

The CONTENTS Procedure

Data Set Name	TRABALHO.DF	Observations	102
Member Type	DATA	Variables	5
Engine	V9	Indexes	0
Created	13/07/2024 11:18:51	Observation Length	40
Last Modified	13/07/2024 11:18:51	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	131072
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	3265
Obs in First Data Page	102
Number of Data Set Repairs	0
Filename	/home/u36587463/dados/df.sas7bdat
Release Created	9.0401M7
Host Created	Linux
Inode Number	23630208228
Access Permission	rw-r--r--
Owner Name	u36587463
File Size	256KB
File Size (bytes)	262144

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Label
1	ID	Num	8	BEST.	Nº do prontuário
2	X1	Num	8	BEST.	Resultado da radiografia
3	X2	Num	8	BEST.	Estágio do tumor
4	X3	Num	8	BEST.	Nível de fosfatase ácida

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Label
5	X4	Num	8	BEST.	Envolvimento nodal

The FREQ Procedure

Nível de fosfatase ácida				
X3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
26	1	0.98	1	0.98
27	1	0.98	2	1.96
40	2	1.96	4	3.92
45	2	1.96	6	5.88
46	1	0.98	7	6.86
47	1	0.98	8	7.84
48	5	4.90	13	12.75
49	7	6.86	20	19.61
50	8	7.84	28	27.45
51	7	6.86	35	34.31
52	2	1.96	37	36.27
53	2	1.96	39	38.24
54	1	0.98	40	39.22
55	5	4.90	45	44.12
56	2	1.96	47	46.08
59	2	1.96	49	48.04
60	1	0.98	50	49.02
61	1	0.98	51	50.00
62	1	0.98	52	50.98
63	1	0.98	53	51.96
64	1	0.98	54	52.94
66	1	0.98	55	53.92
67	6	5.88	61	59.80
68	1	0.98	62	60.78
70	3	2.94	65	63.73
71	1	0.98	66	64.71
72	2	1.96	68	66.67

Nível de fosfatase ácida				
X3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
75	1	0.98	69	67.65
76	3	2.94	72	70.59
77	1	0.98	73	71.57
78	3	2.94	76	74.51
79	2	1.96	78	76.47
81	1	0.98	79	77.45
82	4	3.92	83	81.37
83	1	0.98	84	82.35
84	3	2.94	87	85.29
85	1	0.98	88	86.27
89	2	1.96	90	88.24
98	2	1.96	92	90.20
99	2	1.96	94	92.16
102	2	1.96	96	94.12
136	2	1.96	98	96.08
137	1	0.98	99	97.06
186	1	0.98	100	98.04
187	2	1.96	102	100.00

Envolvimento nodal				
X4	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Não	60	58.82	60	58.82
Sim	42	41.18	102	100.00

The UNIVARIATE Procedure
 Variable: X3 (Nível de fosfatase ácida)
 X4 = Não

Moments			
N	60	Sum Weights	60
Mean	64.4166667	Sum Observations	3865
Std Deviation	31.5709004	Variance	996.721751

Moments			
Skewness	3.07158322	Kurtosis	9.64960429
Uncorrected SS	307777	Corrected SS	58806.5833
Coeff Variation	49.0104534	Std Error Mean	4.07578571

