The SAS System

Obs	ID	SBP	Tobacco	LDL	BAI	Famhist	TypeA	BMI	Alcohol	Age	CHD
1	1	160	12	5.73	23.11	Present	49	25.3	97.2	52	1
2	2	144	0.01	4.41	28.61	Absent	55	28.87	2.06	63	1
3	3	118	0.08	3.48	32.28	Present	52	29.14	3.81	46	0
4	4	170	7.5	6.41	38.03	Present	51	31.99	24.26	58	1
5	5	134	13.6	3.5	27.78	Present	60	25.99	57.34	49	1

The SAS System

	CHD		
	0	1	Total
	N	N	N
Famhist			
Absent	206	64	270
Present	96	96	192
Total	302	160	462

The SAS System

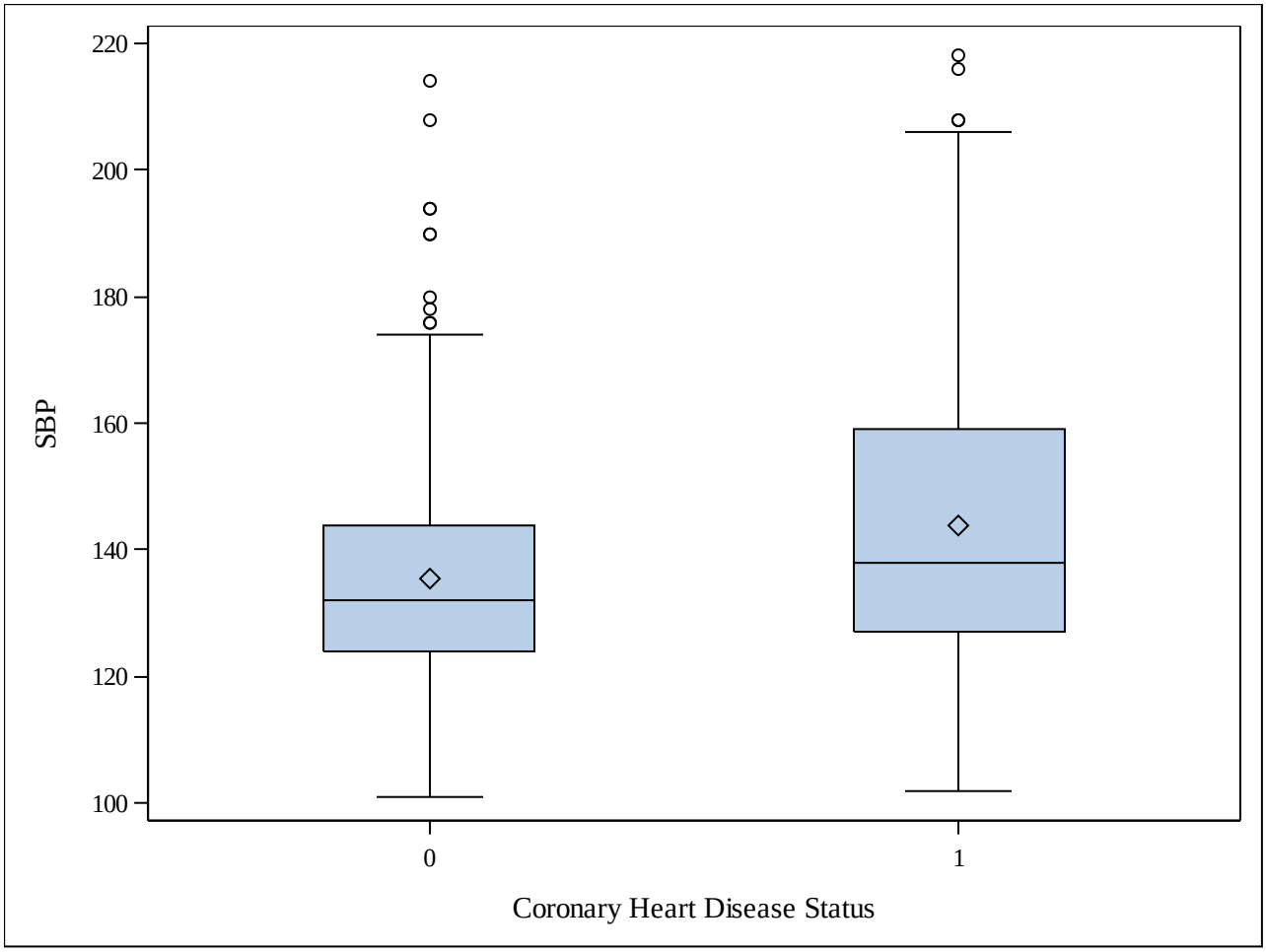
The FREQ Procedure

Table of Famhist by CHD			
Famhist(Famhist)	**CHD(CHD)**		
Frequency	**0**	**1**	**Total**
Absent	206	64	270
Present	96	96	192
Total	302	160	462

The SAS System

The MEANS Procedure

Analysis Variable : SBP SBP								
CHD	**N Obs**	**N**	**Mean**	**Median**	**Std Dev**	**Minimum**	**Maximum**	**Range**
0	302	302	135.46	132.00	17.98	101.00	214.00	113.00
1	160	160	143.74	138.00	23.68	102.00	218.00	116.00


220
200
180
160
140
120
100
SBP
0
1
Coronary Heart Disease Status

The SAS System

The CORR Procedure

CHD=0

2 Variables:	SBP Tobacco

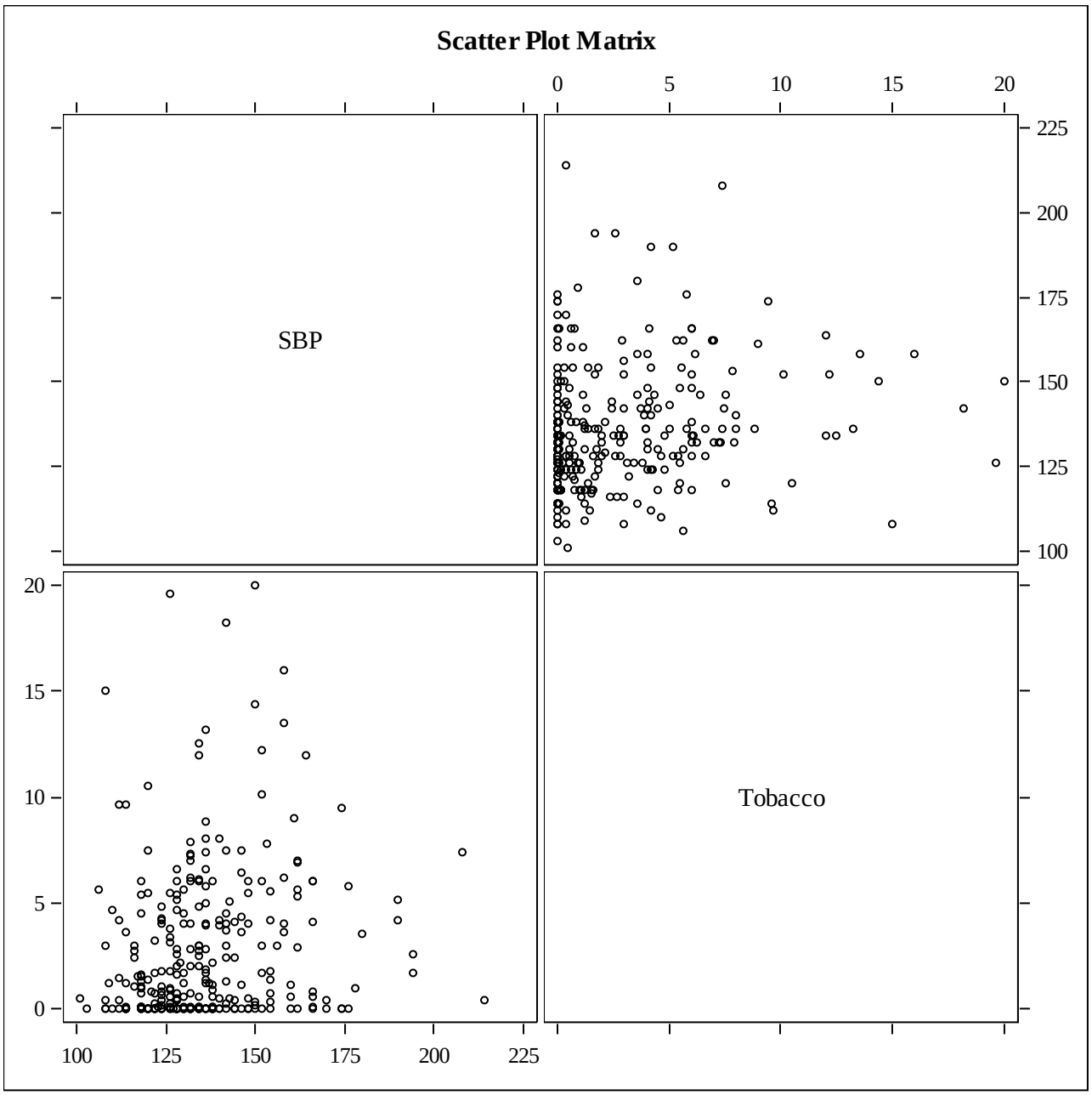
Simple Statistics							
Variable	**N**	**Mean**	**Std Dev**	**Sum**	**Minimum**	**Maximum**	**Label**
SBP	302	135.46026	17.98495	40909	101.00000	214.00000	SBP
Tobacco	302	2.63474	3.61210	795.69000	0	20.00000	Tobacco

