The SAS System

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of sex by ca		
	ca		
sex	0	1	Total
0	21 26.92 63.64 56.76	12 15.38 36.36 29.27	33 42.31
1	16 20.51 35.56 43.24	29 37.18 64.44 70.73	45 57.69
Total	37 47.44	41 52.56	78 100.00

Statistics for Table of sex by ca

Statistic	DF	Value	Prob
Chi-Square	1	6.0208	0.0141
Likelihood Ratio Chi-Square	1	6.0903	0.0136
Continuity Adj. Chi-Square	1	4.9473	0.0261
Mantel-Haenszel Chi-Square	1	5.9436	0.0148
Phi Coefficient		0.2778	
Contingency Coefficient		0.2677	
Cramer's V		0.2778	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	21
Left-sided Pr <= F	0.9965
Right-sided Pr >= F	0.0128
Table Probability (P)	0.0093
Two-sided Pr <= P	0.0214

Odds Ratio and Relative Risks			
Statistic	Value	95% Confidence Limits	
Odds Ratio	3.1719	1.2443	8.0854
Relative Risk (Column 1)	1.7898	1.1182	2.8647
Relative Risk (Column 2)	0.5643	0.3420	0.9311

Sample Size = 78

Frequency Percent	Table of ecg by ca

Row Pct Col Pct	ca		
ecg	0	1	Total
0	21 26.92 63.64 56.76	12 15.38 36.36 29.27	33 42.31
1	13 16.67 40.63 35.14	19 24.36 59.38 46.34	32 41.03
2	3 3.85 23.08 8.11	10 12.82 76.92 24.39	13 16.67
Total	37 47.44	41 52.56	78 100.00

Statistics for Table of ecg by ca

Statistic	DF	Value	Prob
Chi-Square	2	7.1625	0.0278
Likelihood Ratio Chi-Square	2	7.3889	0.0249
Mantel-Haenszel Chi-Square	1	7.0198	0.0081
Phi Coefficient		0.3030	
Contingency Coefficient		0.2900	
Cramer's V		0.3030	

Sample Size = 78

Frequency Percent Row Pct Col Pct	Table 1 of ecg by ca Controlling for sex=0		
	ca		
ecg	0	1	Total
0	11 33.33 73.33 52.38	4 12.12 26.67 33.33	15 45.45
1	9 27.27 64.29 42.86	5 15.15 35.71 41.67	14 42.42
2	1 3.03 25.00 4.76	3 9.09 75.00 25.00	4 12.12
Total	21 63.64	12 36.36	33 100.00

Statistics for Table 1 of ecg by ca
Controlling for sex=0

Statistic	DF	Value	Prob
Chi-Square	2	3.1924	0.2027
Likelihood Ratio Chi-Square	2	3.1165	0.2105
Mantel-Haenszel Chi-Square	1	2.4596	0.1168
Phi Coefficient		0.3110	
Contingency Coefficient		0.2970	
Cramer's V		0.3110	

WARNING: 33% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Sample Size = 33

Frequency Percent Row Pct Col Pct	Table 2 of ecg by ca Controlling for sex=1		
	ca		
ecg	0	1	Total
0	10 22.22 55.56 62.50	8 17.78 44.44 27.59	18 40.00
1	4 8.89 22.22 25.00	14 31.11 77.78 48.28	18 40.00
2	2 4.44 22.22 12.50	7 15.56 77.78 24.14	9 20.00
Total	16 35.56	29 64.44	45 100.00

Statistics for Table 2 of ecg by ca
Controlling for sex=1

Statistic	DF	Value	Prob
Chi-Square	2	5.2371	0.0729
Likelihood Ratio Chi-Square	2	5.2389	0.0728
Mantel-Haenszel Chi-Square	1	3.9015	0.0482
Phi Coefficient		0.3411	
Contingency Coefficient		0.3229	
Cramer's V		0.3411	

Sample Size = 45

The SAS System

The MEANS Procedure

Analysis Variable : age						
ca	N Obs	N	Mean	Std Dev	Minimum	Maximum
0	37	37	44.0810811	7.8999943	28.0000000	59.0000000
1	41	41	49.4390244	8.4055005	32.0000000	63.0000000

