

The DISCRIM Procedure

Total Sample Size	455	DF Total	454
Variables	10	DF Within Classes	453
Classes	2	DF Between Classes	1

Number of Observations Read	455
Number of Observations Used	455

Class Level Information					
diagnosis	Variable Name	Frequency	Weight	Proportion	Prior Probability
0	0	284	284.0000	0.624176	0.624176
1	1	171	171.0000	0.375824	0.375824

The DISCRIM Procedure
Within-Class SSCP Matrices

diagnosis = 0							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	871.396	-122.397	5734.480	65925.626	-0.791	0.822	1.060
texture	-122.397	4409.430	-861.359	-9997.614	-3.285	-2.490	-2.853
perimeter	5734.480	-861.359	37950.539	433625.842	-3.638	12.757	14.320
area	65925.626	-9997.614	433625.842	5037200.067	-68.573	54.106	87.489
smoothness	-0.791	-3.285	-3.638	-68.573	0.045	0.065	0.041
compactness	0.822	-2.490	12.757	54.106	0.065	0.280	0.270
concavity	1.060	-2.853	14.320	87.489	0.041	0.270	0.444
concave_points	3.027	-2.875	22.471	228.500	0.028	0.100	0.122
symmetry	-2.268	-0.355	-12.603	-176.125	0.038	0.091	0.096
fractal_dimension	-1.718	-0.571	-10.247	-128.903	0.012	0.040	0.042

diagnosis = 0			
Variable	concave_points	symmetry	fractal_dimension
radius	3.027	-2.268	-1.718
texture	-2.875	-0.355	-0.571
perimeter	22.471	-12.603	-10.247
area	228.500	-176.125	-128.903
smoothness	0.028	0.038	0.012
compactness	0.100	0.091	0.040
concavity	0.122	0.096	0.042
concave_points	0.064	0.034	0.009
symmetry	0.034	0.172	0.018
fractal_dimension	0.009	0.018	0.012

The DISCRIM Procedure
Within-Class SSCP Matrices

diagnosis = 1							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1746.19	216.84	11880.59	196851.07	-0.72	4.95	21.10
texture	216.84	2540.16	1526.74	24803.91	-1.56	0.26	1.86
perimeter	11880.59	1526.74	81665.84	1341872.12	-1.88	52.74	165.96
area	196851.07	24803.91	1341872.12	22688565.89	-59.45	555.92	2456.09
smoothness	-0.72	-1.56	-1.88	-59.45	0.03	0.08	0.11
compactness	4.95	0.26	52.74	555.92	0.08	0.53	0.63
concavity	21.10	1.86	165.96	2456.09	0.11	0.63	1.04
concave_points	12.82	-0.43	95.04	1460.89	0.04	0.24	0.42
symmetry	-0.88	-2.60	0.89	-107.03	0.04	0.19	0.20
fractal_dimension	-1.72	-0.46	-9.47	-187.30	0.01	0.06	0.05

diagnosis = 1			
Variable	concave_points	symmetry	fractal_dimension
radius	12.82	-0.88	-1.72
texture	-0.43	-2.60	-0.46
perimeter	95.04	0.89	-9.47
area	1460.89	-107.03	-187.30
smoothness	0.04	0.04	0.01
compactness	0.24	0.19	0.06
concavity	0.42	0.20	0.05
concave_points	0.21	0.08	0.01
symmetry	0.08	0.14	0.02
fractal_dimension	0.01	0.02	0.01

The DISCRIM Procedure

Pooled Within-Class SSCP Matrix							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	2617.58	94.44	17615.07	262776.70	-1.52	5.77	22.16
texture	94.44	6949.59	665.39	14806.29	-4.84	-2.23	-0.99
perimeter	17615.07	665.39	119616.38	1775497.97	-5.52	65.50	180.28
area	262776.70	14806.29	1775497.97	27725765.96	-128.03	610.02	2543.58
smoothness	-1.52	-4.84	-5.52	-128.03	0.07	0.15	0.15
compactness	5.77	-2.23	65.50	610.02	0.15	0.81	0.90
concavity	22.16	-0.99	180.28	2543.58	0.15	0.90	1.48
concave_points	15.85	-3.30	117.51	1689.39	0.07	0.34	0.54
symmetry	-3.14	-2.96	-11.71	-283.16	0.07	0.28	0.30
fractal_dimension	-3.44	-1.03	-19.71	-316.20	0.02	0.10	0.09

Pooled Within-Class SSCP Matrix			
Variable	concave_points	symmetry	fractal_dimension
radius	15.85	-3.14	-3.44
texture	-3.30	-2.96	-1.03
perimeter	117.51	-11.71	-19.71
area	1689.39	-283.16	-316.20
smoothness	0.07	0.07	0.02
compactness	0.34	0.28	0.10
concavity	0.54	0.30	0.09
concave_points	0.27	0.11	0.02
symmetry	0.11	0.31	0.04
fractal_dimension	0.02	0.04	0.02

The DISCRIM Procedure

Between-Class SSCP Matrix							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	2834.93	2025.65	20028.01	274063.28	6.84	39.36	66.78
texture	2025.65	1447.39	14310.67	195827.15	4.89	28.13	47.71
perimeter	20028.01	14310.67	141492.47	1936182.75	48.36	278.10	471.77
area	274063.28	195827.15	1936182.75	26494721.73	661.71	3805.48	6455.64
smoothness	6.84	4.89	48.36	661.71	0.02	0.10	0.16
compactness	39.36	28.13	278.10	3805.48	0.10	0.55	0.93
concavity	66.78	47.71	471.77	6455.64	0.16	0.93	1.57
concave_points	35.27	25.20	249.17	3409.59	0.09	0.49	0.83
symmetry	11.57	8.27	81.77	1118.92	0.03	0.16	0.27
fractal_dimension	0.47	0.34	3.34	45.72	0.00	0.01	0.01

Between-Class SSCP Matrix			
Variable	concave_points	symmetry	fractal_dimension
radius	35.27	11.57	0.47
texture	25.20	8.27	0.34
perimeter	249.17	81.77	3.34
area	3409.59	1118.92	45.72
smoothness	0.09	0.03	0.00
compactness	0.49	0.16	0.01
concavity	0.83	0.27	0.01
concave_points	0.44	0.14	0.01
symmetry	0.14	0.05	0.00
fractal_dimension	0.01	0.00	0.00

The DISCRIM Procedure

Total-Sample SSCP Matrix							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	5452.51	2120.09	37643.08	536839.97	5.33	45.14	88.93
texture	2120.09	8396.99	14976.05	210633.44	0.05	25.90	46.73
perimeter	37643.08	14976.05	261108.85	3711680.71	42.83	343.60	652.05
area	536839.97	210633.44	3711680.71	54220487.68	533.68	4415.50	8999.23
smoothness	5.33	0.05	42.83	533.68	0.09	0.24	0.31
compactness	45.14	25.90	343.60	4415.50	0.24	1.36	1.82
concavity	88.93	46.73	652.05	8999.23	0.31	1.82	3.06
concave_points	51.11	21.90	366.68	5098.98	0.15	0.83	1.38
symmetry	8.43	5.31	70.06	835.76	0.10	0.44	0.57
fractal_dimension	-2.96	-0.69	-16.37	-270.49	0.03	0.10	0.10