Pearson Correlation Coefficients, N = 302 Prob > |r| under H0: Rho=0		
	SBP	**Tobacco**
SBP SBP	1.00000	0.18373 0.0013
Tobacco Tobacco	0.18373 0.0013	1.00000

The SAS System

The CORR Procedure

CHD=0



The SAS System

The CORR Procedure

CHD=1

2 Variables:	SBP Tobacco

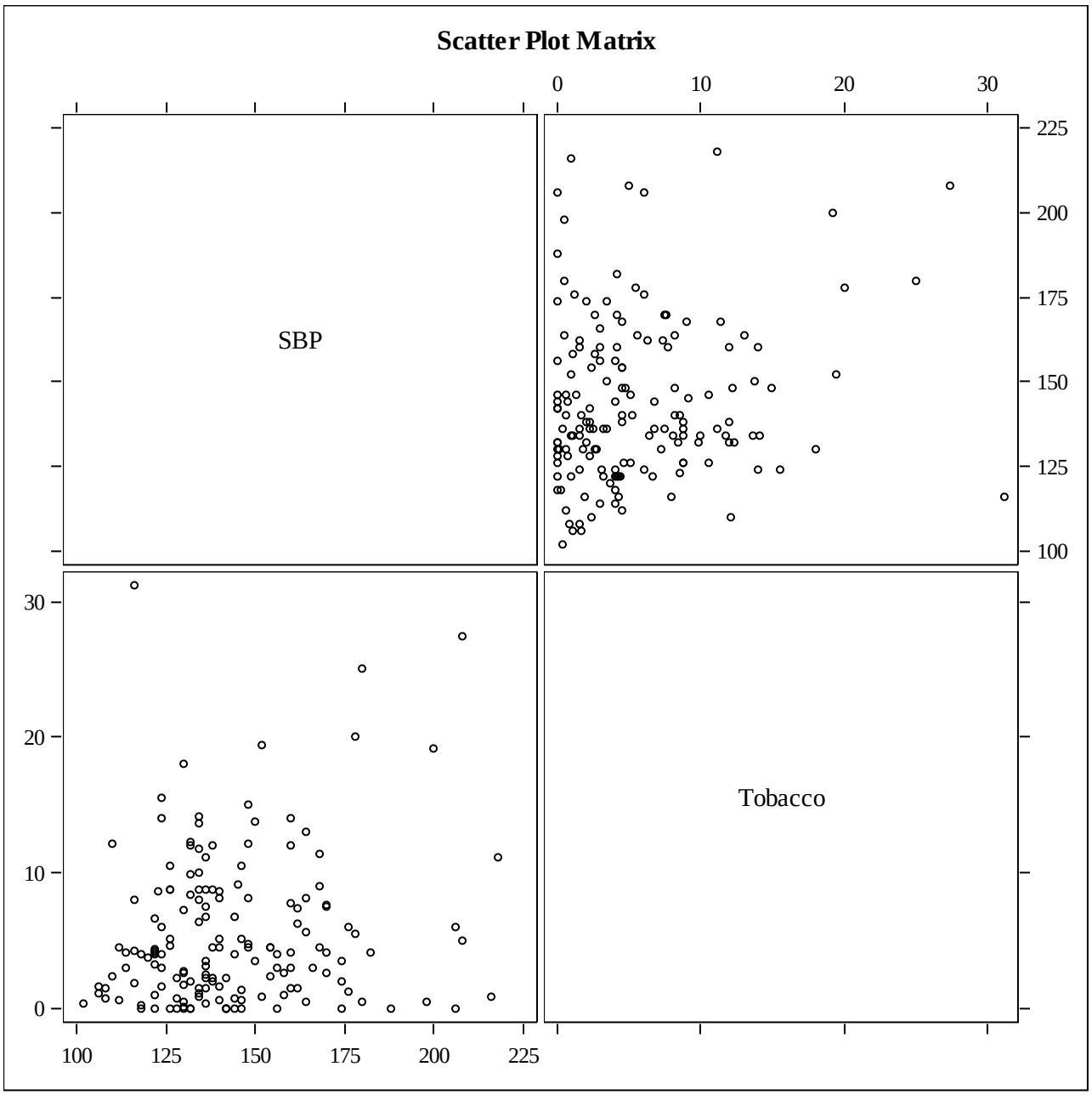
Simple Statistics							
Variable	**N**	**Mean**	**Std Dev**	**Sum**	**Minimum**	**Maximum**	**Label**
SBP	160	143.73750	23.67747	22998	102.00000	218.00000	SBP
Tobacco	160	5.52487	5.56514	883.98000	0	31.20000	Tobacco

