Supplementary material to:

MACHINE LEARNING APPROACHES FOR DISCERNING INTERCORRELATION OF HEMATOLOGICAL PARAMETERS AND GLUCOSE LEVEL FOR IDENTIFICATION OF DIABETES MELLITUS

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Contents of supporting information

The following supplementary tables describe rules derived from association analysis for the three groups of samples stratified by their glycemic levels into normal, pre-DM and DM groups.

Table S1: Association rules for normal group

Table S2: Association rules for Pre-DM group

Table S3: Association rules for DM group

Table S1: Association rules for normal group

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
1	TG = TG_2 and glucose = gluc_1	Normal	7.89	100.00
2	LDL = LDL_4 and glucose = gluc_1	Normal	10.00	100.00
3	chol = chol_3 and glucose = gluc_1	Normal	11.05	100.00
4	RBC = RBC_3 and glucose = gluc_1	Normal	10.53	100.00
5	WBC = WBC_4 and glucose = gluc_1	Normal	9.47	100.00
6	LDL = LDL_3 and WBC = WBC_1	Normal	5.79	100.00
7	LDL = LDL_3 and glucose = gluc_1	Normal	14.21	100.00
8	Hb = Hb_3 and glucose = gluc_1	Normal	14.21	100.00
9	Hct = Hct_4 and glucose = gluc_1	Normal	12.63	100.00
10	Hb = Hb_4 and glucose = gluc_1	Normal	12.11	100.00
11	WBC = WBC_2 and glucose = gluc_1	Normal	14.21	100.00
12	Hct = Hct_3 and glucose = gluc_1	Normal	15.26	100.00
13	Hct = Hct_2 and glucose = gluc_1	Normal	15.26	100.00
14	RBC = RBC_1 and glucose = gluc_1	Normal	13.68	100.00
15	WBC = WBC_3 and glucose = gluc_1	Normal	13.68	100.00
16	Hb = Hb_2 and glucose = gluc_1	Normal	17.37	100.00
17	chol = chol_2 and glucose = gluc_1	Normal	17.37	100.00
18	RBC = RBC_2 and glucose = gluc_1	Normal	18.95	100.00
19	LDL = LDL_2 and glucose = gluc_1	Normal	17.89	100.00
20	TG = TG_2 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	100.00
21	LDL = LDL_4 and chol = chol_3 and glucose = gluc_1	Normal	8.42	100.00
22	LDL = LDL_4 and Hct = Hct_4 and glucose = gluc_1	Normal	5.26	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
23	LDL = LDL_4 and glucose = gluc_1 and HDL = HDL_2	Normal	8.42	100.00
24	LDL = LDL_4 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
25	chol = chol_3 and Hct = Hct_4 and glucose = gluc_1	Normal	5.79	100.00
26	chol = chol_3 and Hb = Hb_4 and glucose = gluc_1	Normal	5.26	100.00
27	chol = chol_3 and glucose = gluc_1 and HDL = HDL_2	Normal	10.00	100.00
28	chol = chol_3 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
29	RBC = RBC_4 and Hct = Hct_4 and glucose = gluc_1	Normal	6.84	100.00
30	RBC = RBC_4 and chol = chol_2 and glucose = gluc_1	Normal	5.26	100.00
31	RBC = RBC_3 and Hb = Hb_4 and glucose = gluc_1	Normal	5.26	100.00
32	RBC = RBC_3 and chol = chol_2 and glucose = gluc_1	Normal	5.26	100.00
33	RBC = RBC_3 and glucose = gluc_1 and HDL = HDL_2	Normal	8.95	100.00
34	RBC = RBC_3 and glucose = gluc_1 and TG = TG_1	Normal	7.37	100.00
35	WBC = WBC_4 and chol = chol_1 and glucose = gluc_1	Normal	6.32	100.00
36	WBC = WBC_4 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
37	WBC = WBC_4 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
38	LDL = LDL_3 and Hct = Hct_3 and glucose = gluc_1	Normal	5.26	100.00
39	LDL = LDL_3 and WBC = WBC_1 and glucose = gluc_1	Normal	5.79	100.00
40	LDL = LDL_3 and WBC = WBC_1 and TG = TG_1	Normal	5.79	100.00
41	LDL = LDL_3 and chol = chol_2 and glucose = gluc_1	Normal	11.58	100.00
42	LDL = LDL_3 and glucose = gluc_1 and HDL = HDL_2	Normal	10.00	100.00
43	LDL = LDL_3 and glucose = gluc_1 and TG = TG_1	Normal	11.58	100.00
44	Hb = Hb_3 and Hct = Hct_3 and glucose = gluc_1	Normal	11.05	100.00
45	Hb = Hb_3 and WBC = WBC_1 and glucose = gluc_1	Normal	5.26	100.00
46	Hb = Hb_3 and chol = chol_2 and glucose = gluc_1	Normal	5.79	100.00
47	Hb = Hb_3 and RBC = RBC_2 and glucose = gluc_1	Normal	5.79	100.00
48	Hb = Hb_3 and LDL = LDL_2 and glucose = gluc_1	Normal	5.79	100.00
49	Hb = Hb_3 and chol = chol_1 and glucose = gluc_1	Normal	7.37	100.00
50	Hb = Hb_3 and glucose = gluc_1 and HDL = HDL_2	Normal	8.95	100.00
51	Hb = Hb_3 and glucose = gluc_1 and TG = TG_1	Normal	10.53	100.00
52	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_1	Normal	10.53	100.00
53	Hct = Hct_4 and chol = chol_2 and glucose = gluc_1	Normal	5.26	100.00
54	Hct = Hct_4 and glucose = gluc_1 and HDL = HDL_2	Normal	10.00	100.00
55	Hct = Hct_4 and glucose = gluc_1 and TG = TG_1	Normal	8.95	100.00
56	Hb = Hb_4 and WBC = WBC_2 and glucose = gluc_1	Normal	5.26	100.00
57	Hb = Hb_4 and glucose = gluc_1 and HDL = HDL_2	Normal	9.47	100.00
58	Hb = Hb_4 and glucose = gluc_1 and TG = TG_1	Normal	9.47	100.00
59	WBC = WBC_2 and RBC = RBC_2 and glucose = gluc_1	Normal	5.26	100.00
60	WBC = WBC_2 and sex = M and glucose = gluc_1	Normal	6.32	100.00
61	WBC = WBC_2 and chol = chol_1 and glucose = gluc_1	Normal	5.79	100.00
62	WBC = WBC_2 and glucose = gluc_1 and HDL = HDL_2	Normal	12.11	100.00
63	WBC = WBC_2 and glucose = gluc_1 and TG = TG_1	Normal	10.53	100.00
64	Hct = Hct_3 and chol = chol_2 and glucose = gluc_1	Normal	6.32	100.00
65	Hct = Hct_3 and RBC = RBC_2 and glucose = gluc_1	Normal	5.79	100.00
66	Hct = Hct_3 and LDL = LDL_2 and glucose = gluc_1	Normal	6.32	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
67	Hct = Hct_3 and sex = M and glucose = gluc_1	Normal	5.26	100.00
68	Hct = Hct_3 and chol = chol_1 and glucose = gluc_1	Normal	7.89	100.00