Total-Sample SSCP Matrix			
Variable	concave_points	symmetry	fractal_dimension
radius	51.11	8.43	-2.96
texture	21.90	5.31	-0.69
perimeter	366.68	70.06	-16.37
area	5098.98	835.76	-270.49
smoothness	0.15	0.10	0.03
compactness	0.83	0.44	0.10
concavity	1.38	0.57	0.10
concave_points	0.71	0.26	0.03
symmetry	0.26	0.36	0.04
fractal_dimension	0.03	0.04	0.02

The DISCRIM Procedure
Within-Class Covariance Matrices

diagnosis = 0, DF = 283							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	3.07914	-0.43250	20.26318	232.95274	-0.00280	0.00291	0.00375
texture	-0.43250	15.58102	-3.04367	-35.32726	-0.01161	-0.00880	-0.01008
perimeter	20.26318	-3.04367	134.10085	1532.24679	-0.01285	0.04508	0.05060
area	232.95274	-35.32726	1532.24679	17799.29352	-0.24231	0.19119	0.30915
smoothness	-0.00280	-0.01161	-0.01285	-0.24231	0.00016	0.00023	0.00015
compactness	0.00291	-0.00880	0.04508	0.19119	0.00023	0.00099	0.00095
concavity	0.00375	-0.01008	0.05060	0.30915	0.00015	0.00095	0.00157
concave_points	0.01070	-0.01016	0.07940	0.80742	0.00010	0.00035	0.00043
symmetry	-0.00802	-0.00125	-0.04454	-0.62235	0.00013	0.00032	0.00034
fractal_dimension	-0.00607	-0.00202	-0.03621	-0.45549	0.00004	0.00014	0.00015

diagnosis = 0, DF = 283			
Variable	concave_points	symmetry	fractal_dimension
radius	0.01070	-0.00802	-0.00607
texture	-0.01016	-0.00125	-0.00202
perimeter	0.07940	-0.04454	-0.03621
area	0.80742	-0.62235	-0.45549
smoothness	0.00010	0.00013	0.00004
compactness	0.00035	0.00032	0.00014
concavity	0.00043	0.00034	0.00015
concave_points	0.00023	0.00012	0.00003
symmetry	0.00012	0.00061	0.00006
fractal_dimension	0.00003	0.00006	0.00004

The DISCRIM Procedure
Within-Class Covariance Matrices

diagnosis = 1, DF = 170							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	10.2717	1.2755	69.8858	1157.9475	-0.0043	0.0291	0.1241
texture	1.2755	14.9421	8.9808	145.9053	-0.0092	0.0015	0.0110
perimeter	69.8858	8.9808	480.3873	7893.3654	-0.0111	0.3102	0.9762
area	1157.9475	145.9053	7893.3654	133462.1523	-0.3497	3.2701	14.4476
smoothness	-0.0043	-0.0092	-0.0111	-0.3497	0.0002	0.0005	0.0006
compactness	0.0291	0.0015	0.3102	3.2701	0.0005	0.0031	0.0037
concavity	0.1241	0.0110	0.9762	14.4476	0.0006	0.0037	0.0061
concave_points	0.0754	-0.0025	0.5591	8.5935	0.0002	0.0014	0.0025
symmetry	-0.0052	-0.0153	0.0052	-0.6296	0.0002	0.0011	0.0012
fractal_dimension	-0.0101	-0.0027	-0.0557	-1.1018	0.0001	0.0003	0.0003

diagnosis = 1, DF = 170			
Variable	concave_points	symmetry	fractal_dimension
radius	0.0754	-0.0052	-0.0101
texture	-0.0025	-0.0153	-0.0027
perimeter	0.5591	0.0052	-0.0557
area	8.5935	-0.6296	-1.1018
smoothness	0.0002	0.0002	0.0001
compactness	0.0014	0.0011	0.0003
concavity	0.0025	0.0012	0.0003
concave_points	0.0012	0.0005	0.0001
symmetry	0.0005	0.0008	0.0001
fractal_dimension	0.0001	0.0001	0.0001

The DISCRIM Procedure

Pooled Within-Class Covariance Matrix, DF = 453							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	5.77833	0.20847	38.88535	580.08101	-0.00335	0.01274	0.04891
texture	0.20847	15.34127	1.46884	32.68497	-0.01069	-0.00492	-0.00218
perimeter	38.88535	1.46884	264.05382	3919.42156	-0.01219	0.14459	0.39797
area	580.08101	32.68497	3919.42156	61204.78137	-0.28262	1.34663	5.61497
smoothness	-0.00335	-0.01069	-0.01219	-0.28262	0.00016	0.00032	0.00033
compactness	0.01274	-0.00492	0.14459	1.34663	0.00032	0.00179	0.00198
concavity	0.04891	-0.00218	0.39797	5.61497	0.00033	0.00198	0.00327
concave_points	0.03498	-0.00730	0.25941	3.72934	0.00015	0.00075	0.00120
symmetry	-0.00694	-0.00653	-0.02585	-0.62507	0.00016	0.00062	0.00066
fractal_dimension	-0.00758	-0.00227	-0.04352	-0.69802	0.00005	0.00021	0.00020

Pooled Within-Class Covariance Matrix, DF = 453			
Variable	concave_points	symmetry	fractal_dimension
radius	0.03498	-0.00694	-0.00758
texture	-0.00730	-0.00653	-0.00227
perimeter	0.25941	-0.02585	-0.04352
area	3.72934	-0.62507	-0.69802
smoothness	0.00015	0.00016	0.00005
compactness	0.00075	0.00062	0.00021
concavity	0.00120	0.00066	0.00020
concave_points	0.00060	0.00025	0.00005
symmetry	0.00025	0.00069	0.00009
fractal_dimension	0.00005	0.00009	0.00005

The DISCRIM Procedure

Between-Class Covariance Matrix, DF = 1							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	12.4612	8.9040	88.0352	1204.6737	0.0301	0.1730	0.2935
texture	8.9040	6.3622	62.9040	860.7787	0.0215	0.1236	0.2097
perimeter	88.0352	62.9040	621.9449	8510.6934	0.2126	1.2224	2.0737
area	1204.6737	860.7787	8510.6934	116460.3153	2.9086	16.7274	28.3765
smoothness	0.0301	0.0215	0.2126	2.9086	0.0001	0.0004	0.0007
compactness	0.1730	0.1236	1.2224	16.7274	0.0004	0.0024	0.0041
concavity	0.2935	0.2097	2.0737	28.3765	0.0007	0.0041	0.0069
concave_points	0.1550	0.1108	1.0952	14.9872	0.0004	0.0022	0.0037
symmetry	0.0509	0.0364	0.3594	4.9183	0.0001	0.0007	0.0012
fractal_dimension	0.0021	0.0015	0.0147	0.2009	0.0000	0.0000	0.0000

Between-Class Covariance Matrix, DF = 1			
Variable	concave_points	symmetry	fractal_dimension
radius	0.1550	0.0509	0.0021
texture	0.1108	0.0364	0.0015
perimeter	1.0952	0.3594	0.0147
area	14.9872	4.9183	0.2009
smoothness	0.0004	0.0001	0.0000
compactness	0.0022	0.0007	0.0000
concavity	0.0037	0.0012	0.0000
concave_points	0.0019	0.0006	0.0000
symmetry	0.0006	0.0002	0.0000
fractal_dimension	0.0000	0.0000	0.0000