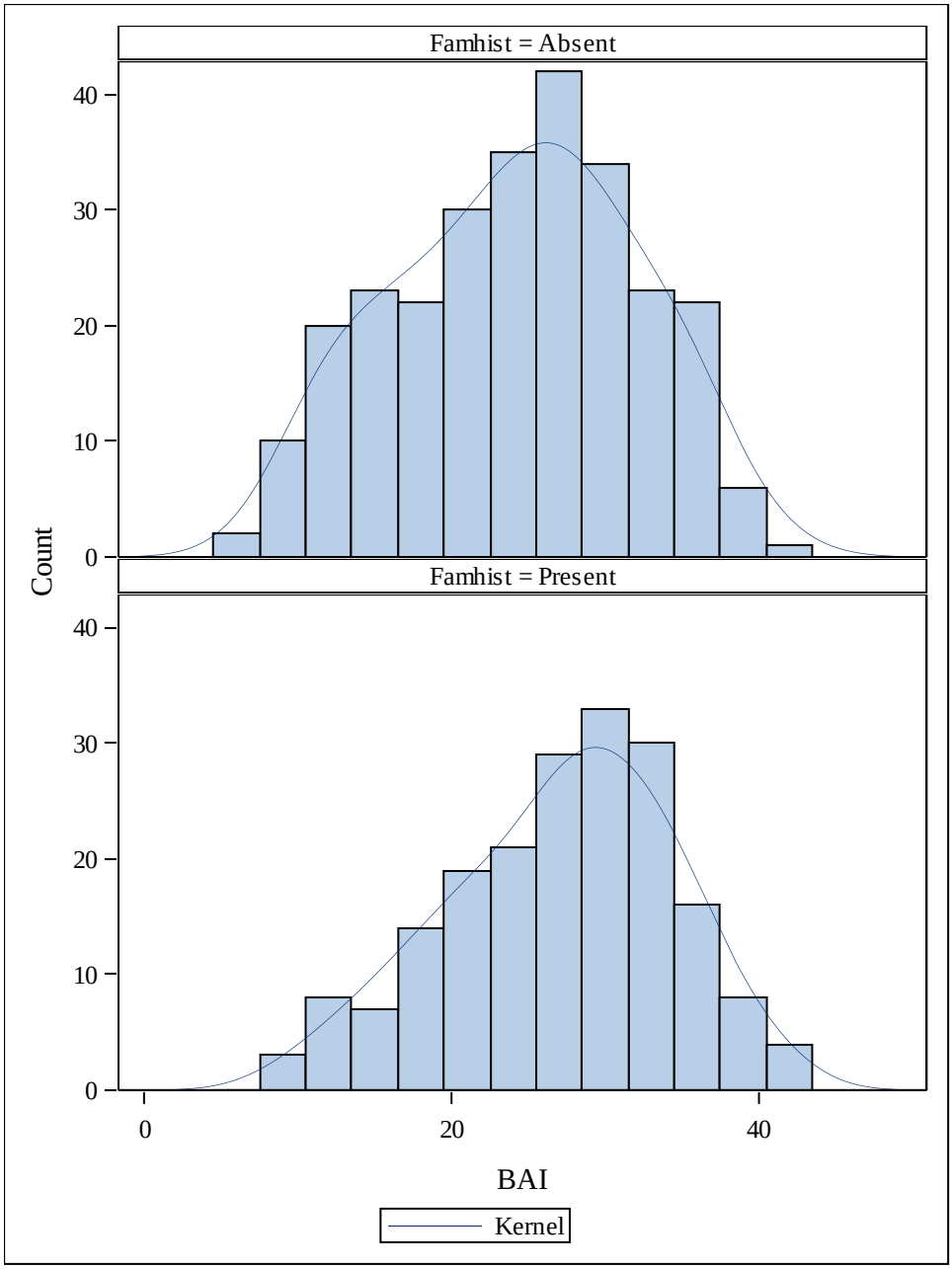
Pearson Correlation Coefficients, N = 160 Prob > |r| under H0: Rho=0		
	SBP	**Tobacco**
SBP SBP	1.00000	0.14876 0.0605
Tobacco Tobacco	0.14876 0.0605	1.00000

The SAS System

The CORR Procedure

CHD=1




Famhist = Absent
Famhist = Present
Count
0
10
20
30
40
0
20
40
BAI
Kernel

The SAS System

		Alcohol			Tobacco		
		Freq	**Mean**	**Std Dev**	**Freq**	**Mean**	**Std Dev**
0	**Absent**	206	15.1	22.19	206	2.5	3.74
	Present	96	17.7	26.12	96	3.0	3.32
	Total	302	15.9	23.50	302	2.6	3.61
1	**Absent**	64	16.3	19.81	64	5.9	6.67
	Present	96	21.1	29.63	96	5.3	4.70
	Total	160	19.1	26.18	160	5.5	5.57
Total	**Absent**	270	15.4	21.62	270	3.3	4.82
	Present	192	19.4	27.91	192	4.1	4.22
	Total	462	17.0	24.48	462	3.6	4.59

The SAS System

		BAI			Alcohol		
		Freq	**Mean**	**Std Dev**	**Freq**	**Mean**	**Std Dev**
0	**Absent**	206	23.3	7.84	206	15.1	22.19
	Present	96	25.5	7.44	96	17.7	26.12
	Total	302	24.0	7.77	302	15.9	23.50
1	**Absent**	64	27.3	7.28	64	16.3	19.81
	Present	96	28.7	6.88	96	21.1	29.63
	Total	160	28.1	7.06	160	19.1	26.18
Total	**Absent**	270	24.2	7.89	270	15.4	21.62
	Present	192	27.1	7.33	192	19.4	27.91
	Total	462	25.4	7.78	462	17.0	24.48

The SAS System

		TypeA			LDL		
		Freq	**Mean**	**Std Dev**	**Freq**	**Mean**	**Std Dev**
0	**Absent**	206	52.2	9.93	206	4.3	1.96
	Present	96	52.8	8.61	96	4.4	1.67
	Total	302	52.4	9.52	302	4.3	1.87
1	**Absent**	64	54.6	9.84	64	4.9	2.19
	Present	96	54.4	10.56	96	5.9	2.18
	Total	160	54.5	10.25	160	5.5	2.23
Total	**Absent**	270	52.7	9.94	270	4.5	2.03
	Present	192	53.6	9.64	192	5.1	2.07
	Total	462	53.1	9.82	462	4.7	2.07

The SAS System

		LDL			SBP		
		Freq	**Mean**	**Std Dev**	**Freq**	**Mean**	**Std Dev**
0	**Absent**	206	4.3	1.96	206	135.0	18.84
	Present	96	4.4	1.67	96	136.5	16.03
	Total	302	4.3	1.87	302	135.5	17.98
1	**Absent**	64	4.9	2.19	64	142.9	24.60
	Present	96	5.9	2.18	96	144.3	23.16
	Total	160	5.5	2.23	160	143.7	23.68
Total	**Absent**	270	4.5	2.03	270	136.8	20.58
	Present	192	5.1	2.07	192	140.4	20.25
	Total	462	4.7	2.07	462	138.3	20.50

The SAS System

		Age			BMI		
		Freq	**Mean**	**Std Dev**	**Freq**	**Mean**	**Std Dev**
0	**Absent**	206	37.2	15.26	206	25.4	4.04
	Present	96	42.4	13.46	96	26.4	4.15
	Total	302	38.9	14.88	302	25.7	4.09
1	**Absent**	64	48.4	12.04	64	26.3	4.69
	Present	96	51.6	9.47	96	26.8	4.19
	Total	160	50.3	10.65	160	26.6	4.39
Total	**Absent**	270	39.9	15.30	270	25.6	4.21
	Present	192	47.0	12.48	192	26.6	4.17
	Total	462	42.8	14.61	462	26.0	4.21

The SAS System

The FREQ Procedure

Table of CHD by Famhist			
CHD(CHD)	**Famhist(Famhist)**		
Frequency	**Absent**	**Present**	**Total**
0	206	96	302
1	64	96	160
Total	270	192	462

Statistics for Table of CHD by Famhist

Statistic	DF	Value	Prob
Chi-Square	1	34.2743	<.0001
Likelihood Ratio Chi-Square	1	34.2141	<.0001
Continuity Adj. Chi-Square	1	33.1226	<.0001
Mantel-Haenszel Chi-Square	1	34.2002	<.0001
Phi Coefficient		0.2724	
Contingency Coefficient		0.2628	
Cramer's V		0.2724	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	206
Left-sided Pr <= F	1.0000
Right-sided Pr >= F	<.0001
Table Probability (P)	<.0001
Two-sided Pr <= P	<.0001

Sample Size = 462

The SAS System

The UNIVARIATE Procedure
Variable: TypeA
(TypeA)
Famhist = Absent

Moments			
N	270	**Sum Weights**	270
Mean	52.7333333	**Sum Observations**	14238
Std Deviation	9.94124	**Variance**	98.8282528
Skewness	-0.4386072	**Kurtosis**	0.55127524
Uncorrected SS	777402	**Corrected SS**	26584.8
Coeff Variation	18.851909	**Std Error Mean**	0.6050046