Analysis Variable : age							
ca	ecg	N Obs	N	Mean	Std Dev	Minimum	Maximum
0	0	21	21	44.9523810	8.4526693	28.0000000	59.0000000
	1	13	13	42.6923077	7.3867518	32.0000000	55.0000000
	2	3	3	44.0000000	7.8102497	35.0000000	49.0000000
1	0	12	12	48.5833333	8.6177231	36.0000000	60.0000000
	1	19	19	48.8947368	8.6081017	32.0000000	63.0000000
	2	10	10	51.5000000	8.2898867	37.0000000	60.0000000

Analysis Variable : age							
ca	sex	N Obs	N	Mean	Std Dev	Minimum	Maximum
0	0	21	21	45.0952381	8.1172949	28.0000000	59.0000000
	1	16	16	42.7500000	7.6550637	30.0000000	55.0000000
1	0	12	12	50.6666667	8.4888519	32.0000000	60.0000000
	1	29	29	48.9310345	8.4681379	36.0000000	63.0000000

The SAS System

The LOGISTIC Procedure

Model Information	
Data Set	WORK.CORONARY
Response Variable	ca
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	78
Number of Observations Used	78

Response Profile		
Ordered Value	ca	Total Frequency
1	0	37
2	1	41

Probability modeled is ca=1.

Class Level Information		
Class	Value	Design Variables
sex	0	1
	1	0

Model Convergence Status
Convergence criterion (GCONV=1E-8) satisfied.

Deviance and Pearson Goodness-of-Fit Statistics				
Criterion	Value	DF	Value/DF	Pr > ChiSq
Deviance	0.0000	0	.	.
Pearson	0.0000	0	.	.

Number of unique profiles: 2

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	109.926	105.835
SC	112.282	110.549
-2 Log L	107.926	101.835

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	6.0903	1	0.0136
Score	6.0208	1	0.0141
Wald	5.8453	1	0.0156

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
sex	1	5.8453	0.0156

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	0.5947	0.3114	3.6464	0.0562
sex	0	1	-1.1543	0.4774	5.8453	0.0156

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
sex 0 vs 1	0.315	0.124	0.804

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	40.1	Somers' D	0.275
Percent Discordant	12.7	Gamma	0.521
Percent Tied	47.2	Tau-a	0.139
Pairs	1517	c	0.637