69	Hct = Hct_3 and glucose = gluc_1 and HDL = HDL_2	Normal	10.53	100.00
70	Hct = Hct_3 and glucose = gluc_1 and TG = TG_1	Normal	11.58	100.00
71	Hct = Hct_1 and RBC = RBC_1 and glucose = gluc_1	Normal	8.42	100.00
72	Hct = Hct_1 and LDL = LDL_2 and glucose = gluc_1	Normal	5.26	100.00
73	Hct = Hct_2 and Hb = Hb_2 and glucose = gluc_1	Normal	12.11	100.00
74	Hct = Hct_2 and WBC = WBC_1 and glucose = gluc_1	Normal	6.84	100.00
75	Hct = Hct_2 and LDL = LDL_1 and glucose = gluc_1	Normal	6.84	100.00
76	Hct = Hct_2 and RBC = RBC_2 and glucose = gluc_1	Normal	8.95	100.00
77	Hct = Hct_2 and sex = M and glucose = gluc_1	Normal	5.79	100.00
78	Hct = Hct_2 and chol = chol_1 and glucose = gluc_1	Normal	9.47	100.00
79	Hct = Hct_2 and glucose = gluc_1 and HDL = HDL_2	Normal	12.63	100.00
80	Hct = Hct_2 and glucose = gluc_1 and TG = TG_1	Normal	13.16	100.00
81	Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1	Normal	6.84	100.00
82	Hb = Hb_1 and LDL = LDL_2 and glucose = gluc_1	Normal	5.79	100.00
83	RBC = RBC_1 and Hb = Hb_2 and glucose = gluc_1	Normal	5.79	100.00
84	RBC = RBC_1 and WBC = WBC_1 and glucose = gluc_1	Normal	5.79	100.00
85	RBC = RBC_1 and LDL = LDL_1 and glucose = gluc_1	Normal	6.84	100.00
86	RBC = RBC_1 and chol = chol_1 and glucose = gluc_1	Normal	9.47	100.00
87	RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	12.11	100.00
88	RBC = RBC_1 and glucose = gluc_1 and TG = TG_1	Normal	11.58	100.00
89	WBC = WBC_3 and chol = chol_2 and glucose = gluc_1	Normal	5.26	100.00
90	WBC = WBC_3 and LDL = LDL_2 and glucose = gluc_1	Normal	5.26	100.00
91	WBC = WBC_3 and chol = chol_1 and glucose = gluc_1	Normal	5.79	100.00
92	WBC = WBC_3 and glucose = gluc_1 and HDL = HDL_2	Normal	9.47	100.00
93	WBC = WBC_3 and glucose = gluc_1 and TG = TG_1	Normal	11.05	100.00
94	Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1	Normal	6.32	100.00
95	Hb = Hb_2 and LDL = LDL_1 and glucose = gluc_1	Normal	6.32	100.00
96	Hb = Hb_2 and LDL = LDL_1 and TG = TG_1	Normal	5.79	100.00
97	Hb = Hb_2 and RBC = RBC_2 and glucose = gluc_1	Normal	8.95	100.00
98	Hb = Hb_2 and sex = M and glucose = gluc_1	Normal	6.84	100.00
99	Hb = Hb_2 and chol = chol_1 and glucose = gluc_1	Normal	9.47	100.00
100	Hb = Hb_2 and glucose = gluc_1 and HDL = HDL_2	Normal	14.74	100.00
101	Hb = Hb_2 and glucose = gluc_1 and TG = TG_1	Normal	14.21	100.00
102	WBC = WBC_1 and chol = chol_2 and glucose = gluc_1	Normal	6.84	100.00
103	WBC = WBC_1 and RBC = RBC_2 and glucose = gluc_1	Normal	5.79	100.00
104	WBC = WBC_1 and LDL = LDL_2 and glucose = gluc_1	Normal	7.37	100.00
105	chol = chol_2 and glucose = gluc_1 and HDL = HDL_2	Normal	12.63	100.00
106	chol = chol_2 and glucose = gluc_1 and TG = TG_1	Normal	15.26	100.00
107	LDL = LDL_1 and RBC = RBC_2 and glucose = gluc_1	Normal	6.32	100.00
108	RBC = RBC_2 and LDL = LDL_2 and glucose = gluc_1	Normal	7.89	100.00
109	RBC = RBC_2 and sex = M and glucose = gluc_1	Normal	5.79	100.00
110	RBC = RBC_2 and chol = chol_1 and glucose = gluc_1	Normal	12.63	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
111	RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2	Normal	13.68	100.00
112	RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	16.32	100.00
113	LDL = LDL_2 and chol = chol_1 and glucose = gluc_1	Normal	13.16	100.00
114	LDL = LDL_2 and glucose = gluc_1 and HDL = HDL_2	Normal	12.63	100.00
115	LDL = LDL_2 and glucose = gluc_1 and TG = TG_1	Normal	14.21	100.00
116	LDL = LDL_4 and chol = chol_3 and glucose = gluc_1 and HDL = HDL_2	Normal	7.37	100.00
117	chol = chol_3 and Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_1	Normal	5.26	100.00
118	chol = chol_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
119	RBC = RBC_4 and Hct = Hct_4 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
120	RBC = RBC_3 and chol = chol_2 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
121	RBC = RBC_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.32	100.00
122	LDL = LDL_3 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
123	LDL = LDL_3 and chol = chol_2 and glucose = gluc_1 and HDL = HDL_2	Normal	7.37	100.00
124	LDL = LDL_3 and chol = chol_2 and glucose = gluc_1 and TG = TG_1	Normal	9.47	100.00
125	LDL = LDL_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.42	100.00
126	Hb = Hb_3 and Hct = Hct_3 and LDL = LDL_2 and glucose = gluc_1	Normal	5.26	100.00
127	Hb = Hb_3 and Hct = Hct_3 and chol = chol_1 and glucose = gluc_1	Normal	6.32	100.00
128	Hb = Hb_3 and Hct = Hct_3 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
129	Hb = Hb_3 and Hct = Hct_3 and glucose = gluc_1 and TG = TG_1	Normal	8.42	100.00
130	Hb = Hb_3 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
131	Hb = Hb_3 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
132	Hb = Hb_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	100.00
133	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_1 and HDL = HDL_2	Normal	7.89	100.00
134	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_1 and TG = TG_1	Normal	7.89	100.00
135	Hct = Hct_4 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	100.00
136	Hb = Hb_4 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	100.00
137	WBC = WBC_2 and sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
138	WBC = WBC_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.42	100.00
