

Table SI. RF model analysis result including 2 combinations of nine miRNAs.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
1	miR-223	miR-1246			0.983	0.984
2	miR-223	miR-206			0.991	0.979
3	miR-223	miR-24			0.994	0.985
4	miR-223	miR-373			0.975	0.967
5	miR-223	miR-21			0.986	0.962
6	miR-223	miR-6875			0.989	0.971
7	miR-223	miR-202			0.968	0.959
8	miR-223	miR-219B			0.976	0.959
9	miR-1246	miR-206			0.979	0.988
10	miR-1246	miR-24			0.984	0.987
11	miR-1246	miR-373			0.968	0.983
12	miR-1246	miR-21			0.973	0.976
13	miR-1246	miR-6875			0.991	0.984
14	miR-1246	miR-202			0.959	0.966
15	miR-1246	miR-219B			0.963	0.964
16	miR-206	miR-24			0.976	0.973
17	miR-206	miR-373			0.964	0.981
18	miR-206	miR-21			0.979	0.973
19	miR-206	miR-6875			0.966	0.969
20	miR-206	miR-202			0.956	0.971
21	miR-206	miR-219B			0.942	0.933
22	miR-24	miR-373			0.982	0.977
23	miR-24	miR-21			0.985	0.988
24	miR-24	miR-6875			0.989	0.987
25	miR-24	miR-202			0.973	0.969
26	miR-24	miR-219B			0.963	0.96
27	miR-373	miR-21			0.96	0.973
28	miR-373	miR-6875			0.957	0.964
29	miR-373	miR-202			0.934	0.956
30	miR-373	miR-219B			0.94	0.95
31	miR-21	miR-6875			0.97	0.969
32	miR-21	miR-202			0.956	0.944
33	miR-21	miR-219B			0.927	0.933
34	miR-6875	miR-202			0.972	0.938
35	miR-6875	miR-219B			0.915	0.94
36	miR-202	miR-219B			0.938	0.914

Table SII. RF model analysis result including 3 combinations of nine miRNAs.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
1	miR-223	miR-1246	miR-206		0.991	0.992
2	miR-223	miR-1246	miR-24		0.997	0.99
3	miR-223	miR-1246	miR-373		0.986	0.986
4	miR-223	miR-1246	miR-21		0.987	0.985
5	miR-223	miR-1246	miR-6875		0.994	0.986
6	miR-223	miR-1246	miR-202		0.981	0.983
7	miR-223	miR-1246	miR-219B		0.99	0.982
8	miR-223	miR-206	miR-24		0.998	0.992
9	miR-223	miR-206	miR-373		0.99	0.985
10	miR-223	miR-206	miR-21		0.993	0.979
11	miR-223	miR-206	miR-6875		0.993	0.983
12	miR-223	miR-206	miR-202		0.988	0.982
13	miR-223	miR-206	miR-219B		0.988	0.974
14	miR-223	miR-24	miR-373		0.995	0.986
15	miR-223	miR-24	miR-21		0.998	0.989
16	miR-223	miR-24	miR-6875		0.998	0.99
17	miR-223	miR-24	miR-202		0.991	0.981
18	miR-223	miR-24	miR-219B		0.997	0.982
19	miR-223	miR-373	miR-21		0.99	0.974
20	miR-223	miR-373	miR-6875		0.988	0.977
21	miR-223	miR-373	miR-202		0.976	0.966
22	miR-223	miR-373	miR-219B		0.981	0.971
23	miR-223	miR-21	miR-6875		0.99	0.977
24	miR-223	miR-21	miR-202		0.98	0.968
25	miR-223	miR-21	miR-219B		0.986	0.958
26	miR-223	miR-6875	miR-202		0.989	0.97
27	miR-223	miR-6875	miR-219B		0.984	0.965
28	miR-223	miR-202	miR-219B		0.976	0.957
29	miR-1246	miR-206	miR-24		0.991	0.994
30	miR-1246	miR-206	miR-373		0.985	0.991
31	miR-1246	miR-206	miR-21		0.988	0.988
32	miR-1246	miR-206	miR-6875		0.992	0.993
33	miR-1246	miR-206	miR-202		0.978	0.987
34	miR-1246	miR-206	miR-219B		0.987	0.984
35	miR-1246	miR-24	miR-373		0.99	0.989
36	miR-1246	miR-24	miR-21		0.989	0.993
37	miR-1246	miR-24	miR-6875		0.997	0.992
38	miR-1246	miR-24	miR-202		0.987	0.987
39	miR-1246	miR-24	miR-219B		0.989	0.988
40	miR-1246	miR-373	miR-21		0.977	0.984
41	miR-1246	miR-373	miR-6875		0.988	0.989
42	miR-1246	miR-373	miR-202		0.973	0.983
43	miR-1246	miR-373	miR-219B		0.976	0.981
44	miR-1246	miR-21	miR-6875		0.989	0.989
45	miR-1246	miR-21	miR-202		0.974	0.979
46	miR-1246	miR-21	miR-219B		0.97	0.978
47	miR-1246	miR-6875	miR-202		0.988	0.984
48	miR-1246	miR-6875	miR-219B		0.989	0.987
49	miR-1246	miR-202	miR-219B		0.975	0.971
50	miR-206	miR-24	miR-373		0.989	0.987
51	miR-206	miR-24	miR-21		0.994	0.992
52	miR-206	miR-24	miR-6875		0.991	0.987
53	miR-206	miR-24	miR-202		0.987	0.987
54	miR-206	miR-24	miR-219B		0.976	0.977
55	miR-206	miR-373	miR-21		0.983	0.984
56	miR-206	miR-373	miR-6875		0.976	0.984
57	miR-206	miR-373	miR-202		0.969	0.984
58	miR-206	miR-373	miR-219B		0.972	0.975
59	miR-206	miR-21	miR-6875		0.982	0.986