The DISCRIM Procedure

Total-Sample Covariance Matrix, DF = 454							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	12.0099	4.6698	82.9143	1182.4669	0.0117	0.0994	0.1959
texture	4.6698	18.4956	32.9869	463.9503	0.0001	0.0570	0.1029
perimeter	82.9143	32.9869	575.1296	8175.5082	0.0943	0.7568	1.4362
area	1182.4669	463.9503	8175.5082	119428.3870	1.1755	9.7258	19.8221
smoothness	0.0117	0.0001	0.0943	1.1755	0.0002	0.0005	0.0007
compactness	0.0994	0.0570	0.7568	9.7258	0.0005	0.0030	0.0040
concavity	0.1959	0.1029	1.4362	19.8221	0.0007	0.0040	0.0067
concave_points	0.1126	0.0482	0.8077	11.2312	0.0003	0.0018	0.0030
symmetry	0.0186	0.0117	0.1543	1.8409	0.0002	0.0010	0.0013
fractal_dimension	-0.0065	-0.0015	-0.0361	-0.5958	0.0001	0.0002	0.0002

Total-Sample Covariance Matrix, DF = 454			
Variable	concave_points	symmetry	fractal_dimension
radius	0.1126	0.0186	-0.0065
texture	0.0482	0.0117	-0.0015
perimeter	0.8077	0.1543	-0.0361
area	11.2312	1.8409	-0.5958
smoothness	0.0003	0.0002	0.0001
compactness	0.0018	0.0010	0.0002
concavity	0.0030	0.0013	0.0002
concave_points	0.0016	0.0006	0.0001
symmetry	0.0006	0.0008	0.0001
fractal_dimension	0.0001	0.0001	0.0000

The DISCRIM Procedure
Within-Class Correlation Coefficients / Pr > |r|

diagnosis = 0							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1.0000 0.2943	-0.0624 0.2943	0.9972 <.0001	0.9951 <.0001	-0.1260 0.0338	0.0526 0.3768	0.0539 0.3657
texture	-0.0624 0.2943	1.0000	-0.0666 0.2634	-0.0671 0.2598	-0.2325 <.0001	-0.0709 0.2339	-0.0645 0.2789
perimeter	0.9972 <.0001	-0.0666 0.2634	1.0000	0.9918 <.0001	-0.0878 0.1400	0.1238 0.0371	0.1103 0.0634
area	0.9951 <.0001	-0.0671 0.2598	0.9918 <.0001	1.0000	-0.1436 0.0154	0.0456 0.4443	0.0585 0.3260
smoothness	-0.1260 0.0338	-0.2325 <.0001	-0.0878 0.1400	-0.1436 0.0154	1.0000	0.5779 <.0001	0.2917 <.0001
compactness	0.0526 0.3768	-0.0709 0.2339	0.1238 0.0371	0.0456 0.4443	0.5779 <.0001	1.0000	0.7664 <.0001
concavity	0.0539 0.3657	-0.0645 0.2789	0.1103 0.0634	0.0585 0.3260	0.2917 <.0001	0.7664 <.0001	1.0000
concave_points	0.4046 <.0001	-0.1708 0.0039	0.4551 <.0001	0.4017 <.0001	0.5127 <.0001	0.7484 <.0001	0.7217 <.0001
symmetry	-0.1854 0.0017	-0.0129 0.8286	-0.1561 0.0084	-0.1894 0.0013	0.4281 <.0001	0.4135 <.0001	0.3458 <.0001
fractal_dimension	-0.5301 <.0001	-0.0783 0.1881	-0.4791 <.0001	-0.5231 <.0001	0.5132 <.0001	0.6928 <.0001	0.5799 <.0001

diagnosis = 0			
Variable	concave_points	symmetry	fractal_dimension
radius	0.4046 <.0001	-0.1854 0.0017	-0.5301 <.0001
texture	-0.1708 0.0039	-0.0129 0.8286	-0.0783 0.1881
perimeter	0.4551 <.0001	-0.1561 0.0084	-0.4791 <.0001
area	0.4017 <.0001	-0.1894 0.0013	-0.5231 <.0001
smoothness	0.5127 <.0001	0.4281 <.0001	0.5132 <.0001
compactness	0.7484 <.0001	0.4135 <.0001	0.6928 <.0001
concavity	0.7217 <.0001	0.3458 <.0001	0.5799 <.0001
concave_points	1.0000	0.3201 <.0001	0.3131 <.0001
symmetry	0.3201 <.0001	1.0000	0.3887 <.0001
fractal_dimension	0.3131 <.0001	0.3887 <.0001	1.0000

The DISCRIM Procedure
Within-Class Correlation Coefficients / Pr > |r|

diagnosis = 1							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1.0000 0.1802	0.1030 0.1802	0.9949 <.0001	0.9890 <.0001	-0.1041 0.1756	0.1626 0.0336	0.4952 <.0001
texture	0.1030 0.1802	1.0000	0.1060 0.1676	0.1033 0.1787	-0.1857 0.0150	0.0071 0.9270	0.0363 0.6376
perimeter	0.9949 <.0001	0.1060 0.1676	1.0000	0.9858 <.0001	-0.0396 0.6071	0.2533 0.0008	0.5697 <.0001
area	0.9890 <.0001	0.1033 0.1787	0.9858 <.0001	1.0000	-0.0749 0.3299	0.1602 0.0364	0.5058 <.0001
smoothness	-0.1041 0.1756	-0.1857 0.0150	-0.0396 0.6071	-0.0749 0.3299	1.0000	0.6617 <.0001	0.6302 <.0001
compactness	0.1626 0.0336	0.0071 0.9270	0.2533 0.0008	0.1602 0.0364	0.6617 <.0001	1.0000	0.8441 <.0001
concavity	0.4952 <.0001	0.0363 0.6376	0.5697 <.0001	0.5058 <.0001	0.6302 <.0001	0.8441 <.0001	1.0000
concave_points	0.6749 <.0001	-0.0188 0.8074	0.7317 <.0001	0.6748 <.0001	0.5549 <.0001	0.7250 <.0001	0.9119 <.0001
symmetry	-0.0562 0.4650	-0.1386 0.0707	0.0084 0.9135	-0.0603 0.4337	0.5665 <.0001	0.7041 <.0001	0.5378 <.0001
fractal_dimension	-0.4016 <.0001	-0.0885 0.2498	-0.3237 <.0001	-0.3842 <.0001	0.7369 <.0001	0.7494 <.0001	0.4542 <.0001

diagnosis = 1			
Variable	concave_points	symmetry	fractal_dimension
radius	0.6749 <.0001	-0.0562 0.4650	-0.4016 <.0001
texture	-0.0188 0.8074	-0.1386 0.0707	-0.0885 0.2498
perimeter	0.7317 <.0001	0.0084 0.9135	-0.3237 <.0001
area	0.6748 <.0001	-0.0603 0.4337	-0.3842 <.0001
smoothness	0.5549 <.0001	0.5665 <.0001	0.7369 <.0001
compactness	0.7250 <.0001	0.7041 <.0001	0.7494 <.0001
concavity	0.9119 <.0001	0.5378 <.0001	0.4542 <.0001
concave_points	1.0000	0.4660 <.0001	0.2834 0.0002
symmetry	0.4660 <.0001	1.0000	0.6295 <.0001
fractal_dimension	0.2834 0.0002	0.6295 <.0001	1.0000