139	Hct = Hct_3 and chol = chol_2 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
140	Hct = Hct_3 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
141	Hct = Hct_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.95	100.00
142	Hct = Hct_1 and Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1	Normal	6.84	100.00
143	Hct = Hct_1 and RBC = RBC_1 and chol = chol_1 and glucose = gluc_1	Normal	5.26	100.00
144	Hct = Hct_1 and RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.37	100.00
145	Hct = Hct_1 and RBC = RBC_1 and glucose = gluc_1 and TG = TG_1	Normal	7.37	100.00
146	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1	Normal	5.79	100.00
147	Hct = Hct_2 and Hb = Hb_2 and RBC = RBC_2 and glucose = gluc_1	Normal	6.84	100.00
148	Hct = Hct_2 and Hb = Hb_2 and chol = chol_1 and glucose = gluc_1	Normal	6.84	100.00
149	Hct = Hct_2 and Hb = Hb_2 and glucose = gluc_1 and HDL = HDL_2	Normal	10.00	100.00
150	Hct = Hct_2 and Hb = Hb_2 and glucose = gluc_1 and TG = TG_1	Normal	10.53	100.00
151	Hct = Hct_2 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
152	Hct = Hct_2 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
153	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1	Normal	6.84	100.00
154	Hct = Hct_2 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
155	Hct = Hct_2 and LDL = LDL_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
156	Hct = Hct_2 and RBC = RBC_2 and chol = chol_1 and glucose = gluc_1	Normal	5.79	100.00
157	Hct = Hct_2 and RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
158	Hct = Hct_2 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	8.42	100.00
159	Hct = Hct_2 and sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
160	Hct = Hct_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.89	100.00
161	Hct = Hct_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	8.42	100.00
162	Hct = Hct_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	10.53	100.00
163	Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
164	Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
165	RBC = RBC_1 and Hb = Hb_2 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
166	RBC = RBC_1 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
167	RBC = RBC_1 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
168	RBC = RBC_1 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1	Normal	6.84	100.00
169	RBC = RBC_1 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
170	RBC = RBC_1 and LDL = LDL_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
171	RBC = RBC_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	8.42	100.00
172	RBC = RBC_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	8.95	100.00
173	RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	10.53	100.00
174	WBC = WBC_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.42	100.00
175	Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	100.00
176	Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
177	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1	Normal	6.32	100.00
178	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and TG = TG_1	Normal	5.79	100.00
179	Hb = Hb_2 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
180	Hb = Hb_2 and LDL = LDL_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
181	Hb = Hb_2 and LDL = LDL_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
182	Hb = Hb_2 and RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
183	Hb = Hb_2 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	7.37	100.00
184	Hb = Hb_2 and sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	6.84	100.00
185	Hb = Hb_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.89	100.00
186	Hb = Hb_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	8.42	100.00
187	Hb = Hb_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.58	100.00
188	WBC = WBC_1 and chol = chol_2 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	100.00
189	WBC = WBC_1 and chol = chol_2 and glucose = gluc_1 and TG = TG_1	Normal	6.84	100.00
190	WBC = WBC_1 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
191	WBC = WBC_1 and LDL = LDL_2 and chol = chol_1 and glucose = gluc_1	Normal	5.26	100.00
192	WBC = WBC_1 and LDL = LDL_2 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
193	WBC = WBC_1 and LDL = LDL_2 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
194	chol = chol_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.58	100.00
195	LDL = LDL_1 and RBC = RBC_2 and chol = chol_1 and glucose = gluc_1	Normal	6.32	100.00
196	LDL = LDL_1 and RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	100.00
197	LDL = LDL_1 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
198	RBC = RBC_2 and LDL = LDL_2 and chol = chol_1 and glucose = gluc_1	Normal	6.32	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
199	RBC = RBC_2 and LDL = LDL_2 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
200	RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	8.42	100.00
201	RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	11.05	100.00
202	RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	12.11	100.00
203	LDL = LDL_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.89	100.00
204	LDL = LDL_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	10.00	100.00
