -24.7511	chr19:57527208 13.2576
	chr3:44761961 152.2639	chr3:44761961 124.1519	chr3:44761961 79.6482	chr3:44761965 37.1806	chr19:57527206 30.6368	chr3:12815285 -11.0047
	chr7:143316521 -67.1495	chr7:143316521 -6.6488	chr7:143316521 12.949	chr11:71998842 -9.5435	chr1:154179209 -3.3927	chr3:12815338 -9.7142
	chr9:22005565 14.7792404	chr9:22005565 51.7895	chr9:22005565 62.1815	chr2:15920273 21.3081	chr1:1937587 10.4319	chr3:12815282 -11.8601
	chr17:29042762 42.5096	chr17:29042762 20.6215	chr17:29042762 16.4622	chr19:10636467 -18.6653	chr2:15920273 14.5369	chr20:45255106 -10.8072
	chr19:57527206 80.2852	chr19:57527206 88.6459	chr19:57527206 77.6669	chr1:229433453 38.5060	chr19:57527211 15.3597	chr9:22005577 9.9550
		chr1:1937681 -9.5313	chr3:12815426 -97.3917	chr9:22005565 21.6437	chr17:29042762 38.6166	chr3:12815320 -6.5007
		chr2:15920273 30.3163	chr3:12815466 -91.1509	chr1:229433354 -1.3860	chr19:57527218 24.8859	chr17:29042762 16.4396
		chr3:12815297 -7.1624	chr9:22005570 -42.6121	chr9:22005570 -13.4409	chr7:143316521 -23.7932	chr3:12815466 -5.6819
		chr4:70722006 16.7646	chr1:229433453 103.271	chr3:12815426 -79.0184	chr3:12815282 -29.4345	chr3:12815348 -5.7061
		chr7:157014781 -20.6586	chr2:15920278 3.9341	chr17:29042762 34.9134	chr1:229433453 12.7462	chr3:44761965 9.5343
		chr10:97585212 13.6126	chr9:22005510 -25.3127	chr7:157014845 5.9814	chr3:44761961 53.4929	chr19:57527218 15.3461
		chr11:71998871 -18.5413	chr19:57527266 838.7422	chr1:154179209 0.0000	chr19:57527208 8.2441	chr9:22005565 10.5171
		chr19:10636467 -35.8907	chr19:10636490 -124.5958	chr19:57527206 83.3785	chr3:12815466 -30.3562	chr9:22005510 8.0299
		chr20:45255106 1.8774	chr11:71998842 -3.6824	chr3:12815466 -63.1110	chr19:10636497 7.3709	chr1:229433354 -4.6144
		chr3:12815426 -102.7828	chr7:157014763 2.5048	chr3:44761961 81.6076	chr1:229433354 0.0001	chr3:12815426 -7.8846
		chr3:12815466 -72.9541	chr19:10636497 107.2891	chr1:1937587 7.1786	chr3:44761965 29.5532	chr3:44761961 13.6991
		chr1:229433453 78.1356	chr7:157014845 47.4632		chr3:12815338 -11.4447	chr3:12815297 -10.1598
		chr9:22005570 -67.5298	chr19:10636475 -49.4553		chr3:12815426 -40.0636	chr3:44761956 9.3837
		chr19:57527266 661.9138	chr7:157014781 -44.6131		chr3:44761956 9.3494	chr19:10636475 -6.2769
			chr4:70722010 37.4356			chr19:57527211 14.9374
			chr1:229433352 -21.4639			chr19:10636467 -11.9319
			chr20:45255106 -5.4741			chr2:15920273 7.3949
			chr1:1937587 21.7114			chr10:97585099 -7.3458
			chr1:154179292 14.6886			chr1:154179209 -7.1598
			chr11:71998932 -24.8091			chr3:12815364 -5.2131
			chr1:1937577 -15.2486			chr19:57527206 14.7116
			chr1:1937530 -0.47			chr3:12815299 -8.4735
			chr3:12815299 96.5078			
			chr3:12815282 -69.6433			
			chr3:44761965 94.4413			
			chr3:12815364 -24.7715			
			chr20:45255065 27.9606			
			chr10:97585212 10.7563			
			chr3:12815404 -27.7485			

This table summarizes the regression coefficients and intercepts for linear models (Linear regression, Stepwise Linear Regression, Lasso, Elastic Net, Ridge) and the feature importance scores for machine learning models (Gradient Boosting, Random Forest, XGBoost). Each CpG site is indicated by its genomic coordinate including chromosome and position. The number of CpGs (*n*) used in each model is specified at the top of each column. The 20 CpG markers identified in this study are highlighted in bold.