Basic Statistical Measures			
Location		**Variability**	
Mean	52.73333	**Std Deviation**	9.94124
Median	53.00000	**Variance**	98.82825
Mode	49.00000	**Range**	64.00000
		Interquartile Range	13.00000

Note: The mode displayed is the smallest of 2 modes with a count of 14.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	87.16187	**Pr > |t|**	<.0001
Sign	**M**	135	**Pr >= |M|**	<.0001
Signed Rank	**S**	18292.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.987295	**Pr < W**	0.0175
Kolmogorov-Smirnov	**D**	0.04699	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.081639	**Pr > W-Sq**	0.2042
Anderson-Darling	**A-Sq**	0.593444	**Pr > A-Sq**	0.1256

The SAS System

The UNIVARIATE Procedure
Variable: TypeA
(TypeA)
Famhist = Absent

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	77
99%	73
95%	67
90%	65
75% Q3	60
50% Median	53
25% Q1	47
10%	41
5%	35
1%	26
0% Min	13

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
13	73	72	309
25	243	73	188
26	142	73	420
28	422	74	314
29	223	77	105

The SAS System

The UNIVARIATE Procedure
Variable: TypeA
(TypeA)
Famhist = Present

Moments			
N	192	**Sum Weights**	192
Mean	53.625	**Sum Observations**	10296
Std Deviation	9.64256489	**Variance**	92.9790576
Skewness	-0.1984733	**Kurtosis**	0.32113333
Uncorrected SS	569882	**Corrected SS**	17759
Coeff Variation	17.981473	**Std Error Mean**	0.69589218

Basic Statistical Measures			
Location		**Variability**	
Mean	53.62500	**Std Deviation**	9.64256
Median	53.00000	**Variance**	92.97906
Mode	52.00000	**Range**	58.00000
		Interquartile Range	12.50000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	77.05935	**Pr > |t|**	<.0001
Sign	**M**	96	**Pr >= |M|**	<.0001
Signed Rank	**S**	9264	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.991968	**Pr < W**	0.3693
Kolmogorov-Smirnov	**D**	0.056607	**Pr > D**	0.1361
Cramer-von Mises	**W-Sq**	0.066274	**Pr > W-Sq**	>0.2500
Anderson-Darling	**A-Sq**	0.421491	**Pr > A-Sq**	>0.2500

The SAS System

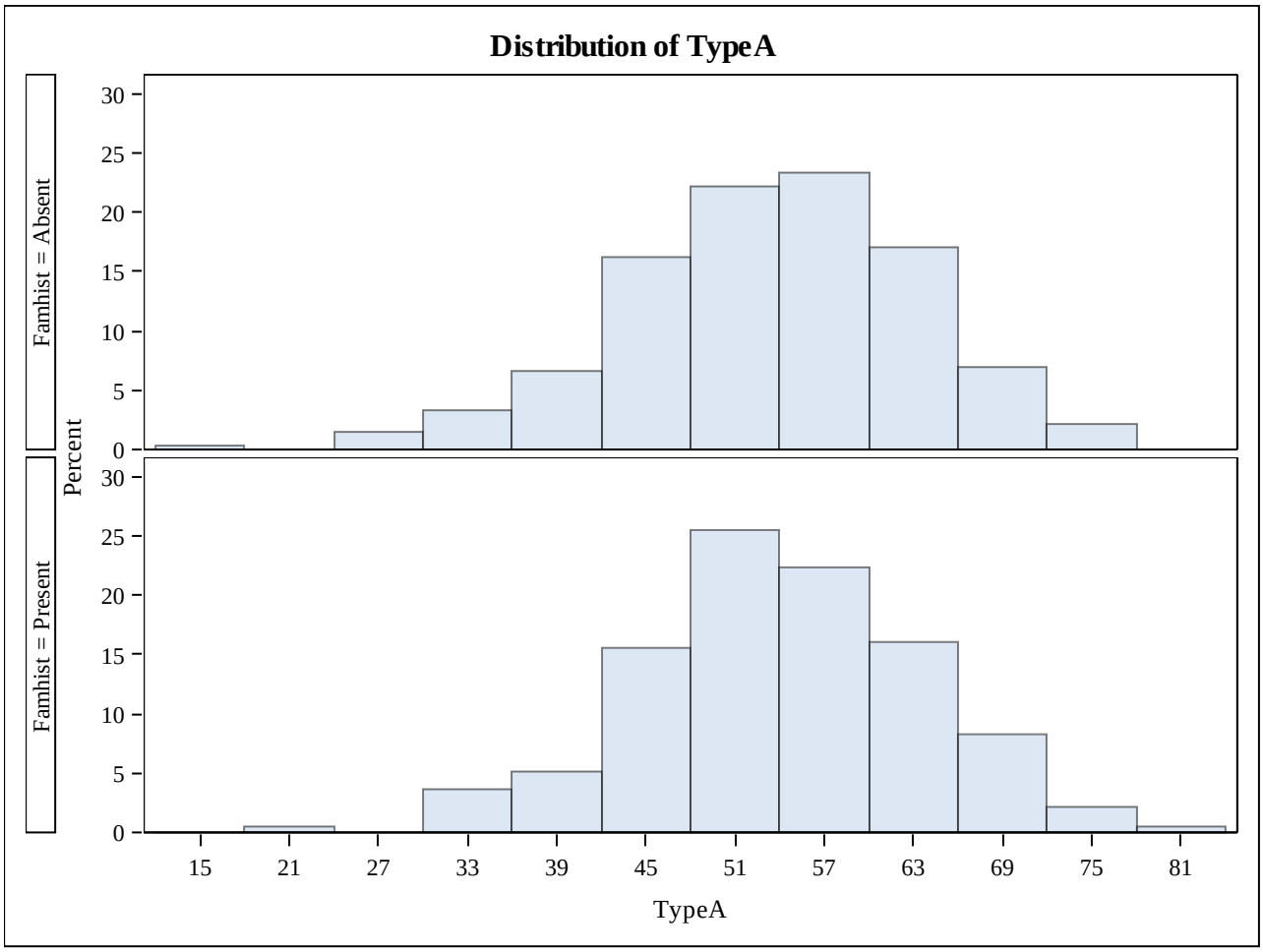
The UNIVARIATE Procedure
Variable: TypeA
(TypeA)
Famhist = Present

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	78.0
99%	75.0
95%	70.0
90%	66.0
75% Q3	60.0
50% Median	53.0
25% Q1	47.5
10%	42.0
5%	36.0
1%	31.0
0% Min	20.0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
20	424	72	373
31	229	72	408
32	190	74	437
33	444	75	323
33	257	78	311