205	LDL = LDL_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.05	100.00
206	LDL = LDL_3 and chol = chol_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.32	100.00
207	Hb = Hb_3 and Hct = Hct_3 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
208	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
209	Hct = Hct_1 and Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
210	Hct = Hct_1 and Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
211	Hct = Hct_1 and RBC = RBC_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.26	100.00
212	Hct = Hct_1 and RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	100.00
213	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
214	Hct = Hct_2 and Hb = Hb_2 and RBC = RBC_2 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
215	Hct = Hct_2 and Hb = Hb_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
216	Hct = Hct_2 and Hb = Hb_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
217	Hct = Hct_2 and Hb = Hb_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.42	100.00
218	Hct = Hct_2 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
219	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
220	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
221	Hct = Hct_2 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
222	Hct = Hct_2 and RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
223	Hct = Hct_2 and RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
224	Hct = Hct_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	100.00
225	Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
226	RBC = RBC_1 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
227	RBC = RBC_1 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	6.32	100.00
228	RBC = RBC_1 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
229	RBC = RBC_1 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	100.00
230	RBC = RBC_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.89	100.00
231	Hb = Hb_2 and WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
232	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.79	100.00
233	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	100.00
234	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
235	Hb = Hb_2 and LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
236	Hb = Hb_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	100.00
237	WBC = WBC_1 and chol = chol_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
238	LDL = LDL_1 and RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	100.00
239	LDL = LDL_1 and RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	6.32	100.00
240	LDL = LDL_1 and RBC = RBC_2 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	100.00
241	RBC = RBC_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.89	100.00
242	LDL = LDL_2 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	100.00
243	glucose = gluc_1	Normal	56.32	99.07
244	glucose = gluc_1 and TG = TG_1	Normal	44.21	98.81
245	glucose = gluc_1 and HDL = HDL_2	Normal	43.68	98.80
246	glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	35.26	98.51
247	chol = chol_1 and glucose = gluc_1	Normal	27.89	98.11
248	chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	23.16	97.73
249	chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	21.05	97.50
250	WBC = WBC_1 and glucose = gluc_1	Normal	18.95	97.22
251	chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	18.42	97.14
252	sex = M and glucose = gluc_1	Normal	17.37	96.97
253	WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	17.37	96.97
254	WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2	Normal	15.79	96.67
255	sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	15.26	96.55
256	WBC = WBC_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	14.74	96.43
257	LDL = LDL_1 and glucose = gluc_1	Normal	14.21	96.30
258	LDL = LDL_1 and chol = chol_1 and glucose = gluc_1	Normal	14.21	96.30
259	RBC = RBC_4 and glucose = gluc_1	Normal	13.16	96.00
260	Hct = Hct_1 and glucose = gluc_1	Normal	13.16	96.00
261	LDL = LDL_1 and glucose = gluc_1 and TG = TG_1	Normal	13.16	96.00
262	LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	13.16	96.00
263	Hb = Hb_1 and glucose = gluc_1	Normal	12.63	95.83
264	LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2	Normal	12.63	95.83
265	sex = M and glucose = gluc_1 and TG = TG_1	Normal	12.63	95.83
266	LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	12.63	95.83
267	LDL = LDL_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.58	95.45
268	LDL = LDL_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.58	95.45
269	sex = M and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	11.05	95.24
270	Hct = Hct_1 and glucose = gluc_1 and HDL = HDL_2	Normal	10.53	95.00
271	Hct = Hct_1 and glucose = gluc_1 and TG = TG_1	Normal	10.53	95.00
272	Hb = Hb_1 and glucose = gluc_1 and HDL = HDL_2	Normal	10.53	95.00
273	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_1	Normal	10.00	94.74
274	Hb = Hb_1 and glucose = gluc_1 and TG = TG_1	Normal	10.00	94.74
275	WBC = WBC_1 and chol = chol_1 and glucose = gluc_1	Normal	10.00	94.74
276	sex = M and chol = chol_1 and glucose = gluc_1	Normal	10.00	94.74
277	RBC = RBC_4 and glucose = gluc_1 and HDL = HDL_2	Normal	8.95	94.12