The DISCRIM Procedure

Pooled Within-Class Correlation Coefficients / Pr > r							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1.0000 0.6380	0.0221 0.6380	0.9955 <.0001	0.9754 <.0001	-0.1096 0.0195	0.1253 0.0075	0.3556 <.0001
texture	0.0221 0.6380	1.0000	0.0231 0.6238	0.0337 0.4734	-0.2151 <.0001	-0.0297 0.5277	-0.0097 0.8360
perimeter	0.9955 <.0001	0.0231 0.6238	1.0000	0.9750 <.0001	-0.0591 0.2088	0.2103 <.0001	0.4280 <.0001
area	0.9754 <.0001	0.0337 0.4734	0.9750 <.0001	1.0000	-0.0900 0.0553	0.1286 0.0061	0.3966 <.0001
smoothness	-0.1096 0.0195	-0.2151 <.0001	-0.0591 0.2088	-0.0900 0.0553	1.0000	0.5975 <.0001	0.4508 <.0001
compactness	0.1253 0.0075	-0.0297 0.5277	0.2103 <.0001	0.1286 0.0061	0.5975 <.0001	1.0000	0.8181 <.0001
concavity	0.3556 <.0001	-0.0097 0.8360	0.4280 <.0001	0.3966 <.0001	0.4508 <.0001	0.8181 <.0001	1.0000
concave_points	0.5951 <.0001	-0.0762 0.1050	0.6529 <.0001	0.6165 <.0001	0.4954 <.0001	0.7266 <.0001	0.8590 <.0001
symmetry	-0.1103 0.0188	-0.0637 0.1756	-0.0607 0.1964	-0.0965 0.0399	0.4842 <.0001	0.5617 <.0001	0.4418 <.0001
fractal_dimension	-0.4474 <.0001	-0.0821 0.0805	-0.3798 <.0001	-0.4001 <.0001	0.6053 <.0001	0.7112 <.0001	0.4913 <.0001

Pooled Within-Class Correlation Coefficients / Pr > r			
Variable	concave_points	symmetry	fractal_dimension
radius	0.5951 <.0001	-0.1103 0.0188	-0.4474 <.0001
texture	-0.0762 0.1050	-0.0637 0.1756	-0.0821 0.0805
perimeter	0.6529 <.0001	-0.0607 0.1964	-0.3798 <.0001
area	0.6165 <.0001	-0.0965 0.0399	-0.4001 <.0001
smoothness	0.4954 <.0001	0.4842 <.0001	0.6053 <.0001
compactness	0.7266 <.0001	0.5617 <.0001	0.7112 <.0001
concavity	0.8590 <.0001	0.4418 <.0001	0.4913 <.0001
concave_points	1.0000	0.3881 <.0001	0.2803 <.0001
symmetry	0.3881 <.0001	1.0000	0.4984 <.0001
fractal_dimension	0.2803 <.0001	0.4984 <.0001	1.0000

The DISCRIM Procedure

Between-Class Correlation Coefficients / Pr > r							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
texture	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
perimeter	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
area	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
smoothness	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
compactness	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
concavity	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
concave_points	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
symmetry	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .
fractal_dimension	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .	1.0000 .

Between-Class Correlation Coefficients / Pr > r			
Variable	concave_points	symmetry	fractal_dimension
radius	1.0000 .	1.0000 .	1.0000 .
texture	1.0000 .	1.0000 .	1.0000 .
perimeter	1.0000 .	1.0000 .	1.0000 .
area	1.0000 .	1.0000 .	1.0000 .
smoothness	1.0000 .	1.0000 .	1.0000 .
compactness	1.0000 .	1.0000 .	1.0000 .
concavity	1.0000 .	1.0000 .	1.0000 .
concave_points	1.0000 .	1.0000 .	1.0000 .
symmetry	1.0000 .	1.0000 .	1.0000 .
fractal_dimension	1.0000 .	1.0000 .	1.0000 .

The DISCRIM Procedure

Total-Sample Correlation Coefficients / Pr > r							
Variable	radius	texture	perimeter	area	smoothness	compactness	concavity
radius	1.0000	0.3133 <.0001	0.9976 <.0001	0.9873 <.0001	0.2412 <.0001	0.5246 <.0001	0.6889 <.0001
texture	0.3133 <.0001	1.0000	0.3198 <.0001	0.3122 <.0001	0.0017 0.9708	0.2426 <.0001	0.2917 <.0001
perimeter	0.9976 <.0001	0.3198 <.0001	1.0000	0.9865 <.0001	0.2802 <.0001	0.5771 <.0001	0.7299 <.0001
area	0.9873 <.0001	0.3122 <.0001	0.9865 <.0001	1.0000	0.2422 <.0001	0.5147 <.0001	0.6991 <.0001
smoothness	0.2412 <.0001	0.0017 0.9708	0.2802 <.0001	0.2422 <.0001	1.0000	0.6896 <.0001	0.5918 <.0001
compactness	0.5246 <.0001	0.2426 <.0001	0.5771 <.0001	0.5147 <.0001	0.6896 <.0001	1.0000	0.8957 <.0001
concavity	0.6889 <.0001	0.2917 <.0001	0.7299 <.0001	0.6991 <.0001	0.5918 <.0001	0.8957 <.0001	1.0000
concave_points	0.8217 <.0001	0.2837 <.0001	0.8519 <.0001	0.8220 <.0001	0.6142 <.0001	0.8459 <.0001	0.9338 <.0001
symmetry	0.1908 <.0001	0.0969 0.0389	0.2291 <.0001	0.1897 <.0001	0.5634 <.0001	0.6350 <.0001	0.5474 <.0001
fractal_dimension	-0.2668 <.0001	-0.0500 0.2868	-0.2131 <.0001	-0.2443 <.0001	0.5710 <.0001	0.5862 <.0001	0.3841 <.0001

Total-Sample Correlation Coefficients / Pr > r			
Variable	concave_points	symmetry	fractal_dimension
radius	0.8217 <.0001	0.1908 <.0001	-0.2668 <.0001
texture	0.2837 <.0001	0.0969 0.0389	-0.0500 0.2868
perimeter	0.8519 <.0001	0.2291 <.0001	-0.2131 <.0001
area	0.8220 <.0001	0.1897 <.0001	-0.2443 <.0001
smoothness	0.6142 <.0001	0.5634 <.0001	0.5710 <.0001
compactness	0.8459 <.0001	0.6350 <.0001	0.5862 <.0001
concavity	0.9338 <.0001	0.5474 <.0001	0.3841 <.0001
concave_points	1.0000	0.5091 <.0001	0.2193 <.0001
symmetry	0.5091 <.0001	1.0000	0.4850 <.0001
fractal_dimension	0.2193 <.0001	0.4850 <.0001	1.0000