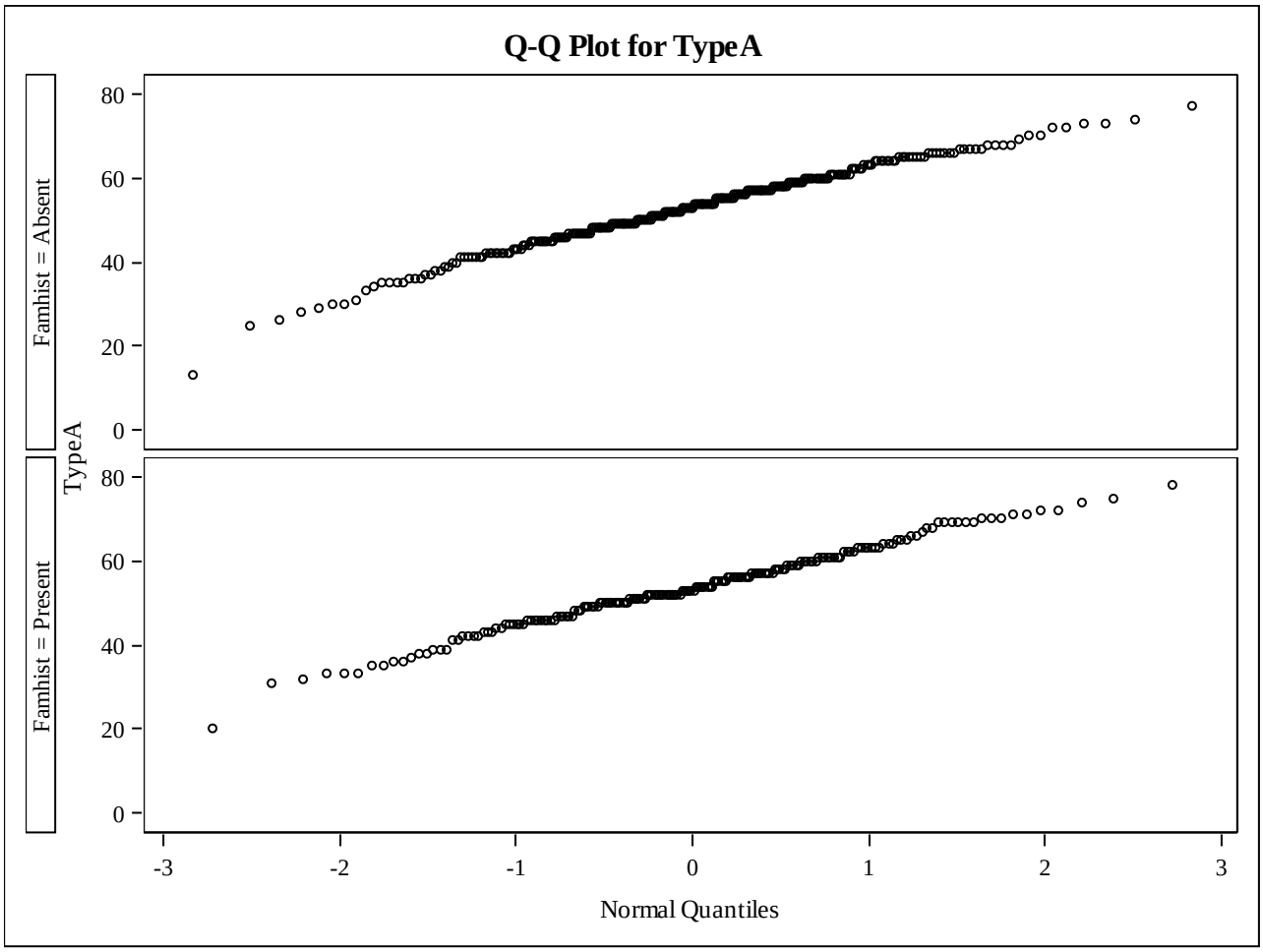
The SAS System

The UNIVARIATE Procedure



The SAS System

The UNIVARIATE Procedure



The SAS System

The NPAR1WAY Procedure

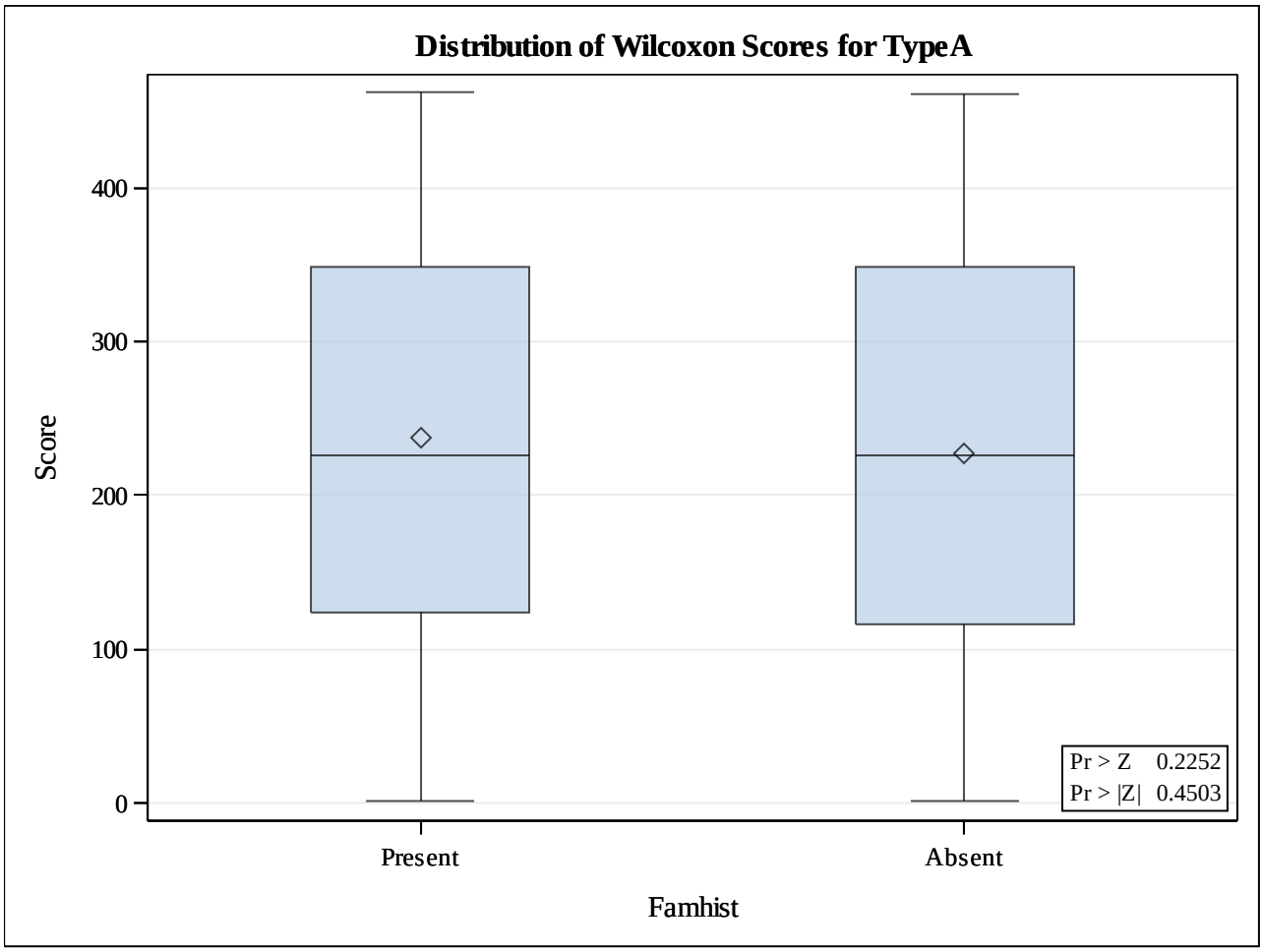
Wilcoxon Scores (Rank Sums) for Variable TypeA Classified by Variable Famhist					
Famhist	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
Present	192	45515.50	44448.0	1413.46144	237.059896
Absent	270	61437.50	62505.0	1413.46144	227.546296
Average scores were used for ties.					

Wilcoxon Two-Sample Test	
Statistic	45515.5000
Normal Approximation	
Z	0.7549
One-Sided Pr > Z	0.2252
Two-Sided Pr > |Z|	0.4503
t Approximation	
One-Sided Pr > Z	0.2254
Two-Sided Pr > |Z|	0.4507
Z includes a continuity correction of 0.5.	