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
278	RBC = RBC_4 and glucose = gluc_1 and TG = TG_1	Normal	8.95	94.12
279	Hct = Hct_1 and chol = chol_1 and glucose = gluc_1	Normal	8.95	94.12
280	Hb = Hb_1 and chol = chol_1 and glucose = gluc_1	Normal	8.95	94.12
281	Hct = Hct_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.95	94.12
282	Hb = Hb_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	8.95	94.12
283	WBC = WBC_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	8.95	94.12
284	WBC = WBC_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	8.42	93.75
285	sex = M and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	8.42	93.75
286	sex = M and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	8.42	93.75
287	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.89	93.33
288	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_1 and TG = TG_1	Normal	7.89	93.33
289	WBC = WBC_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.89	93.33
290	Hct = Hct_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	7.37	92.86
291	Hb = Hb_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	7.37	92.86
292	Hb = Hb_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	7.37	92.86
293	sex = M and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	92.86
294	Hct = Hct_1 and Hb = Hb_1 and chol = chol_1 and glucose = gluc_1	Normal	6.84	92.31
295	Hct = Hct_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	6.84	92.31
296	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	92.31
297	Hb = Hb_2 and LDL = LDL_1 and HDL = HDL_2	Normal	6.32	91.67
298	RBC = RBC_4 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.32	91.67
299	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2	Normal	6.32	91.67
300	Hb = Hb_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	6.32	91.67
301	Hct = Hct_1 and Hb = Hb_1 and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.79	90.91
302	Hct = Hct_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	90.91
303	RBC = RBC_4 and WBC = WBC_1 and glucose = gluc_1	Normal	5.26	90.00
304	Hct = Hct_1 and WBC = WBC_1 and glucose = gluc_1	Normal	5.26	90.00
305	Hb = Hb_1 and WBC = WBC_1 and glucose = gluc_1	Normal	5.26	90.00
306	WBC = WBC_1 and sex = M and glucose = gluc_1	Normal	5.26	90.00
307	LDL = LDL_1 and sex = M and glucose = gluc_1	Normal	5.26	90.00
308	Hct = Hct_1 and WBC = WBC_1 and glucose = gluc_1 and TG = TG_1	Normal	5.26	90.00
309	Hct = Hct_2 and Hb = Hb_2 and LDL = LDL_1 and HDL = HDL_2	Normal	5.26	90.00
310	WBC = WBC_1 and sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	90.00
311	LDL = LDL_1 and sex = M and chol = chol_1 and glucose = gluc_1	Normal	5.26	90.00
312	LDL = LDL_1 and sex = M and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	90.00
313	LDL = LDL_1 and sex = M and glucose = gluc_1 and TG = TG_1	Normal	5.26	90.00
314	Hct = Hct_1 and Hb = Hb_1 and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	90.00
315	Hct = Hct_2 and Hb = Hb_2 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2	Normal	5.26	90.00
316	LDL = LDL_1 and sex = M and chol = chol_1 and glucose = gluc_1 and HDL = HDL_2	Normal	5.26	90.00
317	LDL = LDL_1 and sex = M and chol = chol_1 and glucose = gluc_1 and TG = TG_1	Normal	5.26	90.00
318	LDL = LDL_1 and sex = M and glucose = gluc_1 and HDL = HDL_2 and TG = TG_1	Normal	5.26	90.00
319	WBC = WBC_1 and chol = chol_2	Normal	7.89	86.67