The DISCRIM Procedure Simple Statistics

Total-Sample					
Variable	N	Sum	Mean	Variance	Standard Deviation
radius	455	6416	14.10102	12.00994	3.4655
texture	455	8726	19.17738	18.49557	4.3006
perimeter	455	41772	91.80598	575.12962	23.9819
area	455	296368	651.35846	119428	345.5841
smoothness	455	43.85126	0.09638	0.0001972	0.0140
compactness	455	47.38853	0.10415	0.00299	0.0547
concavity	455	40.63379	0.08931	0.00673	0.0820
concave_points	455	22.30788	0.04903	0.00156	0.0395
symmetry	455	82.52000	0.18136	0.0007886	0.0281
fractal_dimension	455	28.55448	0.06276	0.0000498	0.007057

diagnosis = 0					
Variable	N	Sum	Mean	Variance	Standard Deviation
radius	284	3455	12.16413	3.07914	1.7547
texture	284	5053	17.79342	15.58102	3.9473
perimeter	284	22187	78.12239	134.10085	11.5802
area	284	131808	464.11232	17799	133.4140
smoothness	284	26.04277	0.09170	0.0001599	0.0126
compactness	284	21.94075	0.07726	0.0009891	0.0315
concavity	284	12.40542	0.04368	0.00157	0.0396
concave_points	284	7.08061	0.02493	0.0002270	0.0151
symmetry	284	49.26120	0.17345	0.0006067	0.0246
fractal_dimension	284	17.73126	0.06243	0.0000426	0.006527

diagnosis = 1					
Variable	N	Sum	Mean	Variance	Standard Deviation
radius	171	2961	17.31784	10.27169	3.2049
texture	171	3672	21.47591	14.94214	3.8655
perimeter	171	19585	114.53193	480.38729	21.9177
area	171	164560	962.34035	133462	365.3247
smoothness	171	17.80849	0.10414	0.0001632	0.0128
compactness	171	25.44778	0.14882	0.00312	0.0559
concavity	171	28.22837	0.16508	0.00611	0.0782
concave_points	171	15.22727	0.08905	0.00122	0.0349

The DISCRIM Procedure
Simple Statistics

diagnosis = 1					
Variable	N	Sum	Mean	Variance	Standard Deviation
symmetry	171	33.25880	0.19450	0.0008181	0.0286
fractal_dimension	171	10.82322	0.06329	0.0000616	0.007849

The DISCRIM Procedure

Total-Sample Standardized Class Means		
Variable	0	1
radius	-0.558899739	0.928231146
texture	-0.321804848	0.534459513
perimeter	-0.570580575	0.947630897
area	-0.541825056	0.899873193
smoothness	-0.333036207	0.553112766
compactness	-0.491830614	0.816841488
concavity	-0.556059708	0.923514369
concave_points	-0.609500630	1.012270052
symmetry	-0.281592287	0.467673740
fractal_dimension	-0.045783315	0.076037786

Pooled Within-Class Standardized Class Means		
Variable	0	1
radius	-0.805755322	1.338213517
texture	-0.353342417	0.586837698
perimeter	-0.842080532	1.398543106
area	-0.756868085	1.257020679
smoothness	-0.368409274	0.611861016
compactness	-0.635646936	1.055694327
concavity	-0.797296159	1.324164382
concave_points	-0.985498567	1.636734463
symmetry	-0.301910288	0.501418256
fractal_dimension	-0.045812853	0.076086844

Within Covariance Matrix Information		
diagnosis	Covariance Matrix Rank	Natural Log of the Determinant of the Covariance Matrix
0	10	-47.00514
1	10	-39.38434
Pooled	10	-40.67387

The DISCRIM Procedure
Test of Homogeneity of Within Covariance Matrices

Chi-Square	DF	Pr > ChiSq
1533.198119	55	<.0001

Since the Chi-Square value is significant at the 0.1 level, the within covariance matrices will be used in the discriminant function.

Reference: Morrison, D.F. (1976) Multivariate Statistical Methods p252.

The DISCRIM Procedure

Squared Distance to diagnosis		
From diagnosis	0	1
0	0	8.71487
1	105.77149	0

Generalized Squared Distance to diagnosis		
From diagnosis	0	1
0	-46.06249	-28.71220
1	59.70900	-37.42707

The DISCRIM Procedure

Univariate Test Statistics							
F Statistics, Num DF=1, Den DF=453							
Variable	Total Standard Deviation	Pooled Standard Deviation	Between Standard Deviation	R-Square	R-Square / (1-RSq)	F Value	Pr > F
radius	3.4655	2.4038	3.5300	0.5199	1.0830	490.61	<.0001
texture	4.3006	3.9168	2.5223	0.1724	0.2083	94.35	<.0001
perimeter	23.9819	16.2497	24.9388	0.5419	1.1829	535.85	<.0001
area	345.5841	247.3960	341.2628	0.4886	0.9556	432.89	<.0001
smoothness	0.0140	0.0127	0.008523	0.1846	0.2264	102.56	<.0001
compactness	0.0547	0.0423	0.0490	0.4026	0.6740	305.33	<.0001
concavity	0.0820	0.0572	0.0832	0.5147	1.0604	480.37	<.0001
concave_points	0.0395	0.0245	0.0439	0.6183	1.6201	733.91	<.0001
symmetry	0.0281	0.0262	0.0144	0.1320	0.1521	68.88	<.0001
fractal_dimension	0.007057	0.007052	0.000589	0.0035	0.0035	1.59	0.2085

Average R-Square	
Unweighted	0.3578556
Weighted by Variance	0.4888573

Multivariate Statistics and Exact F Statistics					
S=1 M=4 N=221					
Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.30619704	100.60	10	444	<.0001
Pillai's Trace	0.69380296	100.60	10	444	<.0001
Hotelling-Lawley Trace	2.26587086	100.60	10	444	<.0001
Roy's Greatest Root	2.26587086	100.60	10	444	<.0001

The DISCRIM Procedure
Classification Summary for Calibration Data: WORK.TRAIN_WDBC_SUB
Resubstitution Summary using Quadratic Discriminant Function

Number of Observations and Percent Classified into diagnosis			
From diagnosis	0	1	Total
0	277 97.54	7 2.46	284 100.00
1	20 11.70	151 88.30	171 100.00
Total	297 65.27	158 34.73	455 100.00
Priors	0.62418	0.37582	

Error Count Estimates for diagnosis			
	0	1	Total
Rate	0.0246	0.1170	0.0593
Priors	0.6242	0.3758	

The DISCRIM Procedure
Classification Results for Calibration Data: WORK.TRAIN_WDBC_SUB
Resubstitution Results using Quadratic Discriminant Function

Number of Observations and Average Posterior Probabilities Classified into diagnosis		
From diagnosis	0	1
0	277 0.9889	7 0.9495
1	20 0.8907	151 0.9843
Total	297 0.9823	158 0.9828
Priors	0.62418	0.37582

Posterior Probability Error Rate Estimates for diagnosis			
Estimate	0	1	Total
Stratified	-0.0272	0.0919	0.0176
Unstratified	-0.0272	0.0919	0.0176
Priors	0.6242	0.3758	

The DISCRIM Procedure
Classification Summary for Calibration Data: WORK.TRAIN_WDBC_SUB
Cross-validation Summary using Quadratic Discriminant Function

Number of Observations and Percent Classified into diagnosis			
From diagnosis	0	1	Total
0	275 96.83	9 3.17	284 100.00
1	20 11.70	151 88.30	171 100.00
Total	295 64.84	160 35.16	455 100.00
Priors	0.62418	0.37582	