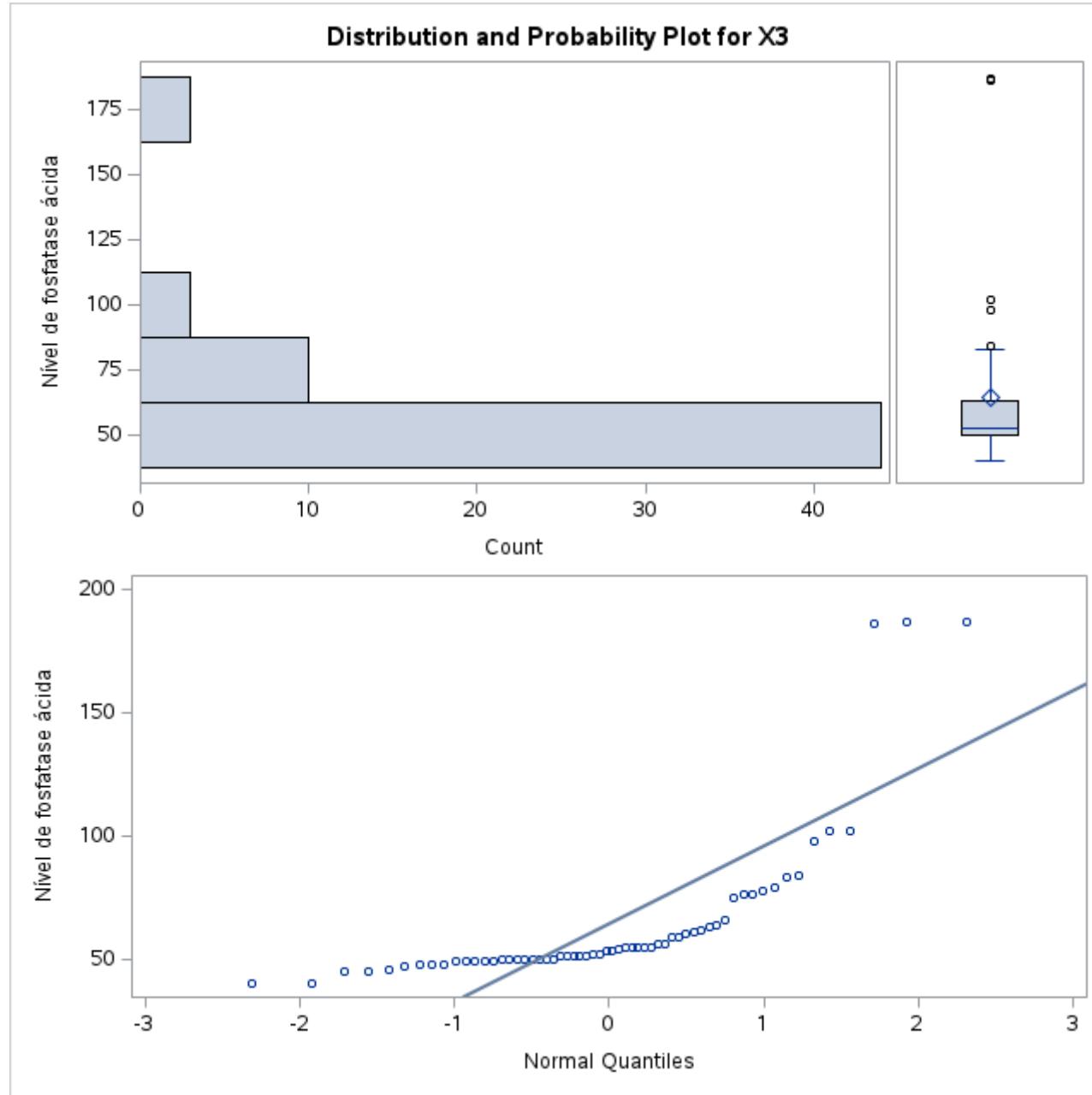
Basic Statistical Measures			
Location		Variability	
Mean	64.41667	Std Deviation	31.57090
Median	53.00000	Variance	996.72175
Mode	50.00000	Range	147.00000
		Interquartile Range	13.50000

Tests for Location: Mu0=0				
Test		Statistic		p Value
Student's t	t	15.80472	Pr > t	<.0001
Sign	M	30	Pr >= M	<.0001
Signed Rank	S	915	Pr >= S	<.0001

Quantiles (Definition 5)	
Level	Quantile
100% Max	187.0
99%	187.0
95%	144.0
90%	91.0
75% Q3	63.5
50% Median	53.0
25% Q1	50.0
10%	47.5
5%	45.0
1%	40.0
0% Min	40.0

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
40	79	102	28
40	20	102	86

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
45	102	186	54
45	42	187	18
46	6	187	74