Table SII. Continued.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
60	miR-206	miR-21	miR-202		0.979	0.975
61	miR-206	miR-21	miR-219B		0.973	0.966
62	miR-206	miR-6875	miR-202		0.983	0.979
63	miR-206	miR-6875	miR-219B		0.968	0.967
64	miR-206	miR-202	miR-219B		0.966	0.959
65	miR-24	miR-373	miR-21		0.988	0.992
66	miR-24	miR-373	miR-6875		0.991	0.983
67	miR-24	miR-373	miR-202		0.981	0.979
68	miR-24	miR-373	miR-219B		0.985	0.977
69	miR-24	miR-21	miR-6875		0.992	0.991
70	miR-24	miR-21	miR-202		0.987	0.985
71	miR-24	miR-21	miR-219B		0.986	0.982
72	miR-24	miR-6875	miR-202		0.992	0.984
73	miR-24	miR-6875	miR-219B		0.986	0.983
74	miR-24	miR-202	miR-219B		0.985	0.969
75	miR-373	miR-21	miR-6875		0.975	0.983
76	miR-373	miR-21	miR-202		0.967	0.966
77	miR-373	miR-21	miR-219B		0.965	0.972
78	miR-373	miR-6875	miR-202		0.966	0.967
79	miR-373	miR-6875	miR-219B		0.962	0.972
80	miR-373	miR-202	miR-219B		0.951	0.954
81	miR-21	miR-6875	miR-202		0.98	0.969
82	miR-21	miR-6875	miR-219B		0.964	0.965
83	miR-21	miR-202	miR-219B		0.965	0.952
84	miR-6875	miR-202	miR-219B		0.973	0.952