The SAS System

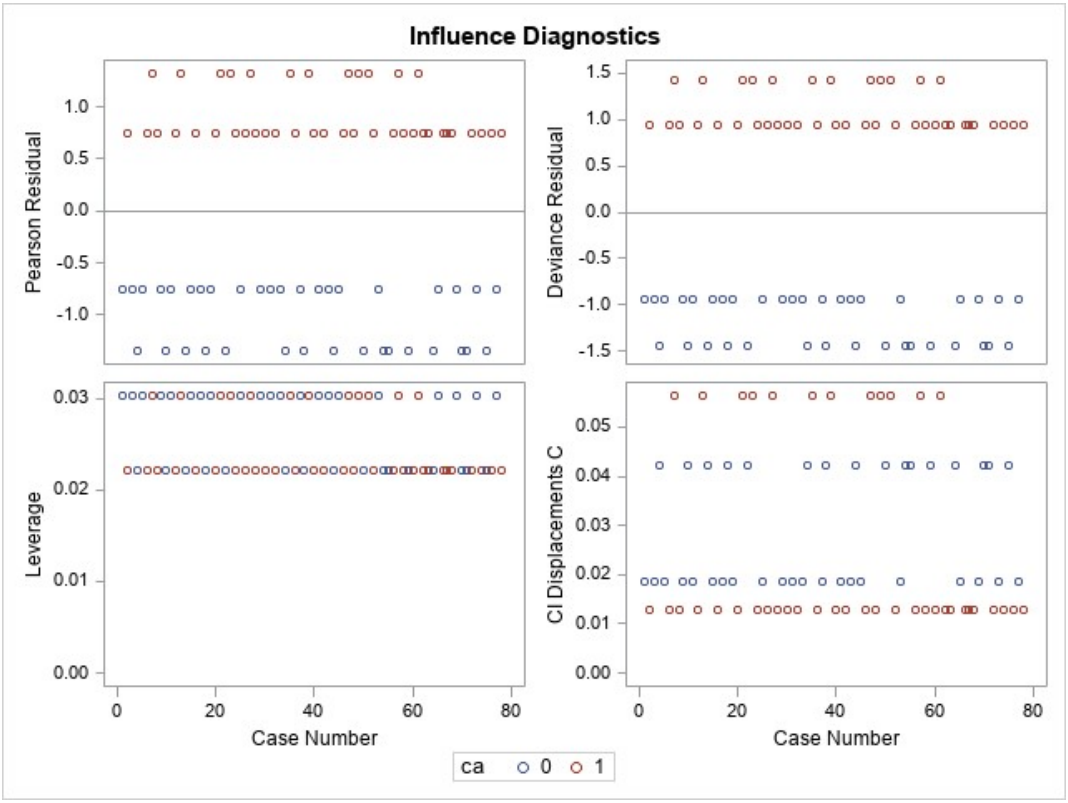
The LOGISTIC Procedure

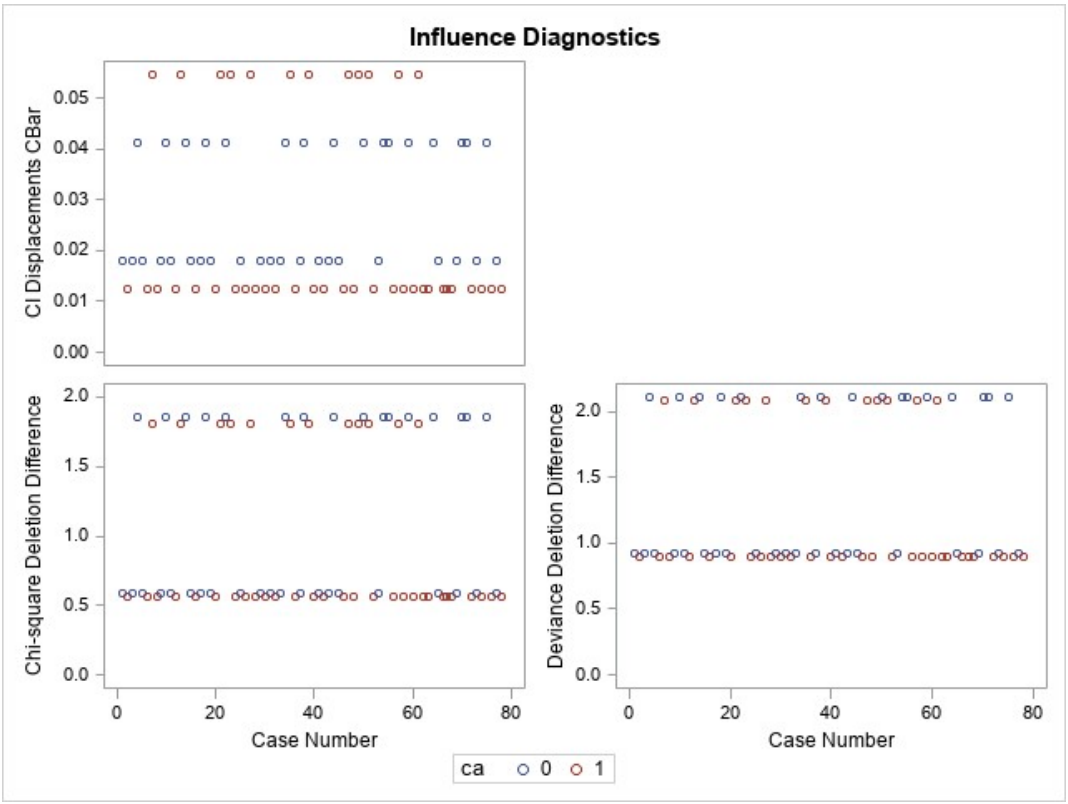
Regression Diagnostics

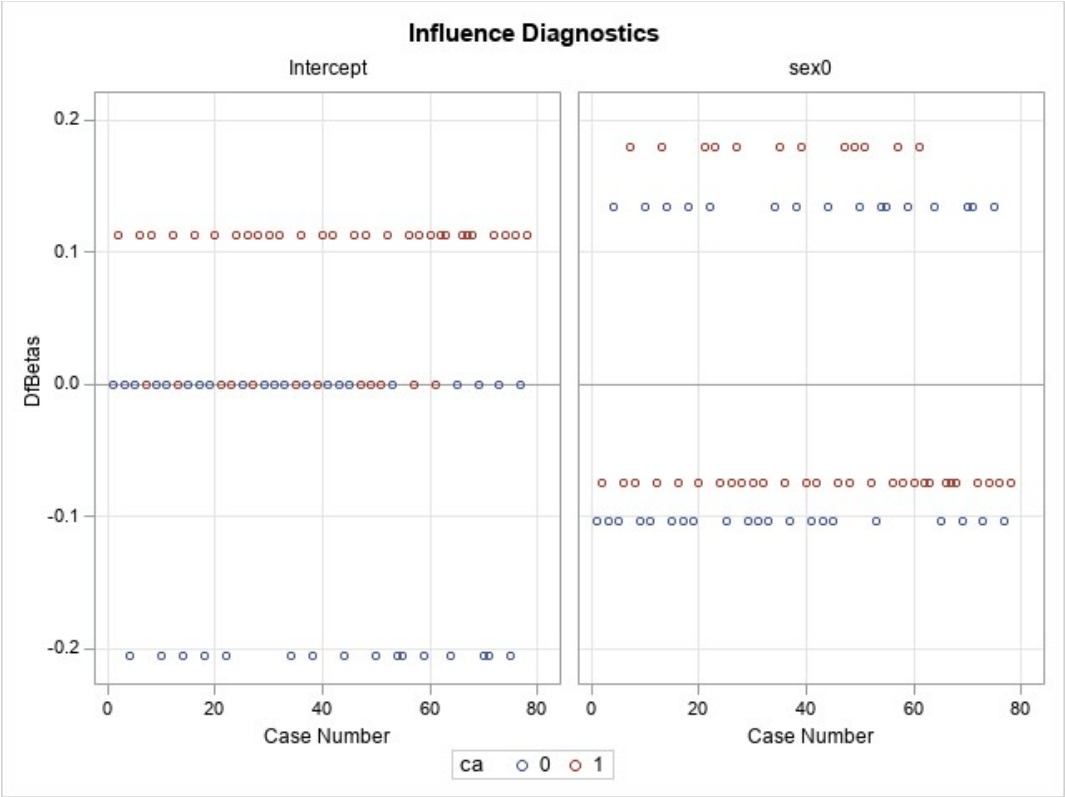
Case Number	Covariates: sex 0	Pearson Residual	Deviance Residual	Hat Matrix Diagonal	Intercept DfBeta	sex0 DfBeta	Confidence Interval Displacement C	Confidence Interval Displacement CBar	Delta Deviance	Delta Chi-Square
1	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
2	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
3	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
4	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
5	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
6	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
7	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
8	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
9	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
10	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
11	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
12	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
13	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
14	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
15	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
16	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
17	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
18	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
19	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
20	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
21	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
22	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
23	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
24	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
25	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
26	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
27	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
28	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
29	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
30	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
31	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
32	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
33	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
34	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
35	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046

36	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
37	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
38	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
39	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
40	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
41	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
42	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
43	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
44	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
45	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
46	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
47	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
48	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
49	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
50	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
51	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
52	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
53	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
54	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
55	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
56	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
57	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
58	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
59	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
60	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
61	1.0000	1.3229	1.4224	0.0303	0	0.1800	0.0564	0.0547	2.0779	1.8046
62	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
63	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
64	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
65	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
66	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
67	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
68	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
69	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
70	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
71	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
72	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
73	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893
74	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
75	0	-1.3463	-1.4381	0.0222	-0.2053	0.1339	0.0421	0.0412	2.1093	1.8536
76	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643
77	1.0000	-0.7559	-0.9508	0.0303	0	-0.1029	0.0184	0.0179	0.9218	0.5893

	0	0.7428	0.9374	0.0222	0.1132	-0.0739	0.0128	0.0125	0.8913	0.5643






Influence Diagnostics
Intercept
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DfBetas
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0.1
0.0
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20
40
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Case Number
ca 0 1