The UNIVARIATE Procedure
Variable: X3 (Nível de fosfatase ácida)
X4 = Sim

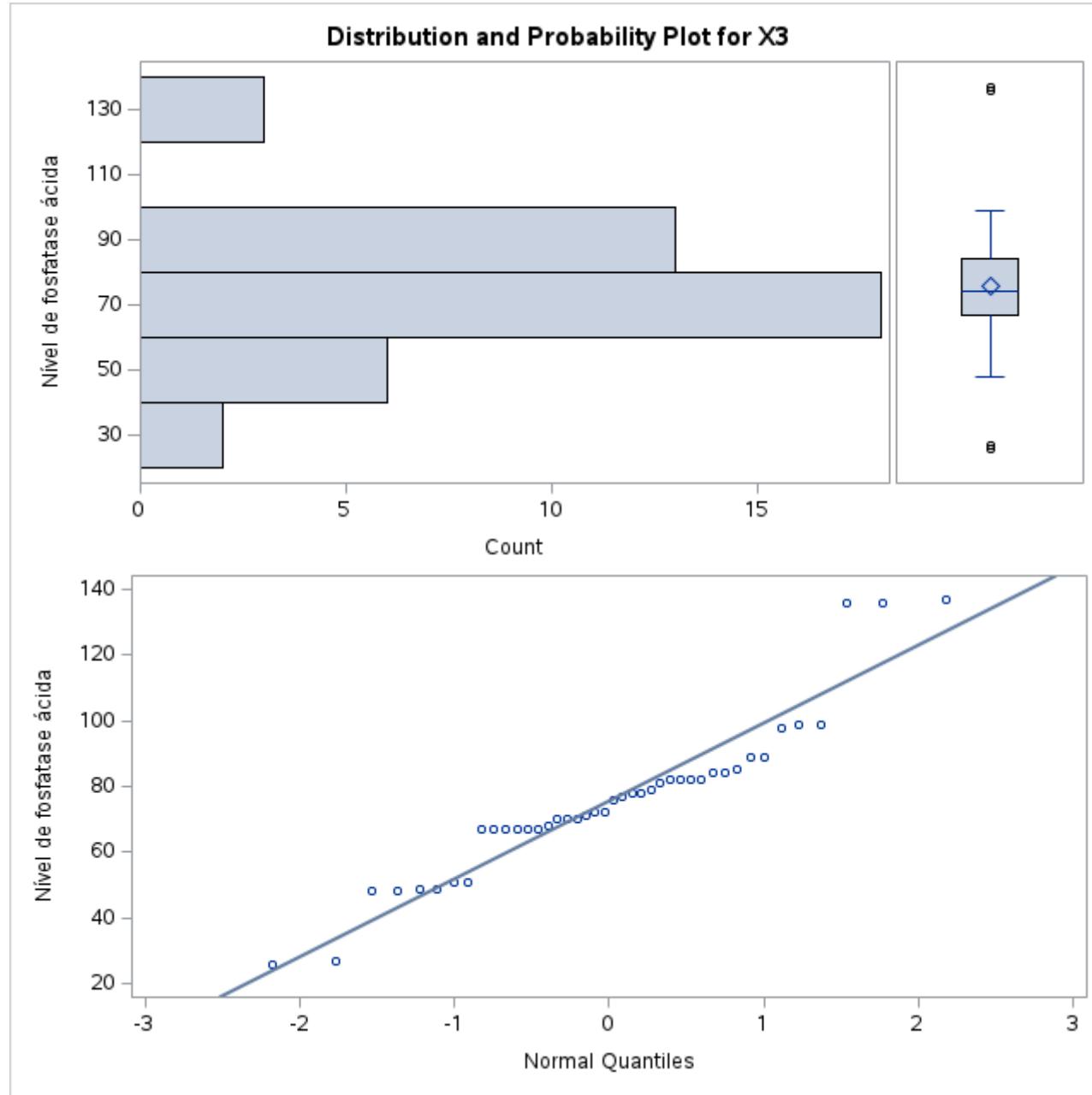
Moments			
N	42	Sum Weights	42
Mean	75.6428571	Sum Observations	3177
Std Deviation	23.7279514	Variance	563.015679
Skewness	0.69572446	Kurtosis	1.7801564
Uncorrected SS	263401	Corrected SS	23083.6429
Coeff Variation	31.3683966	Std Error Mean	3.66130239

Basic Statistical Measures			
Location		Variability	
Mean	75.64286	Std Deviation	23.72795
Median	74.00000	Variance	563.01568
Mode	67.00000	Range	111.00000
		Interquartile Range	17.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	20.6601	Pr > t	<.0001
Sign	M	21	Pr >= M	<.0001
Signed Rank	S	451.5	Pr >= S	<.0001