Table III. RF model analysis result including 4 combinations of nine miRNAs.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
1	miR-223	miR-1246	miR-206	miR-24	0.997	0.994
2	miR-223	miR-1246	miR-206	miR-373	0.991	0.993
3	miR-223	miR-1246	miR-206	miR-21	0.993	0.992
4	miR-223	miR-1246	miR-206	miR-6875	0.995	0.991
5	miR-223	miR-1246	miR-206	miR-202	0.989	0.99
6	miR-223	miR-1246	miR-206	miR-219B	0.991	0.989
7	miR-223	miR-1246	miR-24	miR-373	0.997	0.99
8	miR-223	miR-1246	miR-24	miR-21	0.997	0.989
9	miR-223	miR-1246	miR-24	miR-6875	0.999	0.991
10	miR-223	miR-1246	miR-24	miR-202	0.996	0.989
11	miR-223	miR-1246	miR-24	miR-219B	0.998	0.988
12	miR-223	miR-1246	miR-373	miR-21	0.986	0.985
13	miR-223	miR-1246	miR-373	miR-6875	0.993	0.988
14	miR-223	miR-1246	miR-373	miR-202	0.984	0.986
15	miR-223	miR-1246	miR-373	miR-219B	0.991	0.986
16	miR-223	miR-1246	miR-21	miR-6875	0.993	0.986
17	miR-223	miR-1246	miR-21	miR-202	0.986	0.986
18	miR-223	miR-1246	miR-21	miR-219B	0.991	0.984
19	miR-223	miR-1246	miR-6875	miR-202	0.991	0.985
20	miR-223	miR-1246	miR-6875	miR-219B	0.994	0.986
21	miR-223	miR-1246	miR-202	miR-219B	0.987	0.983
22	miR-223	miR-206	miR-24	miR-373	0.998	0.99
23	miR-223	miR-206	miR-24	miR-21	0.999	0.993
24	miR-223	miR-206	miR-24	miR-6875	0.998	0.993
25	miR-223	miR-206	miR-24	miR-202	0.997	0.992
26	miR-223	miR-206	miR-24	miR-219B	0.998	0.989
27	miR-223	miR-206	miR-373	miR-21	0.993	0.981
28	miR-223	miR-206	miR-373	miR-6875	0.991	0.984
29	miR-223	miR-206	miR-373	miR-202	0.99	0.984
30	miR-223	miR-206	miR-373	miR-219B	0.99	0.984
31	miR-223	miR-206	miR-21	miR-6875	0.993	0.987
32	miR-223	miR-206	miR-21	miR-202	0.991	0.981
33	miR-223	miR-206	miR-21	miR-219B	0.992	0.976
34	miR-223	miR-206	miR-6875	miR-202	0.994	0.983
35	miR-223	miR-206	miR-6875	miR-219B	0.991	0.979
36	miR-223	miR-206	miR-202	miR-219B	0.988	0.98
37	miR-223	miR-24	miR-373	miR-21	0.997	0.988
38	miR-223	miR-24	miR-373	miR-6875	0.996	0.99
39	miR-223	miR-24	miR-373	miR-202	0.993	0.983
40	miR-223	miR-24	miR-373	miR-219B	0.996	0.982
41	miR-223	miR-24	miR-21	miR-6875	0.998	0.989
42	miR-223	miR-24	miR-21	miR-202	0.996	0.985
43	miR-223	miR-24	miR-21	miR-219B	0.997	0.985
44	miR-223	miR-24	miR-6875	miR-202	0.996	0.987
45	miR-223	miR-24	miR-6875	miR-219B	0.997	0.988
46	miR-223	miR-24	miR-202	miR-219B	0.995	0.979
47	miR-223	miR-373	miR-21	miR-6875	0.989	0.978
48	miR-223	miR-373	miR-21	miR-202	0.983	0.972
49	miR-223	miR-373	miR-21	miR-219B	0.988	0.975
50	miR-223	miR-373	miR-6875	miR-202	0.987	0.974
51	miR-223	miR-373	miR-6875	miR-219B	0.988	0.974
52	miR-223	miR-373	miR-202	miR-219B	0.978	0.967
53	miR-223	miR-21	miR-6875	miR-202	0.988	0.975
54	miR-223	miR-21	miR-6875	miR-219B	0.991	0.972
55	miR-223	miR-21	miR-202	miR-219B	0.983	0.967
56	miR-223	miR-6875	miR-202	miR-219B	0.989	0.966
57	miR-1246	miR-206	miR-24	miR-373	0.993	0.992
58	miR-1246	miR-206	miR-24	miR-21	0.995	0.996
59	miR-1246	miR-206	miR-24	miR-6875	0.997	0.996