Kruskal-Wallis Test	
Chi-Square	0.5704
DF	1
Pr > Chi-Square	0.4501

The SAS System

The NPAR1WAY Procedure



The SAS System

The CORR Procedure

2 Variables:	Alcohol Tobacco

Simple Statistics							
Variable	**N**	**Mean**	**Std Dev**	**Sum**	**Minimum**	**Maximum**	**Label**
Alcohol	462	17.04439	24.48106	7875	0	147.19000	Alcohol
Tobacco	462	3.63565	4.59302	1680	0	31.20000	Tobacco

Pearson Correlation Coefficients, N = 462 Prob > |r| under H0: Rho=0		
	Alcohol	**Tobacco**
Alcohol Alcohol	1.00000	0.20081 <.0001
Tobacco Tobacco	0.20081 <.0001	1.00000

The SAS System

The FREQ Procedure

Famhist				
Famhist	**Frequency**	**Percent**	**Cumulative Frequency**	**Cumulative Percent**
Present	192	41.56	192	41.56
Absent	270	58.44	462	100.00

Binomial Proportion	
Famhist = Present	
Proportion	0.4156
ASE	0.0229
95% Lower Conf Limit	0.3706
95% Upper Conf Limit	0.4605
Exact Conf Limits	
95% Lower Conf Limit	0.3702
95% Upper Conf Limit	0.4620

Test of H0: Proportion = 0.4	
ASE under H0	0.0228
Z	0.6838
One-sided Pr > Z	0.2471
Two-sided Pr > |Z|	0.4941

Sample Size = 462

The SAS System

The LOGISTIC Procedure

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

Number of Observations Read	462
Number of Observations Used	462

Response Profile		
Ordered Value	**CHD**	**Total Frequency**
1	1	160
2	0	302

Probability modeled is CHD='1'.

Class Level Information		
Class	**Value**	**Design Variables**
Famhist	**Absent**	0
	Present	1

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	492.140
SC	602.244	533.496
-2 Log L	596.108	472.140

The SAS System

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	123.9684	9	<.0001
Score	109.0388	9	<.0001
Wald	85.2308	9	<.0001

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
SBP	1	1.2882	0.2564
Tobacco	1	8.9028	0.0028
LDL	1	8.4982	0.0036
BAI	1	0.4027	0.5257
TypeA	1	10.3286	0.0013
BMI	1	2.0214	0.1551
Alcohol	1	0.0007	0.9784
Age	1	13.9014	0.0002
Famhist	1	16.4879	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	-6.1507	1.3083	22.1036	<.0001
SBP		1	0.00650	0.00573	1.2882	0.2564
Tobacco		1	0.0794	0.0266	8.9028	0.0028
LDL		1	0.1739	0.0597	8.4982	0.0036
BAI		1	0.0186	0.0293	0.4027	0.5257
TypeA		1	0.0396	0.0123	10.3286	0.0013
BMI		1	-0.0629	0.0442	2.0214	0.1551
Alcohol		1	0.000122	0.00448	0.0007	0.9784
Age		1	0.0452	0.0121	13.9014	0.0002
Famhist	**Present**	1	0.9254	0.2279	16.4879	<.0001

The SAS System

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
SBP	1.007	0.995	1.018
Tobacco	1.083	1.028	1.141
LDL	1.190	1.059	1.338
BAI	1.019	0.962	1.079
TypeA	1.040	1.016	1.066
BMI	0.939	0.861	1.024
Alcohol	1.000	0.991	1.009
Age	1.046	1.022	1.071
Famhist Present vs Absent	2.523	1.614	3.943

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	79.4	**Somers' D**	0.590
Percent Discordant	20.4	**Gamma**	0.591
Percent Tied	0.2	**Tau-a**	0.268
Pairs	48320	**c**	0.795

Partition for the Hosmer and Lemeshow Test					
		CHD = 1		**CHD = 0**	
Group	**Total**	**Observed**	**Expected**	**Observed**	**Expected**
1	46	1	1.74	45	44.26
2	46	4	3.94	42	42.06
3	46	9	6.49	37	39.51
4	46	7	8.80	39	37.20
5	46	12	12.24	34	33.76
6	46	21	15.86	25	30.14
7	46	17	19.92	29	26.08
8	46	22	24.43	24	21.57
9	46	27	29.43	19	16.57
10	48	40	37.15	8	10.85

The SAS System

The LOGISTIC Procedure

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	**DF**	**Pr > ChiSq**
7.2507	8	0.5098

The SAS System

The LOGISTIC Procedure

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

Number of Observations Read	462
Number of Observations Used	462

Response Profile		
Ordered Value	**CHD**	**Total Frequency**
1	1	160
2	0	302

Probability modeled is CHD='1'.

Stepwise Selection Procedure

Class Level Information		
Class	**Value**	**Design Variables**
Famhist	**Absent**	-1
	Present	1

Step 0. Intercept entered:

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

-2 Log L	=	596.108

The SAS System

The LOGISTIC Procedure

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
109.0388	9	<.0001

Step 1. Effect Age entered:

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	529.562
SC	602.244	537.833
-2 Log L	596.108	525.562

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	70.5461	1	<.0001
Score	64.2684	1	<.0001
Wald	56.4428	1	<.0001

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
51.4206	8	<.0001

Note: No effects for the model in Step 1 are removed.

Step 2. Effect Famhist entered:

The SAS System

The LOGISTIC Procedure

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	512.658
SC	602.244	525.065
-2 Log L	596.108	506.658

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	89.4503	2	<.0001
Score	80.6802	2	<.0001
Wald	68.0493	2	<.0001

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
33.2596	7	<.0001

Note: No effects for the model in Step 2 are removed.

Step 3. Effect Tobacco entered:

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

The SAS System

The LOGISTIC Procedure

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	503.385
SC	602.244	519.928
-2 Log L	596.108	495.385

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	100.7230	3	<.0001
Score	91.3271	3	<.0001
Wald	74.6203	3	<.0001

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
22.8034	6	0.0009

Note: No effects for the model in Step 3 are removed.

Step 4. Effect TypeA entered:

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	494.714
SC	602.244	515.392
-2 Log L	596.108	484.714

The SAS System

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	111.3941	4	<.0001
Score	98.3611	4	<.0001
Wald	77.8614	4	<.0001

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
12.5568	5	0.0279

Note: No effects for the model in Step 4 are removed.

Step 5. Effect LDL entered:

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	487.686
SC	602.244	512.499
-2 Log L	596.108	475.686

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	120.4228	5	<.0001
Score	105.5848	5	<.0001
Wald	82.5120	5	<.0001

The SAS System

The LOGISTIC Procedure

Residual Chi-Square Test		
Chi-Square	**DF**	**Pr > ChiSq**
3.4772	4	0.4814

Note: No effects for the model in Step 5 are removed.

Note: No (additional) effects met the 0.05 significance level for entry into the model.

Summary of Stepwise Selection								
	Effect			Number	Score	Wald		Variable
Step	**Entered**	**Removed**	**DF**	**In**	**Chi-Square**	**Chi-Square**	**Pr > ChiSq**	**Label**
1	**Age**		1	1	64.2684		<.0001	Age
2	**Famhist**		1	2	19.0794		<.0001	Famhist
3	**Tobacco**		1	3	11.0460		0.0009	Tobacco
4	**TypeA**		1	4	10.4263		0.0012	TypeA
5	**LDL**		1	5	9.0922		0.0026	LDL

Type 3 Analysis of Effects			
Effect	**DF**	**Wald Chi-Square**	**Pr > ChiSq**
Tobacco	1	9.6456	0.0019
LDL	1	8.6846	0.0032
TypeA	1	9.3058	0.0023
Age	1	24.4446	<.0001
Famhist	1	16.1827	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	-5.9923	0.9174	42.6626	<.0001
Tobacco		1	0.0804	0.0259	9.6456	0.0019
LDL		1	0.1620	0.0550	8.6846	0.0032
TypeA		1	0.0371	0.0122	9.3058	0.0023
Age		1	0.0505	0.0102	24.4446	<.0001
Famhist	**Present**	1	0.4541	0.1129	16.1827	<.0001