Error Count Estimates for diagnosis			
	0	1	Total
Rate	0.0317	0.1170	0.0637
Priors	0.6242	0.3758	

The DISCRIM Procedure
Classification Results for Calibration Data: WORK.TRAIN_WDBC_SUB
Cross-validation Results using Quadratic Discriminant Function

Number of Observations and Average Posterior Probabilities Classified into diagnosis		
From diagnosis	0	1
0	275 0.9866	9 0.9399
1	20 0.9064	151 0.9810
Total	295 0.9812	160 0.9787
Priors	0.62418	0.37582

Posterior Probability Error Rate Estimates for diagnosis			
Estimate	0	1	Total
Stratified	-0.0192	0.0843	0.0197
Unstratified	-0.0192	0.0843	0.0197
Priors	0.6242	0.3758	

The DISCRIM Procedure
Classification Summary for Test Data: WORK.TEST_WDBC_SUB
Classification Summary using Quadratic Discriminant Function

Observation Profile for Test Data	
Number of Observations Read	114
Number of Observations Used	114

Number of Observations and Percent Classified into diagnosis			
From diagnosis	0	1	Total
0	66 90.41	7 9.59	73 100.00
1	3 7.32	38 92.68	41 100.00
Total	69 60.53	45 39.47	114 100.00
Priors	0.62418	0.37582	

Error Count Estimates for diagnosis			
	0	1	Total
Rate	0.0959	0.0732	0.0874
Priors	0.6242	0.3758	

The DISCRIM Procedure
Classification Results for Test Data: WORK.TEST_WDBC_SUB
Classification Results using Quadratic Discriminant Function

Number of Observations and Average Posterior Probabilities Classified into diagnosis		
From diagnosis	0	1
0	66 0.9915	7 0.9247
1	3 0.7438	38 0.9731
Total	69 0.9808	45 0.9655
Priors	0.62418	0.37582

Posterior Probability Error Rate Estimates for diagnosis			
Estimate	0	1	Total
Stratified	0.0708	-0.0491	0.0257
Unstratified	0.0489	-0.0141	0.0252
Priors	0.6242	0.3758	

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
1	12	84610002	1	15.78	17.89	103.6	781	0.0971	0.1292	0.09954
2	16	84799002	1	14.54	27.54	96.73	658.8	0.1139	0.1595	0.1639
3	18	84862001	1	16.13	20.68	108.1	798.8	0.117	0.2022	0.1722
4	21	8510653	0	13.08	15.71	85.63	520	0.1075	0.127	0.04568
5	28	852781	1	18.61	20.25	122.1	1094	0.0944	0.1066	0.149
6	31	853401	1	18.63	25.11	124.8	1088	0.1064	0.1887	0.2319
7	51	857343	0	11.76	21.6	74.72	427.9	0.08637	0.04966	0.01657
8	53	857374	0	11.94	18.24	75.71	437.6	0.08261	0.04751	0.01972
9	54	857392	1	18.22	18.7	120.3	1033	0.1148	0.1485	0.1772
10	55	857438	1	15.1	22.02	97.26	712.8	0.09056	0.07081	0.05253
11	61	858970	0	10.17	14.88	64.55	311.9	0.1134	0.08061	0.01084
12	62	858981	0	8.598	20.98	54.66	221.8	0.1243	0.08963	0.03
13	64	859196	0	9.173	13.86	59.2	260.9	0.07721	0.08751	0.05988
14	67	859464	0	9.465	21.01	60.11	269.4	0.1044	0.07773	0.02172
15	68	859465	0	11.31	19.04	71.8	394.1	0.08139	0.04701	0.03709
16	69	859471	0	9.029	17.33	58.79	250.5	0.1066	0.1413	0.313
17	73	859717	1	17.2	24.52	114.2	929.4	0.1071	0.183	0.1692
18	81	861103	0	11.45	20.97	73.81	401.5	0.1102	0.09362	0.04591

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
1	0.06606	0.1842	0.06082	0.00187	0.99813	1
2	0.07364	0.2303	0.07077	0.00002	0.99998	1
3	0.1028	0.2164	0.07356	0.00000	1.00000	1
4	0.0311	0.1967	0.06811	0.99921	0.00079	0
5	0.07731	0.1697	0.05699	0.00000	1.00000	1
6	0.1244	0.2183	0.06197	0.00000	1.00000	1
7	0.01115	0.1495	0.05888	0.99975	0.00025	0
8	0.01349	0.1868	0.0611	0.99996	0.00004	0
9	0.106	0.2092	0.0631	0.00000	1.00000	1
10	0.03334	0.1616	0.05684	0.68888	0.31112	0
11	0.0129	0.2743	0.0696	1.00000	0.00000	0
12	0.009259	0.1828	0.06757	0.99901	0.00099	0
13	0.0218	0.2341	0.06963	1.00000	0.00000	0
14	0.01504	0.1717	0.06899	0.99998	0.00002	0
15	0.0223	0.1516	0.05667	1.00000	0.00000	0
16	0.04375	0.2111	0.08046	1.00000	0.00000	0
17	0.07944	0.1927	0.06487	0.00000	1.00000	1
18	0.02233	0.1842	0.07005	0.99927	0.00073	0

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
19	82	8611161	0	13.34	15.86	86.49	520	0.1078	0.1535	0.1169
20	92	861799	1	15.37	22.76	100.2	728.2	0.092	0.1036	0.1122
21	97	86211	0	12.18	17.84	77.79	451.1	0.1045	0.07057	0.0249
22	102	862722	0	6.981	13.43	43.79	143.5	0.117	0.07568	0
23	108	863270	0	12.36	18.54	79.01	466.7	0.08477	0.06815	0.02643
24	113	86409	0	14.26	19.65	97.83	629.9	0.07837	0.2233	0.3003
25	118	864729	1	14.87	16.67	98.64	682.5	0.1162	0.1649	0.169
26	124	865432	0	14.5	10.89	94.28	640.7	0.1101	0.1099	0.08842
27	128	866203	1	19	18.91	123.4	1138	0.08217	0.08028	0.09271
28	130	866674	1	19.79	25.12	130.4	1192	0.1015	0.1589	0.2545
29	131	866714	0	12.19	13.29	79.08	455.8	0.1066	0.09509	0.02855
30	144	869224	0	12.9	15.92	83.74	512.2	0.08677	0.09509	0.04894
31	158	8711216	0	16.84	19.46	108.4	880.2	0.07445	0.07223	0.0515
32	165	8712289	1	23.27	22.04	152.1	1686	0.08439	0.1145	0.1324
33	168	8712729	1	16.78	18.8	109.3	886.3	0.08865	0.09182	0.08422
34	172	87163	1	13.43	19.63	85.84	565.4	0.09048	0.06288	0.05858
35	181	873592	1	27.22	21.87	182.1	2250	0.1094	0.1914	0.2871
36	193	875099	0	9.72	18.22	60.73	288.1	0.0695	0.02344	0

