The LOGISTIC Procedure

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

Number of Observations Read	100
Number of Observations Used	100

Response Profile		
Ordered Value	chd	Total Frequency
1	0	57
2	1	43

Probability modeled is chd=0.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	138.663	111.353
SC	141.268	116.563
-2 Log L	136.663	107.353

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	29.3099	1	<.0001
Score	26.3989	1	<.0001
Wald	21.2541	1	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	5.3095	1.1337	21.9350	<.0001
age	1	-0.1109	0.0241	21.2541	<.0001

The LOGISTIC Procedure

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
age	0.895	0.854	0.938

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	79.0	Somers' D	0.600
Percent Discordant	19.0	Gamma	0.612
Percent Tied	2.0	Tau-a	0.297
Pairs	2451	c	0.800

Partition for the Hosmer and Lemeshow Test					
		chd = 0		chd = 1	
Group	Total	Observed	Expected	Observed	Expected
1	10	2	1.61	8	8.39
2	11	3	2.78	8	8.22
3	11	2	3.64	9	7.36
4	12	7	5.76	5	6.24
5	11	6	6.58	5	4.42
6	10	7	6.86	3	3.14
7	10	8	7.79	2	2.21
8	9	8	7.50	1	1.50
9	16	14	14.49	2	1.51

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
2.2805	7	0.9427

The LOGISTIC Procedure

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

Number of Observations Read	100
Number of Observations Used	100

Response Profile		
Ordered Value	chd	Total Frequency
1	0	57
2	1	43

Probability modeled is chd=1.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	138.663	111.353
SC	141.268	116.563
-2 Log L	136.663	107.353

Testing Global Null Hypothesis: BETA=0			
Test	**Chi-Square**	**DF**	**Pr > ChiSq**
Likelihood Ratio	29.3099	1	<.0001
Score	26.3989	1	<.0001
Wald	21.2541	1	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	**DF**	**Estimate**	**Standard Error**	**Wald Chi-Square**	**Pr > ChiSq**
Intercept	1	-5.3095	1.1337	21.9350	<.0001
age	1	0.1109	0.0241	21.2541	<.0001

The LOGISTIC Procedure

	Odds Ratio Estimates		
Effect	**Point Estimate**	**95% Wald Confidence Limits**	
age	1.117	1.066	1.171

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	79.0	**Somers' D**	0.600
Percent Discordant	19.0	**Gamma**	0.612
Percent Tied	2.0	**Tau-a**	0.297
Pairs	2451	**c**	0.800

ROC Curve for Model
Area Under the Curve = 0.7999
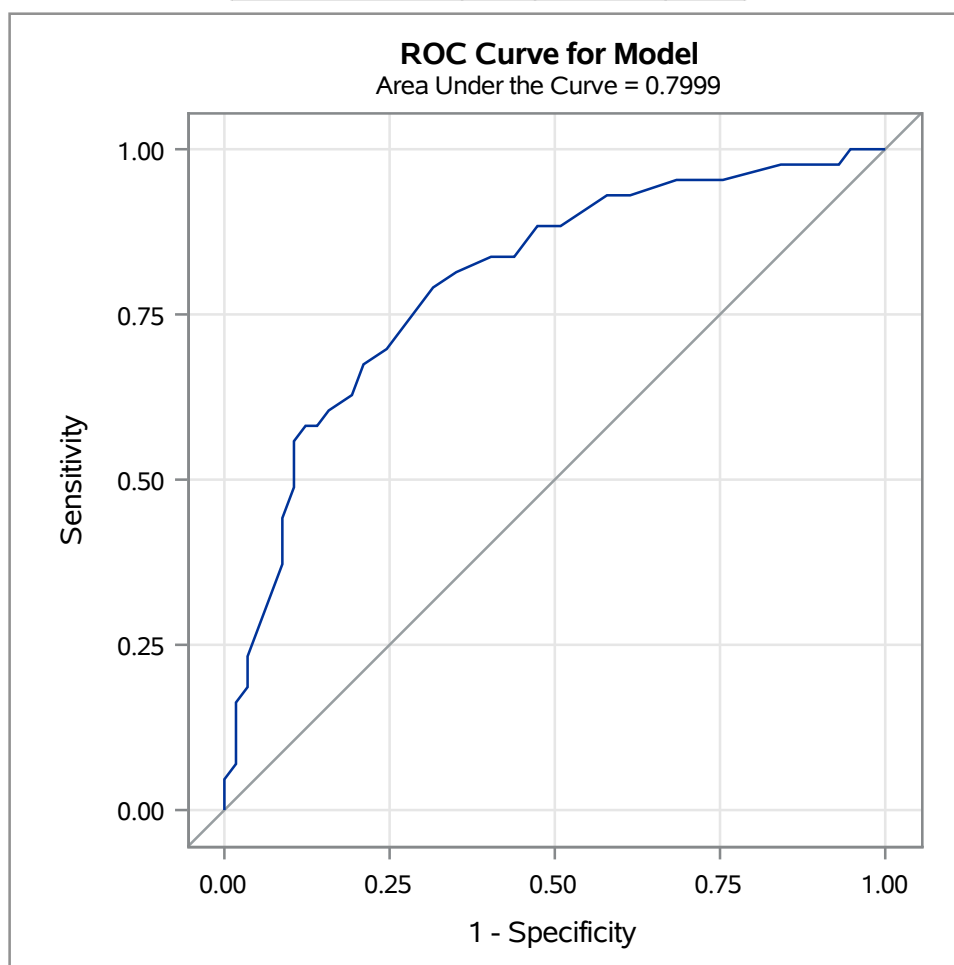
	Partition for the Hosmer and Lemeshow Test				
		chd = 1		**chd = 0**	
Group	**Total**	**Observed**	**Expected**	**Observed**	**Expected**
1	10	1	0.79	9	9.21
2	10	1	1.34	9	8.66
3	10	2	1.91	8	8.09
4	11	3	2.96	8	8.04

The LOGISTIC Procedure

Partition for the Hosmer and Lemeshow Test					
		chd = 1		chd = 0	
Group	Total	Observed	Expected	Observed	Expected
5	11	4	4.05	7	6.95
6	10	5	4.68	5	5.32
7	10	5	5.80	5	4.20
8	13	10	9.26	3	3.74
9	15	12	12.21	3	2.79

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
0.6978	7	0.9984

i	bo	bn
1	0	-4.151841
	0	0.0872429

i	bo	bn
2	-4.151841	-5.181106
	0.0872429	0.1083254

i	bo	bn
3	-5.181106	-5.307673
	0.1083254	0.1108854

i	bo	bn
4	-5.307673	-5.309453
	0.1108854	0.1109211

i	bo	bn
5	-5.309453	-5.309453
	0.1109211	0.1109211

chisq_stat	critical_value	p_value
2.4032762	15.507313	0.0275329

ea		zeros_ea		chisq_stat
0.7870863	1	9.2129137	9	2.4032762
1.34281	1	8.65719	9	
1.9054071	2	8.0945929	8	
2.6452143	3	7.3547857	7	
3.582987	2	6.417013	8	
4.4595466	5	5.5404534	5	
5.5305799	5	4.4694201	5	
6.8730886	8	3.1269114	2	
7.4816075	8	2.5183925	2	
8.3916728	8	1.6083272	2	

ROC curve