(Continued)

<i>n</i> of target CpGs	11	9	15
<i>n</i> of cryptic CpGs	19	21	49
Modeling	GB	RF	XGB
	feature importance	feature importance	feature importance
	chr3:44761965 0.2691	chr3:44761961 0.1645	chr3:12815297 0.1917
	chr3:44761961 0.188	chr3:44761965 0.1045	chr1:154179209 0.1077
	chr19:10636467 0.1372	chr19:57527218 0.0869	chr19:57527211 0.0996
	chr19:57527218 0.0987	chr3:12815297 0.0843	chr19:57527206 0.0629
	chr3:12815285 0.0794	chr19:10636467 0.0809	chr3:44761956 0.0629
	chr19:57527221 0.0458	chr3:12815285 0.0639	chr19:10636467 0.057
	chr3:12815282 0.0232	chr3:44761956 0.0552	chr3:44761961 0.0531
	chr19:57527208 0.0217	chr3:12815282 0.0542	chr3:44761965 0.0459
	chr1:229433474 0.0139	chr19:57527206 0.047	chr3:12815282 0.0437
	chr17:29042762 0.0119	chr3:12815348 0.0299	chr19:57527208 0.0435
	chr3:12815297 0.0119	chr19:57527221 0.0276	chr19:10636475 0.033
	chr19:57527206 0.0105	chr19:57527208 0.0252	chr1:229433352 0.0289
	chr9:22005565 0.0095	chr3:12815338 0.0184	chr7:143316521 0.0185
	chr2:15920273 0.0085	chr19:57527211 0.0165	chr19:57527218 0.0176
	chr3:12815338 0.008	chr3:12815299 0.0148	chr20:45255065 0.017
	chr3:12815466 0.0077	chr2:15920273 0.0143	chr19:57527221 0.0125
	chr20:45255106 0.0068	chr3:12815364 0.0088	chr17:29042762 0.0085
	chr19:57527266 0.0063	chr17:29042762 0.0086	chr2:15920284 0.0076
	chr19:10636475 0.0044	chr1:229433474 0.0055	chr3:12815426 0.0074
	chr3:44762007 0.0044	chr19:57527266 0.0052	chr3:12815348 0.0065
	chr9:22005510 0.0038	chr9:22005565 0.0052	chr3:12815285 0.0057
	chr1:154179292 0.0034	chr1:154179209 0.0039	chr2:15920278 0.0056
	chr19:57527254 0.0026	chr19:57527254 0.0036	chr3:12815308 0.0052
	chr11:71998871 0.0021	chr9:22005570 0.0035	chr1:1937530 0.0052
	chr7:157014845 0.0019	chr7:143316521 0.0034	chr9:22005577 0.0048
	chr4:70722006 0.0019	chr3:12815426 0.0032	chr3:12815338 0.0048
	chr3:12815364 0.0017	chr3:12815308 0.0032	chr1:229433474 0.0046
	chr4:70722010 0.0013	chr9:22005577 0.0027	chr9:22005565 0.0046
	chr3:12815426 0.0013	chr20:45255065 0.0026	chr19:57527266 0.0036
	chr7:143316521 0.0013	chr1:1937724 0.0024	chr10:97585099 0.0036
			chr1:154179292 0.0027
			chr19:57527254 0.0024
			chr11:71998842 0.0021
			chr20:45255106 0.002
			chr3:12815466 0.0019
			chr7:157014781 0.0015
			chr9:22005570 0.0013
			chr10:97585212 0.0012
			chr2:15920273 0.0011
			chr1:229433354 0.0011
			chr3:12815299 0.001
			chr4:70722006 0.0008
			chr9:22005510 0.0008
			chr1:1937724 0.0006
			chr1:229433453 0.0006
			chr4:70721924 0.0005
			chr1:1937681 0.0005
			chr4:70722010 0.0005
			chr1:1937706 0.0004
			chr1:1937771 0.0004
			chr1:1937599 0.0004
			chr1:1937577 0.0004
			chr19:10636497 0.0003
			chr7:157014861 0.0003
			chr1:1937621 0.0003
			chr3:44762007 0.0002
			chr3:12815440 0.0002
			chr3:12815404 0.0002
			chr11:71998932 0.0002
			chr1:1937587 0.0002
			chr1:1937608 0.0002
			chr19:57527261 0.0001
			chr7:157014845 0.0001
			chr11:71998905 0.0001