Table III. Continued.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
60	miR-1246	miR-206	miR-24	miR-202	0.991	0.995
61	miR-1246	miR-206	miR-24	miR-219B	0.993	0.992
62	miR-1246	miR-206	miR-373	miR-21	0.987	0.99
63	miR-1246	miR-206	miR-373	miR-6875	0.99	0.995
64	miR-1246	miR-206	miR-373	miR-202	0.982	0.99
65	miR-1246	miR-206	miR-373	miR-219B	0.987	0.988
66	miR-1246	miR-206	miR-21	miR-6875	0.992	0.996
67	miR-1246	miR-206	miR-21	miR-202	0.988	0.988
68	miR-1246	miR-206	miR-21	miR-219B	0.987	0.985
69	miR-1246	miR-206	miR-6875	miR-202	0.99	0.994
70	miR-1246	miR-206	miR-6875	miR-219B	0.992	0.994
71	miR-1246	miR-206	miR-202	miR-219B	0.983	0.986
72	miR-1246	miR-24	miR-373	miR-21	0.992	0.991
73	miR-1246	miR-24	miR-373	miR-6875	0.996	0.992
74	miR-1246	miR-24	miR-373	miR-202	0.991	0.988
75	miR-1246	miR-24	miR-373	miR-219B	0.992	0.987
76	miR-1246	miR-24	miR-21	miR-6875	0.997	0.995
77	miR-1246	miR-24	miR-21	miR-202	0.991	0.99
78	miR-1246	miR-24	miR-21	miR-219B	0.99	0.99
79	miR-1246	miR-24	miR-6875	miR-202	0.996	0.991
80	miR-1246	miR-24	miR-6875	miR-219B	0.997	0.99
81	miR-1246	miR-24	miR-202	miR-219B	0.991	0.985
82	miR-1246	miR-373	miR-21	miR-6875	0.987	0.991
83	miR-1246	miR-373	miR-21	miR-202	0.979	0.982
84	miR-1246	miR-373	miR-21	miR-219B	0.979	0.984
85	miR-1246	miR-373	miR-6875	miR-202	0.987	0.99
86	miR-1246	miR-373	miR-6875	miR-219B	0.988	0.99
87	miR-1246	miR-373	miR-202	miR-219B	0.977	0.983
88	miR-1246	miR-21	miR-6875	miR-202	0.988	0.989
89	miR-1246	miR-21	miR-6875	miR-219B	0.987	0.988
90	miR-1246	miR-21	miR-202	miR-219B	0.978	0.979
91	miR-1246	miR-6875	miR-202	miR-219B	0.989	0.985
92	miR-206	miR-24	miR-373	miR-21	0.992	0.994
93	miR-206	miR-24	miR-373	miR-6875	0.994	0.99
94	miR-206	miR-24	miR-373	miR-202	0.988	0.99
95	miR-206	miR-24	miR-373	miR-219B	0.99	0.985
96	miR-206	miR-24	miR-21	miR-6875	0.993	0.993
97	miR-206	miR-24	miR-21	miR-202	0.992	0.993
98	miR-206	miR-24	miR-21	miR-219B	0.993	0.988
99	miR-206	miR-24	miR-6875	miR-202	0.994	0.991
100	miR-206	miR-24	miR-6875	miR-219B	0.989	0.987
101	miR-206	miR-24	miR-202	miR-219B	0.987	0.981
102	miR-206	miR-373	miR-21	miR-6875	0.983	0.99
103	miR-206	miR-373	miR-21	miR-202	0.98	0.981
104	miR-206	miR-373	miR-21	miR-219B	0.982	0.979
105	miR-206	miR-373	miR-6875	miR-202	0.977	0.985
106	miR-206	miR-373	miR-6875	miR-219B	0.977	0.979
107	miR-206	miR-373	miR-202	miR-219B	0.972	0.978
108	miR-206	miR-21	miR-6875	miR-202	0.983	0.986
109	miR-206	miR-21	miR-6875	miR-219B	0.981	0.981
110	miR-206	miR-21	miR-202	miR-219B	0.979	0.973
111	miR-206	miR-6875	miR-202	miR-219B	0.982	0.972
112	miR-24	miR-373	miR-21	miR-6875	0.991	0.992
113	miR-24	miR-373	miR-21	miR-202	0.988	0.988
114	miR-24	miR-373	miR-21	miR-219B	0.989	0.988
115	miR-24	miR-373	miR-6875	miR-202	0.991	0.985
116	miR-24	miR-373	miR-6875	miR-219B	0.991	0.983
117	miR-24	miR-373	miR-202	miR-219B	0.986	0.974
118	miR-24	miR-21	miR-6875	miR-202	0.993	0.989

Table SIII. Continued.

Biomarker	1	2	3	4	Training set AUC	Validation set AUC
119	miR-24	miR-21	miR-6875	miR-219B	0.993	0.989
120	miR-24	miR-21	miR-202	miR-219B	0.99	0.981
121	miR-24	miR-6875	miR-202	miR-219B	0.991	0.981
122	miR-373	miR-21	miR-6875	miR-202	0.974	0.977
123	miR-373	miR-21	miR-6875	miR-219B	0.977	0.98
124	miR-373	miR-21	miR-202	miR-219B	0.971	0.968
125	miR-373	miR-6875	miR-202	miR-219B	0.968	0.964
126	miR-21	miR-6875	miR-202	miR-219B	0.978	0.966