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
320	WBC = WBC_1 and chol = chol_2 and TG = TG_1	Normal	7.89	86.67
321	LDL = LDL_4 and Hct = Hct_4	Normal	6.32	83.33
322	Hb = Hb_2 and WBC = WBC_1 and HDL = HDL_2	Normal	6.32	83.33
323	WBC = WBC_1 and chol = chol_2 and HDL = HDL_2	Normal	6.32	83.33
324	Hb = Hb_2 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	6.32	83.33
325	WBC = WBC_1 and chol = chol_2 and HDL = HDL_2 and TG = TG_1	Normal	6.32	83.33
326	chol = chol_3 and WBC = WBC_2	Normal	5.79	81.82
327	LDL = LDL_4 and Hct = Hct_4 and Hb = Hb_4	Normal	5.79	81.82
328	chol = chol_3 and WBC = WBC_2 and HDL = HDL_2	Normal	5.79	81.82
329	LDL = LDL_3 and Hct = Hct_3 and chol = chol_2	Normal	5.79	81.82
330	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1 and HDL = HDL_2	Normal	5.79	81.82
331	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	81.82
332	LDL = LDL_4 and WBC = WBC_2	Normal	5.26	80.00
333	LDL = LDL_3 and Hb = Hb_3	Normal	5.26	80.00
334	Hb = Hb_2 and WBC = WBC_1	Normal	7.89	80.00
335	Hb = Hb_2 and LDL = LDL_1	Normal	7.89	80.00
336	LDL = LDL_4 and chol = chol_3 and Hct = Hct_4	Normal	5.26	80.00
337	RBC = RBC_3 and LDL = LDL_3 and TG = TG_1	Normal	5.26	80.00
338	Hct = Hct_2 and LDL = LDL_1 and TG = TG_1	Normal	7.89	80.00
339	WBC = WBC_3 and chol = chol_2 and TG = TG_1	Normal	5.26	80.00
340	Hb = Hb_2 and WBC = WBC_1 and TG = TG_1	Normal	7.89	80.00
341	Hb = Hb_2 and LDL = LDL_1 and chol = chol_1	Normal	7.89	80.00
342	Hct = Hct_2 and LDL = LDL_1 and RBC = RBC_2 and TG = TG_1	Normal	5.26	80.00
343	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and TG = TG_1	Normal	7.89	80.00
344	RBC = RBC_1 and Hb = Hb_2 and chol = chol_1 and HDL = HDL_2	Normal	5.26	80.00
345	Hb = Hb_2 and RBC = RBC_2 and chol = chol_1 and TG = TG_1	Normal	5.26	80.00
346	Hct = Hct_2 and LDL = LDL_1 and RBC = RBC_2 and chol = chol_1 and TG = TG_1	Normal	5.26	80.00
347	chol = chol_3 and Hct = Hct_4	Normal	7.37	78.57
348	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1	Normal	7.37	78.57
349	Hct = Hct_2 and WBC = WBC_1 and HDL = HDL_2	Normal	7.37	78.57
350	RBC = RBC_1 and WBC = WBC_1 and HDL = HDL_2	Normal	7.37	78.57
351	Hct = Hct_2 and Hb = Hb_2 and WBC = WBC_1 and TG = TG_1	Normal	7.37	78.57
352	Hct = Hct_2 and LDL = LDL_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	78.57
353	RBC = RBC_1 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	78.57
354	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	78.57
355	RBC = RBC_4 and chol = chol_2	Normal	6.84	76.92
356	WBC = WBC_3 and chol = chol_2	Normal	6.84	76.92
357	chol = chol_3 and Hct = Hct_4 and Hb = Hb_4	Normal	6.84	76.92
358	Hct = Hct_3 and chol = chol_2 and TG = TG_1	Normal	6.84	76.92
359	Hct = Hct_2 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	6.84	76.92
360	Hct = Hct_2 and WBC = WBC_1	Normal	8.95	76.47
361	Hb = Hb_2 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Normal	8.95	76.47
362	LDL = LDL_4 and Hb = Hb_4	Normal	6.32	75.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
363	Hct = Hct_1 and WBC = WBC_1	Normal	6.32	75.00
364	chol = chol_3 and Hct = Hct_4 and HDL = HDL_2	Normal	6.32	75.00
365	Hct = Hct_1 and WBC = WBC_1 and TG = TG_1	Normal	6.32	75.00
366	Hct = Hct_2 and Hb = Hb_2 and LDL = LDL_1	Normal	6.32	75.00
367	Hct = Hct_2 and WBC = WBC_1 and TG = TG_1	Normal	8.42	75.00
368	Hct = Hct_2 and LDL = LDL_1 and HDL = HDL_2	Normal	8.42	75.00
369	Hb = Hb_1 and LDL = LDL_2 and chol = chol_1	Normal	6.32	75.00
370	Hb = Hb_2 and chol = chol_1 and HDL = HDL_2	Normal	10.53	75.00
371	Hct = Hct_2 and Hb = Hb_2 and LDL = LDL_1 and chol = chol_1	Normal	6.32	75.00
372	Hct = Hct_2 and Hb = Hb_2 and RBC = RBC_2 and TG = TG_1	Normal	8.42	75.00
373	Hct = Hct_2 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2	Normal	8.42	75.00
374	Hb = Hb_2 and HDL = HDL_2	Normal	20.00	73.68
375	Hb = Hb_2 and RBC = RBC_2 and TG = TG_1	Normal	10.00	73.68
376	Hb = Hb_1 and LDL = LDL_2	Normal	7.89	73.33
377	RBC = RBC_1 and WBC = WBC_1	Normal	7.89	73.33
378	RBC = RBC_1 and Hb = Hb_2 and HDL = HDL_2	Normal	7.89	73.33
379	RBC = RBC_1 and WBC = WBC_1 and TG = TG_1	Normal	7.89	73.33
380	WBC = WBC_1 and RBC = RBC_2 and TG = TG_1	Normal	7.89	73.33
381	RBC = RBC_4 and LDL = LDL_3	Normal	5.79	72.73
382	RBC = RBC_4 and Hb = Hb_3	Normal	5.79	72.73
383	RBC = RBC_4 and chol = chol_2 and TG = TG_1	Normal	5.79	72.73
384	LDL = LDL_3 and Hb = Hb_4 and TG = TG_1	Normal	5.79	72.73
385	Hb = Hb_3 and WBC = WBC_1 and HDL = HDL_2	Normal	5.79	72.73
386	Hct = Hct_4 and Hb = Hb_4 and WBC = WBC_3	Normal	5.79	72.73
387	Hct = Hct_4 and WBC = WBC_3 and TG = TG_1	Normal	5.79	72.73
388	WBC = WBC_2 and Hb = Hb_2 and HDL = HDL_2	Normal	5.79	72.73
389	Hct = Hct_1 and Hb = Hb_1 and WBC = WBC_1	Normal	5.79	72.73
390	Hct = Hct_1 and WBC = WBC_1 and HDL = HDL_2	Normal	5.79	72.73
391	Hct = Hct_2 and LDL = LDL_1 and RBC = RBC_2	Normal	5.79	72.73
392	Hb = Hb_2 and chol = chol_1 and TG = TG_1	Normal	11.58	72.73
393	chol = chol_3 and Hct = Hct_4 and Hb = Hb_4 and HDL = HDL_2	Normal	5.79	72.73
394	Hb = Hb_3 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	72.73
395	Hct = Hct_3 and chol = chol_2 and HDL = HDL_2 and TG = TG_1	Normal	5.79	72.73
396	Hct = Hct_1 and Hb = Hb_1 and WBC = WBC_1 and TG = TG_1	Normal	5.79	72.73
397	Hct = Hct_1 and WBC = WBC_1 and HDL = HDL_2 and TG = TG_1	Normal	5.79	72.73
398	Hct = Hct_2 and LDL = LDL_1 and RBC = RBC_2 and chol = chol_1	Normal	5.79	72.73
399	chol = chol_3 and Hb = Hb_4	Normal	7.37	71.43
400	LDL = LDL_3 and Hct = Hct_3	Normal	7.37	71.43
401	Hb = Hb_3 and WBC = WBC_1	Normal	7.37	71.43
402	RBC = RBC_3 and chol = chol_2 and TG = TG_1	Normal	7.37	71.43
403	Hct = Hct_2 and Hb = Hb_2 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Normal	7.37	71.43
404	Hb = Hb_2 and TG = TG_1	Normal	20.00	71.05
405	Hb = Hb_2 and HDL = HDL_2 and TG = TG_1	Normal	16.32	70.97
406	RBC = RBC_1 and LDL = LDL_1 and HDL = HDL_2	Normal	8.95	70.59