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
19	0.06987	0.1942	0.06902	0.00000	1.00000	1
20	0.07483	0.1717	0.06097	0.00313	0.99687	1
21	0.02941	0.19	0.06635	0.99509	0.00491	0
22	0	0.193	0.07818	0.99966	0.00034	0
23	0.01921	0.1602	0.06066	0.99967	0.00033	0
24	0.07798	0.1704	0.07769	0.00135	0.99865	1
25	0.08923	0.2157	0.06768	0.00154	0.99846	1
26	0.05778	0.1856	0.06402	0.99618	0.00382	0
27	0.05627	0.1946	0.05044	0.00000	1.00000	1
28	0.1149	0.2202	0.06113	0.00000	1.00000	1
29	0.02882	0.188	0.06471	0.99983	0.00017	0
30	0.03088	0.1778	0.06235	0.99924	0.00076	0
31	0.02771	0.1844	0.05268	0.00015	0.99985	1
32	0.09702	0.1801	0.05553	0.00000	1.00000	1
33	0.06576	0.1893	0.05534	0.00000	1.00000	1
34	0.03438	0.1598	0.05671	0.99129	0.00871	0
35	0.1878	0.18	0.0577	0.00000	1.00000	1
36	0	0.1653	0.06447	1.00000	0.00000	0

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
37	198	877159	1	18.08	21.84	117.4	1024	0.07371	0.08642	0.1103
38	202	877989	1	17.54	19.32	115.1	951.6	0.08968	0.1198	0.1036
39	206	879523	1	15.12	16.68	98.78	716.6	0.08876	0.09588	0.0755
40	209	8810158	0	13.11	22.54	87.02	529.4	0.1002	0.1483	0.08705
41	217	8811523	0	11.89	18.35	77.32	432.2	0.09363	0.1154	0.06636
42	229	88147202	0	12.62	23.97	81.35	496.4	0.07903	0.07529	0.05438
43	230	881861	1	12.83	22.33	85.26	503.2	0.1088	0.1799	0.1695
44	237	88299702	1	23.21	26.97	153.5	1670	0.09509	0.1682	0.195
45	239	883270	0	14.22	27.85	92.55	623.9	0.08223	0.1039	0.1103
46	248	884626	0	12.89	14.11	84.95	512.2	0.0876	0.1346	0.1374
47	260	88725602	1	15.53	33.56	103.7	744.9	0.1063	0.1639	0.1751
48	261	887549	1	20.31	27.06	132.9	1288	0.1	0.1088	0.1519
49	265	889719	1	17.19	22.07	111.6	928.3	0.09726	0.08995	0.09061
50	268	8910499	0	13.59	21.84	87.16	561	0.07956	0.08259	0.04072
51	270	8910720	0	10.71	20.39	69.5	344.9	0.1082	0.1289	0.08448
52	271	8910721	0	14.29	16.82	90.3	632.6	0.06429	0.02675	0.00725
53	273	8910988	1	21.75	20.99	147.3	1491	0.09401	0.1961	0.2195
54	275	8911163	1	17.93	24.48	115.2	998.9	0.08855	0.07027	0.05699

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
37	0.05778	0.177	0.0534	0.00000	1.00000	1
38	0.07488	0.1506	0.05491	0.00000	1.00000	1
39	0.04079	0.1594	0.05986	0.29960	0.70040	1
40	0.05102	0.185	0.0731	0.03263	0.96737	1
41	0.03142	0.1967	0.06314	0.99714	0.00286	0
42	0.02036	0.1514	0.06019	0.99980	0.00020	0
43	0.06861	0.2123	0.07254	0.23941	0.76059	1
44	0.1237	0.1909	0.06309	0.00000	1.00000	1
45	0.04408	0.1342	0.06129	0.98210	0.01790	0
46	0.0398	0.1596	0.06409	0.99844	0.00156	0
47	0.08399	0.2091	0.0665	0.00000	1.00000	1
48	0.09333	0.1814	0.05572	0.00000	1.00000	1
49	0.06527	0.1867	0.0558	0.00000	1.00000	1
50	0.02142	0.1635	0.05859	0.97647	0.02353	0
51	0.02867	0.1668	0.06862	0.97250	0.02750	0
52	0.00625	0.1508	0.05376	0.99994	0.00006	0
53	0.1088	0.1721	0.06194	0.00000	1.00000	1
54	0.04744	0.1538	0.0551	0.00000	1.00000	1

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
55	276	8911164	0	11.89	17.36	76.2	435.6	0.1225	0.0721	0.05929
56	278	8911670	1	18.81	19.98	120.9	1102	0.08923	0.05884	0.0802
57	285	8912284	0	12.89	15.7	84.08	516.6	0.07818	0.0958	0.1115
58	291	89143602	0	14.41	19.73	96.03	651	0.08757	0.1676	0.1362
59	292	8915	0	14.96	19.1	97.03	687.3	0.08992	0.09823	0.0594
60	307	89344	0	13.2	15.82	84.07	537.3	0.08511	0.05251	0.001461
61	314	893988	0	11.54	10.72	73.73	409.1	0.08597	0.05969	0.01367
62	315	894047	0	8.597	18.6	54.09	221.2	0.1074	0.05847	0
63	317	894090	0	12.18	14.08	77.25	461.4	0.07734	0.03212	0.01123
64	321	894604	0	10.25	16.18	66.52	324.2	0.1061	0.1111	0.06726
65	327	89524	0	14.11	12.88	90.03	616.5	0.09309	0.05306	0.01765
66	338	897630	1	18.77	21.43	122.9	1092	0.09116	0.1402	0.106
67	350	899147	0	11.95	14.96	77.23	426.7	0.1158	0.1206	0.01171
68	357	9010259	0	13.05	18.59	85.09	512	0.1082	0.1304	0.09603
69	363	9010598	0	12.76	18.84	81.87	496.6	0.09676	0.07952	0.02688
70	367	9011494	1	20.2	26.83	133.7	1234	0.09905	0.1669	0.1641
71	371	9012315	1	16.35	23.29	109	840.4	0.09742	0.1497	0.1811
72	382	901836	0	11.04	14.93	70.67	372.7	0.07987	0.07079	0.03546

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
55	0.07404	0.2015	0.05875	0.06570	0.93430	1
56	0.05843	0.155	0.04996	0.00000	1.00000	1
57	0.0339	0.1432	0.05935	0.99998	0.00002	0
58	0.06602	0.1714	0.07192	0.33082	0.66918	1
59	0.04819	0.1879	0.05852	0.93971	0.06029	0
60	0.003261	0.1632	0.05894	0.99915	0.00085	0
61	0.008907	0.1833	0.061	0.99999	0.00001	0
62	0	0.2163	0.07359	1.00000	0.00000	0
63	0.005051	0.1673	0.05649	0.99999	0.00001	0
64	0.03965	0.1743	0.07279	0.99999	0.00001	0
65	0.02733	0.1373	0.057	0.99942	0.00058	0
66	0.0609	0.1953	0.06083	0.00000	1.00000	1
67	0.01787	0.2459	0.06581	0.99995	0.00005	0
68	0.05603	0.2035	0.06501	0.88135	0.11865	0
69	0.01781	0.1759	0.06183	0.99810	0.00190	0
70	0.1265	0.1875	0.0602	0.00000	1.00000	1
71	0.08773	0.2175	0.06218	0.00000	1.00000	1
72	0.02074	0.2003	0.06246	1.00000	0.00000	0