The SAS System

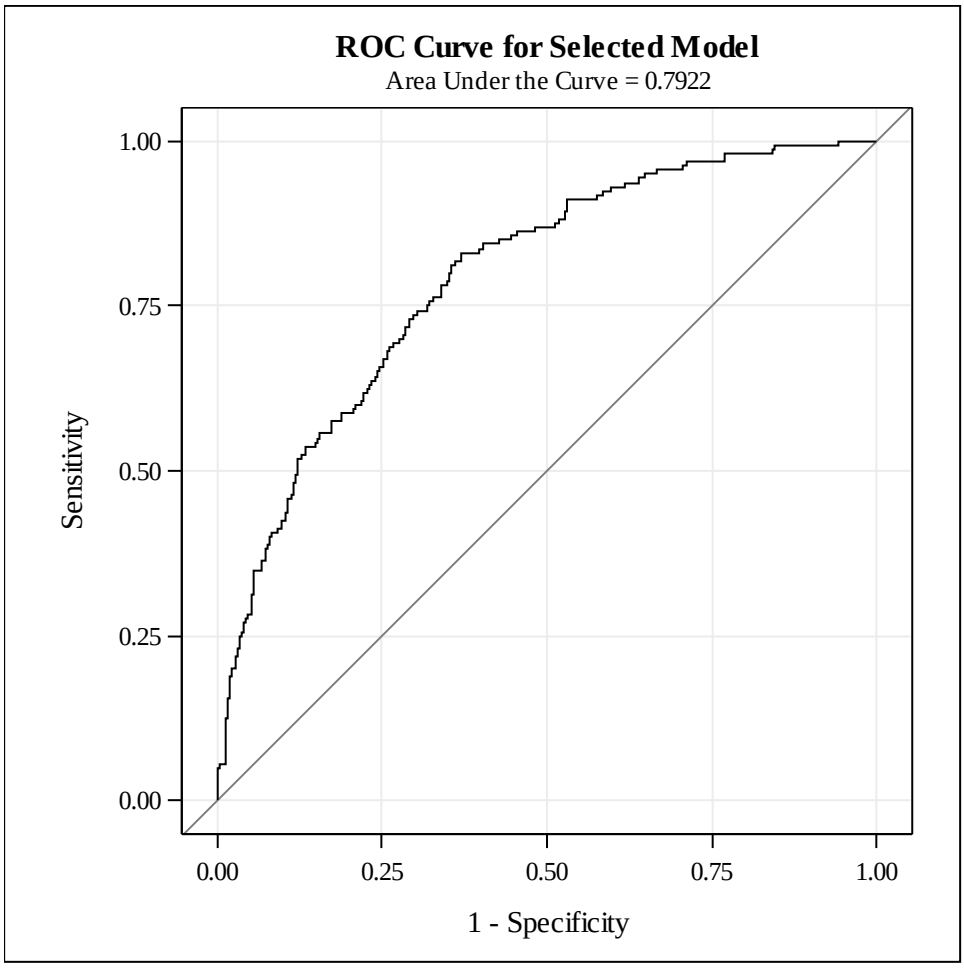
The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
Tobacco	1.084	1.030	1.140
LDL	1.176	1.056	1.310
TypeA	1.038	1.013	1.063
Age	1.052	1.031	1.073
Famhist Present vs Absent	2.480	1.593	3.860

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	79.2	**Somers' D**	0.584
Percent Discordant	20.8	**Gamma**	0.584
Percent Tied	0.0	**Tau-a**	0.265
Pairs	48320	**c**	0.792