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
407	Hct = Hct_2 and Hb = Hb_2 and chol = chol_1 and TG = TG_1	Normal	8.95	70.59
408	RBC = RBC_1 and LDL = LDL_1 and chol = chol_1 and HDL = HDL_2	Normal	8.95	70.59
409	LDL = LDL_4	Normal	14.21	70.37
410	chol = chol_3 and HDL = HDL_2	Normal	14.21	70.37
411	chol = chol_3	Normal	15.79	70.00

Table S2: Association rules for Pre-DM group

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
1	WBC = WBC_1 and glucose = gluc_2	Pre-DM	6.84	100.00
2	WBC = WBC_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.26	100.00
3	WBC = WBC_1 and glucose = gluc_2 and chol = chol_1 and TG = TG_1	Pre-DM	5.26	100.00
4	WBC = WBC_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.79	100.00
5	WBC = WBC_1 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
6	WBC = WBC_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	6.32	100.00
7	WBC = WBC_2 and glucose = gluc_2	Pre-DM	7.89	100.00
8	WBC = WBC_2 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	6.84	100.00
9	WBC = WBC_2 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
10	WBC = WBC_2 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.78	100.00
11	WBC = WBC_3 and glucose = gluc_2	Pre-DM	8.42	100.00
12	WBC = WBC_3 and glucose = gluc_2 and chol = chol_1	Pre-DM	6.32	100.00
13	WBC = WBC_3 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.79	100.00
14	WBC = WBC_3 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
15	WBC = WBC_3 and glucose = gluc_2 and TG = TG_1	Pre-DM	6.32	100.00
16	WBC = WBC_4 and glucose = gluc_2	Pre-DM	7.89	100.00
17	WBC = WBC_4 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.79	100.00
18	Hb = Hb_1 and glucose = gluc_2	Pre-DM	7.37	100.00
19	Hb = Hb_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.79	100.00
20	Hb = Hb_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.79	100.00
21	Hb = Hb_1 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
22	Hb = Hb_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	6.32	100.00
23	Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_2	Pre-DM	5.26	100.00
24	Hb = Hb_2 and glucose = gluc_2	Pre-DM	6.32	100.00
25	Hb = Hb_3 and glucose = gluc_2	Pre-DM	7.89	100.00
26	Hb = Hb_3 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.26	100.00
27	Hb = Hb_3 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.26	100.00
28	Hb = Hb_3 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.79	100.00
29	Hb = Hb_3 and Hct = Hct_3 and glucose = gluc_2	Pre-DM	5.79	100.00
30	Hb = Hb_4 and glucose = gluc_2	Pre-DM	9.47	100.00
31	Hb = Hb_4 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	7.89	100.00
32	Hb = Hb_4 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.32	100.00
33	Hb = Hb_4 and glucose = gluc_2 and TG = TG_1	Pre-DM	7.89	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
34	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_2	Pre-DM	6.84	100.00
35	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.26	100.00
36	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.26	100.00
37	Hct = Hct_1 and Hb = Hb_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.79	100.00
38	Hct = Hct_1 and Hb = Hb_1 and RBC = RBC_1 and glucose = gluc_2	Pre-DM	5.26	100.00
39	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_2	Pre-DM	8.42	100.00
40	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	6.84	100.00
41	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.32	100.00
42	Hct = Hct_4 and Hb = Hb_4 and glucose = gluc_2 and TG = TG_1	Pre-DM	7.89	100.00
43	Hct = Hct_1 and glucose = gluc_2	Pre-DM	7.37	100.00
44	Hct = Hct_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.79	100.00
45	Hct = Hct_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.26	100.00
46	Hct = Hct_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.79	100.00
47	Hct = Hct_1 and RBC = RBC_1 and glucose = gluc_2	Pre-DM	5.26	100.00
48	Hct = Hct_2 and glucose = gluc_2	Pre-DM	5.79	100.00
49	Hct = Hct_2 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.26	100.00
50	Hct = Hct_2 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.26	100.00
51	Hct = Hct_3 and glucose = gluc_2	Pre-DM	8.95	100.00
52	Hct = Hct_3 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	5.26	100.00
53	Hct = Hct_3 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.26	100.00
54	Hct = Hct_4 and glucose = gluc_2	Pre-DM	8.95	100.00
55	Hct = Hct_4 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	6.84	100.00
56	Hct = Hct_4 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.32	100.00
57	Hct = Hct_4 and glucose = gluc_2 and TG = TG_1	Pre-DM	7.89	100.00
58	RBC = RBC_1 and glucose = gluc_2	Pre-DM	8.42	100.00
59	RBC = RBC_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	5.26	100.00
60	RBC = RBC_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	6.32	100.00
61	RBC = RBC_1 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.32	100.00
62	RBC = RBC_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	7.89	100.00
63	RBC = RBC_3 and glucose = gluc_2	Pre-DM	7.89	100.00
64	RBC = RBC_3 and glucose = gluc_2 and TG = TG_1	Pre-DM	5.79	100.00
65	glucose = gluc_2 and RBC = RBC_2	Pre-DM	10.00	100.00
66	glucose = gluc_2 and RBC = RBC_2 and chol = chol_1	Pre-DM	6.32	100.00
67	glucose = gluc_2 and RBC = RBC_2 and chol = chol_1 and HDL = HDL_2	Pre-DM	5.79	100.00
68	glucose = gluc_2 and RBC = RBC_2 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
69	glucose = gluc_2 and RBC = RBC_2 and chol = chol_1 and TG = TG_1	Pre-DM	5.26	100.00
70	glucose = gluc_2 and RBC = RBC_2 and HDL = HDL_2	Pre-DM	9.47	100.00
71	glucose = gluc_2 and RBC = RBC_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	7.37	100.00
72	glucose = gluc_2 and RBC = RBC_2 and sex = M	Pre-DM	5.79	100.00
73	glucose = gluc_2 and RBC = RBC_2 and sex = M and HDL = HDL_2	Pre-DM	5.79	100.00
74	glucose = gluc_2 and RBC = RBC_2 and TG = TG_1	Pre-DM	7.37	100.00
75	LDL = LDL_1 and glucose = gluc_2	Pre-DM	10.53	100.00
76	LDL = LDL_1 and glucose = gluc_2 and chol = chol_1	Pre-DM	10.53	100.00
77	LDL = LDL_1 and glucose = gluc_2 and chol = chol_1 and HDL = HDL_2	Pre-DM	7.89	100.00