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
73	386	90291	1	14.6	23.29	93.97	664.7	0.08682	0.06636	0.0839
74	390	90312	1	19.55	23.21	128.9	1174	0.101	0.1318	0.1856
75	392	903483	0	8.734	16.84	55.27	234.3	0.1039	0.07428	0
76	397	90401601	0	13.51	18.89	88.1	558.1	0.1059	0.1147	0.0858
77	398	90401602	0	12.8	17.46	83.05	508.3	0.08044	0.08895	0.0739
78	404	9047	0	12.94	16.17	83.18	507.6	0.09879	0.08836	0.03296
79	405	904969	0	12.34	14.95	78.29	469.1	0.08682	0.04571	0.02109
80	406	904971	0	10.94	18.59	70.39	370	0.1004	0.0746	0.04944
81	418	90602302	1	15.5	21.08	102.9	803.1	0.112	0.1571	0.1522
82	424	906878	0	13.66	19.13	89.46	575.3	0.09057	0.1147	0.09657
83	436	908489	1	13.98	19.62	91.12	599.5	0.106	0.1133	0.1126
84	447	9110732	1	17.75	28.03	117.3	981.6	0.09997	0.1314	0.1698
85	449	911150	0	14.53	19.34	94.25	659.7	0.08388	0.078	0.08817
86	450	911157302	1	21.1	20.52	138.1	1384	0.09684	0.1175	0.1572
87	457	9112366	0	11.63	29.29	74.87	415.1	0.09357	0.08574	0.0716
88	458	9112367	0	13.21	25.25	84.1	537.9	0.08791	0.05205	0.02772
89	467	9113455	0	13.14	20.74	85.98	536.9	0.08675	0.1089	0.1085
90	483	912519	0	13.47	14.06	87.32	546.3	0.1071	0.1155	0.05786

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
73	0.05271	0.1627	0.05416	0.55121	0.44879	0
74	0.1021	0.1989	0.05884	0.00000	1.00000	1
75	0	0.1985	0.07098	1.00000	0.00000	0
76	0.05381	0.1806	0.06079	0.97539	0.02461	0
77	0.04083	0.1574	0.0575	0.99988	0.00012	0
78	0.0239	0.1735	0.062	0.99795	0.00205	0
79	0.02054	0.1571	0.05708	0.99986	0.00014	0
80	0.02932	0.1486	0.06615	0.99965	0.00035	0
81	0.08481	0.2085	0.06864	0.00000	1.00000	1
82	0.04812	0.1848	0.06181	0.95741	0.04259	0
83	0.06463	0.1669	0.06544	0.47742	0.52258	1
84	0.08293	0.1713	0.05916	0.00000	1.00000	1
85	0.02925	0.1473	0.05746	0.94695	0.05305	0
86	0.1155	0.1554	0.05661	0.00000	1.00000	1
87	0.02017	0.1799	0.06166	0.98778	0.01222	0
88	0.02068	0.1619	0.05584	0.98515	0.01485	0
89	0.0351	0.1562	0.0602	0.97260	0.02740	0
90	0.05266	0.1779	0.06639	0.97141	0.02859	0

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
91	490	913535	1	16.69	20.2	107.1	857.6	0.07497	0.07112	0.03649
92	491	91376701	0	12.25	22.44	78.18	466.5	0.08192	0.052	0.01714
93	493	914062	1	18.01	20.56	118.4	1007	0.1001	0.1289	0.117
94	497	914366	0	12.65	18.17	82.69	485.6	0.1076	0.1334	0.08017
95	504	915143	1	23.09	19.83	152.1	1682	0.09342	0.1275	0.1676
96	505	915186	0	9.268	12.87	61.49	248.7	0.1634	0.2239	0.0973
97	508	91544002	0	11.06	17.12	71.25	366.5	0.1194	0.1071	0.04063
98	512	915664	0	14.81	14.7	94.66	680.7	0.08472	0.05016	0.03416
99	516	916221	0	11.34	18.61	72.76	391.2	0.1049	0.08499	0.04302
100	517	916799	1	18.31	20.58	120.8	1052	0.1068	0.1248	0.1569
101	519	917062	0	12.88	18.22	84.45	493.1	0.1218	0.1661	0.04825
102	522	91762702	1	24.63	21.6	165.5	1841	0.103	0.2106	0.231
103	523	91789	0	11.26	19.83	71.3	388.1	0.08511	0.04413	0.005067
104	525	917897	0	9.847	15.68	63	293.2	0.09492	0.08419	0.0233
105	528	91813702	0	12.34	12.27	78.94	468.5	0.09003	0.06307	0.02958
106	530	918465	0	12.07	13.44	77.83	445.2	0.11	0.09009	0.03781
107	531	91858	0	11.75	17.56	75.89	422.9	0.1073	0.09713	0.05282
108	540	921362	0	7.691	25.44	48.34	170.4	0.08668	0.1199	0.09252

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
91	0.02307	0.1846	0.05325	0.00085	0.99915	1
92	0.01261	0.1544	0.05976	0.99976	0.00024	0
93	0.07762	0.2116	0.06077	0.00000	1.00000	1
94	0.05074	0.1641	0.06854	0.98998	0.01002	0
95	0.1003	0.1505	0.05484	0.00000	1.00000	1
96	0.05252	0.2378	0.09502	0.99998	0.00002	0
97	0.04268	0.1954	0.07976	0.97661	0.02339	0
98	0.02541	0.1659	0.05348	0.99710	0.00290	0
99	0.02594	0.1927	0.06211	0.99961	0.00039	0
100	0.09451	0.186	0.05941	0.00000	1.00000	1
101	0.05303	0.1709	0.07253	0.99665	0.00335	0
102	0.1471	0.1991	0.06739	0.00000	1.00000	1
103	0.005664	0.1637	0.06343	0.99997	0.00003	0
104	0.02416	0.1387	0.06891	1.00000	0.00000	0
105	0.02647	0.1689	0.05808	0.99992	0.00008	0
106	0.02798	0.1657	0.06608	0.99991	0.00009	0
107	0.0444	0.1598	0.06677	0.99769	0.00231	0
108	0.01364	0.2037	0.07751	0.99998	0.00002	0

Obs	VAR1	ID_number	diagnosis	radius	texture	perimeter	area	smoothness	compactness	concavity
109	544	922296	0	13.21	28.06	84.88	538.4	0.08671	0.06877	0.02987
110	545	922297	0	13.87	20.7	89.77	584.8	0.09578	0.1018	0.03688
111	547	922577	0	10.32	16.35	65.31	324.9	0.09434	0.04994	0.01012
112	553	924084	0	12.77	29.43	81.35	507.9	0.08276	0.04234	0.01997
113	558	925236	0	9.423	27.88	59.26	271.3	0.08123	0.04971	0
114	559	925277	0	14.59	22.68	96.39	657.1	0.08473	0.133	0.1029

Obs	concave_points	symmetry	fractal_dimension	0	1	_INTO_
109	0.03275	0.1628	0.05781	0.97748	0.02252	0
110	0.02369	0.162	0.06688	0.99326	0.00674	0
111	0.005495	0.1885	0.06201	0.99999	0.00001	0
112	0.01499	0.1539	0.05637	0.98910	0.01090	0
113	0	0.1742	0.06059	1.00000	0.00000	0
114	0.03736	0.1454	0.06147	0.09674	0.90326	1