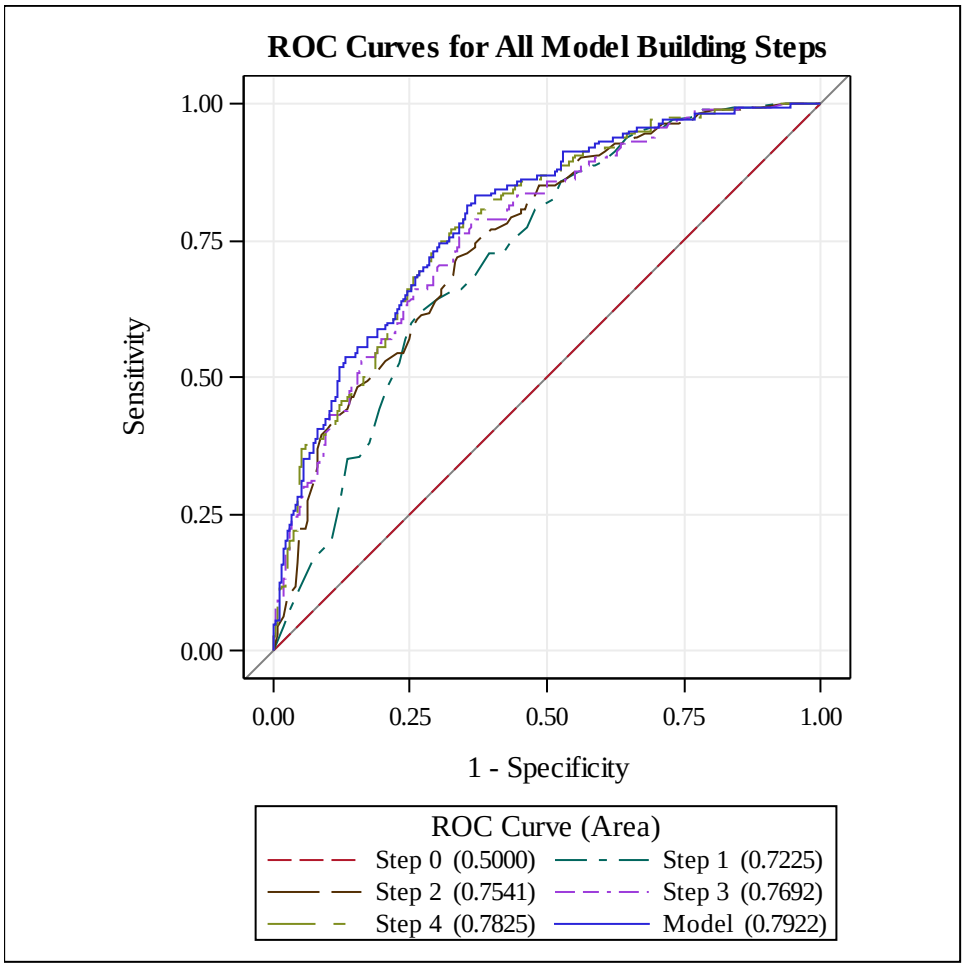
The SAS System

The LOGISTIC Procedure



The SAS System

The LOGISTIC Procedure

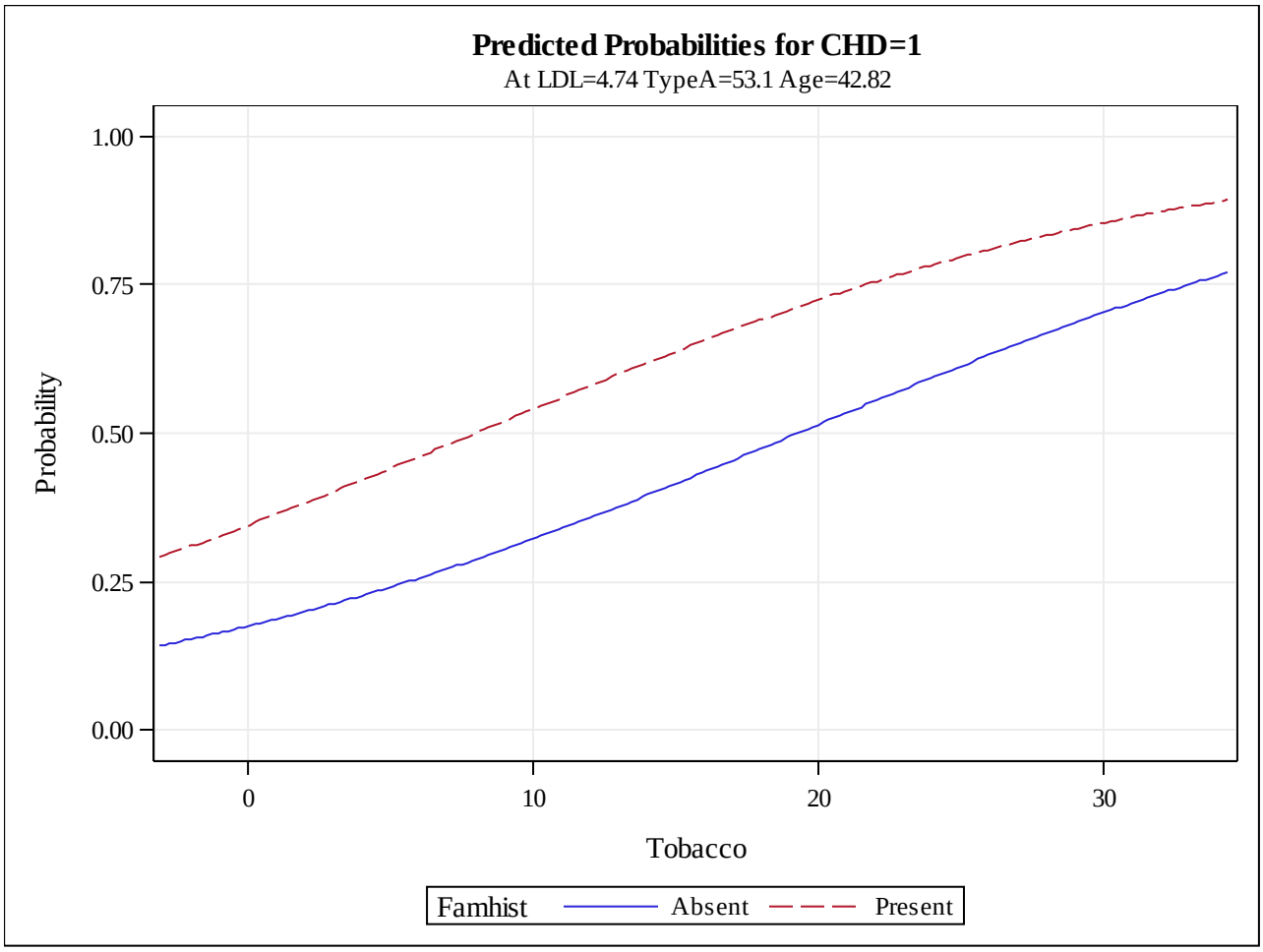


Partition for the Hosmer and Lemeshow Test					
		CHD = 1		CHD = 0	
Group	Total	Observed	Expected	Observed	Expected
1	46	1	1.72	45	44.28
2	46	4	3.92	42	42.08
3	46	8	6.61	38	39.39
4	46	9	9.06	37	36.94
5	46	12	12.42	34	33.58
6	46	18	16.08	28	29.92
7	46	19	20.43	27	25.57
8	46	23	24.37	23	21.63
9	46	28	28.48	18	17.52
10	48	38	36.91	10	11.09

The SAS System

The LOGISTIC Procedure

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	**DF**	**Pr > ChiSq**
1.5312	8	0.9922



The SAS System

The LOGISTIC Procedure

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

Number of Observations Read	462
Number of Observations Used	462

Response Profile		
Ordered Value	**CHD**	**Total Frequency**
1	1	160
2	0	302

Probability modeled is CHD='1'.

Class Level Information		
Class	**Value**	**Design Variables**
Famhist	**Absent**	0
	Present	1

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

Model Fit Statistics		
Criterion	**Intercept Only**	**Intercept and Covariates**
AIC	598.108	487.686
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The SAS System

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
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Analysis of Maximum Likelihood Estimates						
Parameter		**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept		1	-6.4464	0.9209	49.0051	<.0001
Tobacco		1	0.0804	0.0259	9.6456	0.0019
LDL		1	0.1620	0.0550	8.6846	0.0032
TypeA		1	0.0371	0.0122	9.3058	0.0023
Age		1	0.0505	0.0102	24.4446	<.0001
Famhist	**Present**	1	0.9082	0.2258	16.1827	<.0001

Odds Ratio Estimates			
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
Tobacco	1.084	1.030	1.140
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The LOGISTIC Procedure

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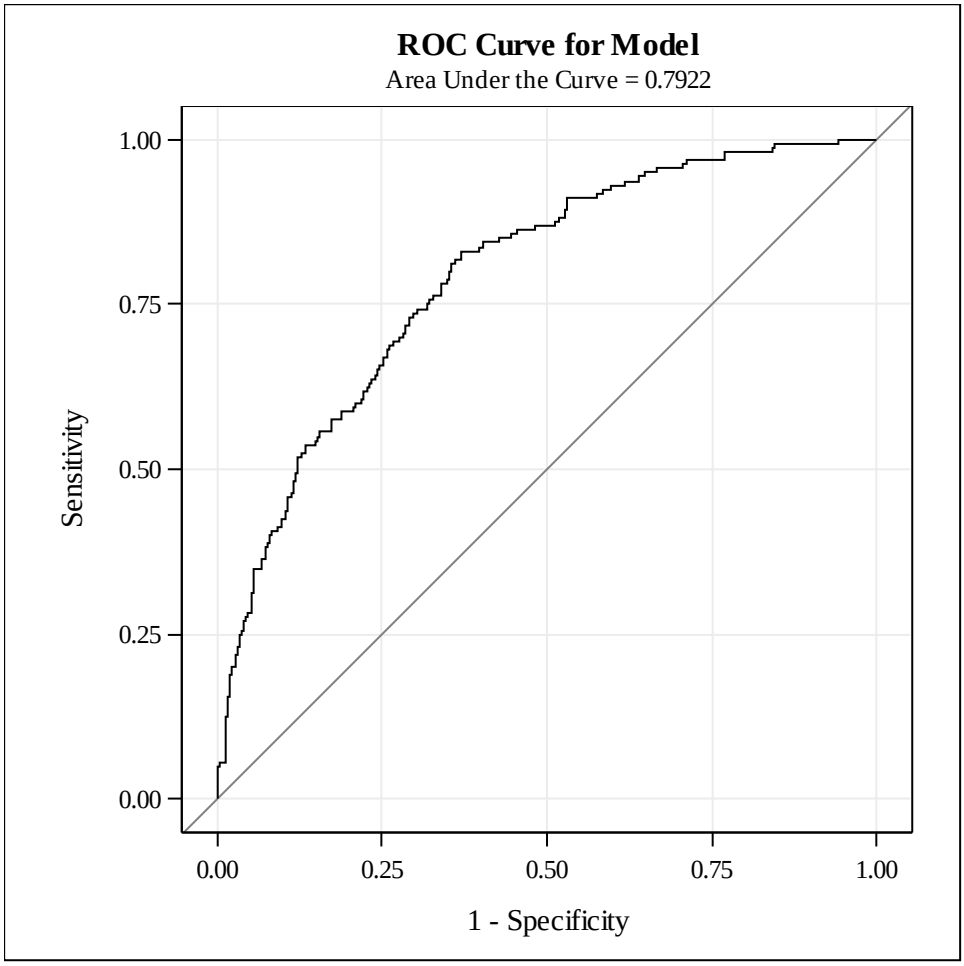

The SAS System

The LOGISTIC Procedure

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Chi-Square	DF	Pr > ChiSq
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The SAS System

The LOGISTIC Procedure