Rule	Antecedent	Consequent	Support (%)	Confidence (%)
78	LDL = LDL_1 and glucose = gluc_2 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.84	100.00
79	LDL = LDL_1 and glucose = gluc_2 and chol = chol_1 and TG = TG_1	Pre-DM	8.95	100.00
80	LDL = LDL_1 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	7.89	100.00
81	LDL = LDL_1 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.84	100.00
82	LDL = LDL_1 and glucose = gluc_2 and sex = M	Pre-DM	5.79	100.00
83	LDL = LDL_1 and glucose = gluc_2 and sex = M and chol = chol_1	Pre-DM	5.79	100.00
84	LDL = LDL_1 and glucose = gluc_2 and TG = TG_1	Pre-DM	8.95	100.00
85	LDL = LDL_3 and glucose = gluc_2	Pre-DM	5.79	100.00
86	chol = chol_2 and glucose = gluc_2	Pre-DM	8.42	100.00
87	chol = chol_2 and glucose = gluc_2 and HDL = HDL_2	Pre-DM	6.84	100.00
88	chol = chol_2 and glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	5.26	100.00
89	chol = chol_2 and glucose = gluc_2 and TG = TG_1	Pre-DM	6.32	100.00
90	glucose = gluc_2	Pre-DM	31.05	100.00
91	glucose = gluc_2 and chol = chol_1	Pre-DM	19.47	100.00
92	glucose = gluc_2 and chol = chol_1 and HDL = HDL_2	Pre-DM	12.63	100.00
93	glucose = gluc_2 and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Pre-DM	11.58	100.00
94	glucose = gluc_2 and chol = chol_1 and TG = TG_1	Pre-DM	15.26	100.00
95	glucose = gluc_2 and HDL = HDL_2	Pre-DM	22.63	100.00
96	glucose = gluc_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	19.47	100.00
97	glucose = gluc_2 and LDL = LDL_2	Pre-DM	11.58	100.00
98	glucose = gluc_2 and LDL = LDL_2 and chol = chol_1	Pre-DM	7.89	100.00
99	glucose = gluc_2 and LDL = LDL_2 and chol = chol_1 and TG = TG_1	Pre-DM	5.26	100.00
100	glucose = gluc_2 and LDL = LDL_2 and HDL = HDL_2	Pre-DM	7.89	100.00
101	glucose = gluc_2 and LDL = LDL_2 and HDL = HDL_2 and TG = TG_1	Pre-DM	7.37	100.00
102	glucose = gluc_2 and LDL = LDL_2 and TG = TG_1	Pre-DM	8.42	100.00
103	glucose = gluc_2 and sex = M	Pre-DM	14.21	100.00
104	glucose = gluc_2 and sex = M and chol = chol_1	Pre-DM	10.53	100.00
105	glucose = gluc_2 and sex = M and chol = chol_1 and HDL = HDL_2	Pre-DM	7.37	100.00
106	glucose = gluc_2 and sex = M and chol = chol_1 and HDL = HDL_2 and TG = TG_1	Pre-DM	6.32	100.00
107	glucose = gluc_2 and sex = M and chol = chol_1 and TG = TG_1	Pre-DM	7.37	100.00
108	glucose = gluc_2 and sex = M and HDL = HDL_2	Pre-DM	10.53	100.00
109	glucose = gluc_2 and sex = M and HDL = HDL_2 and TG = TG_1	Pre-DM	8.95	100.00
110	glucose = gluc_2 and sex = M and TG = TG_1	Pre-DM	10.53	100.00
111	glucose = gluc_2 and TG = TG_1	Pre-DM	24.21	100.00

Table S3: Association rules for DM group

Rule	Antecedent	Consequent	Support %	Confidence %
1	glucose = gluc_3	DM	12.63	100.00
2	glucose = gluc_3 and Hb = Hb_1	DM	5.79	100.00
3	glucose = gluc_3 and LDL = LDL_1	DM	5.79	100.00
4	glucose = gluc_3 and sex = M	DM	5.79	100.00
5	glucose = gluc_3 and chol = chol_1	DM	8.42	100.00
6	glucose = gluc_3 and HDL = HDL_2	DM	6.84	100.00
7	glucose = gluc_3 and TG = TG_1	DM	8.95	100.00
8	glucose = gluc_3 and LDL = LDL_1 and chol = chol_1	DM	5.79	100.00
9	glucose = gluc_3 and sex = M and TG = TG_1	DM	5.26	100.00
10	glucose = gluc_3 and chol = chol_1 and TG = TG_1	DM	5.79	100.00
11	glucose = gluc_3 and HDL = HDL_2 and TG = TG_1	DM	6.84	100.00