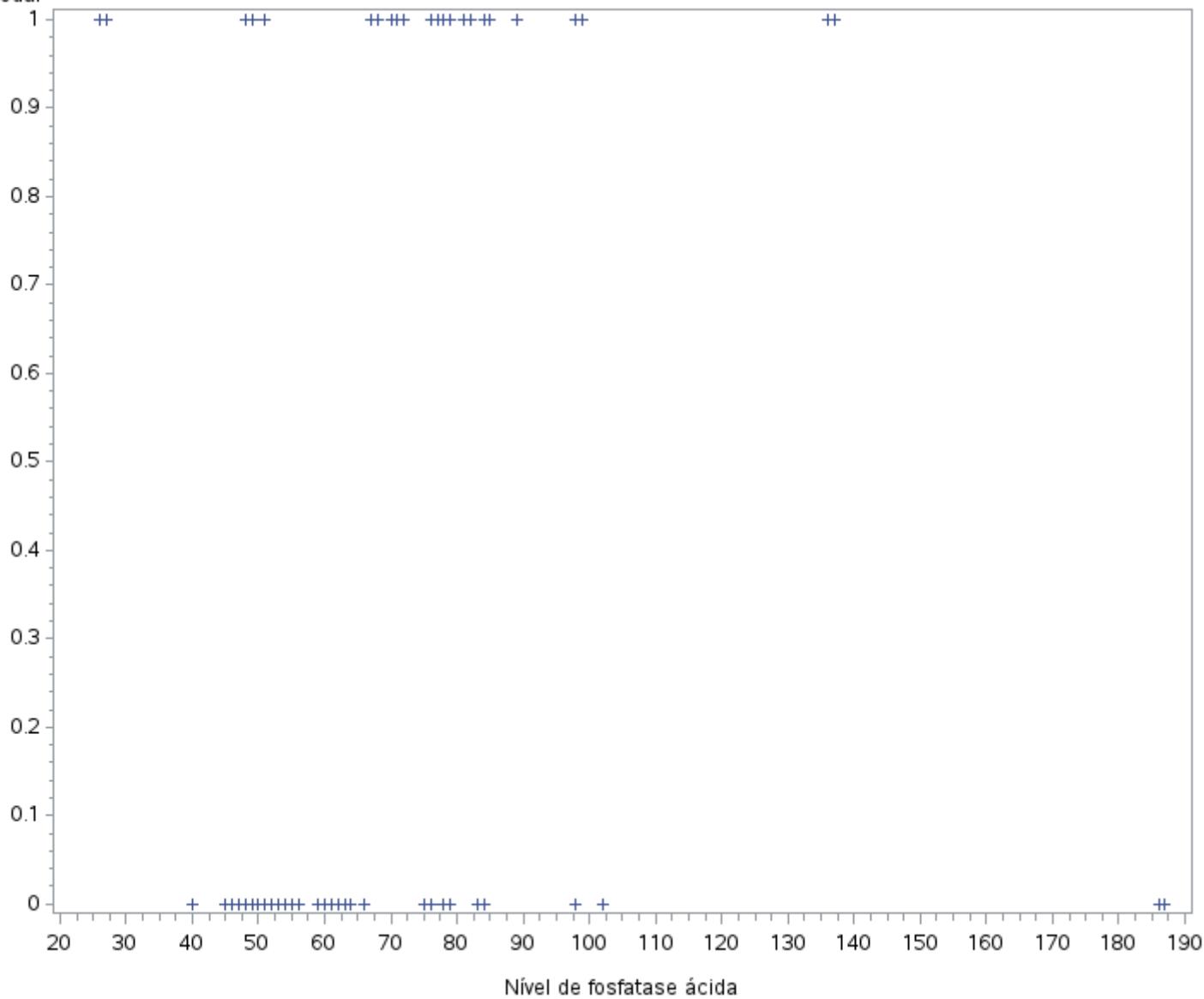
Quantiles (Definition 5)	
Level	Quantile
100% Max	137
99%	137
95%	136
90%	99
75% Q3	84
50% Median	74
25% Q1	67
10%	49
5%	48
1%	26
0% Min	26

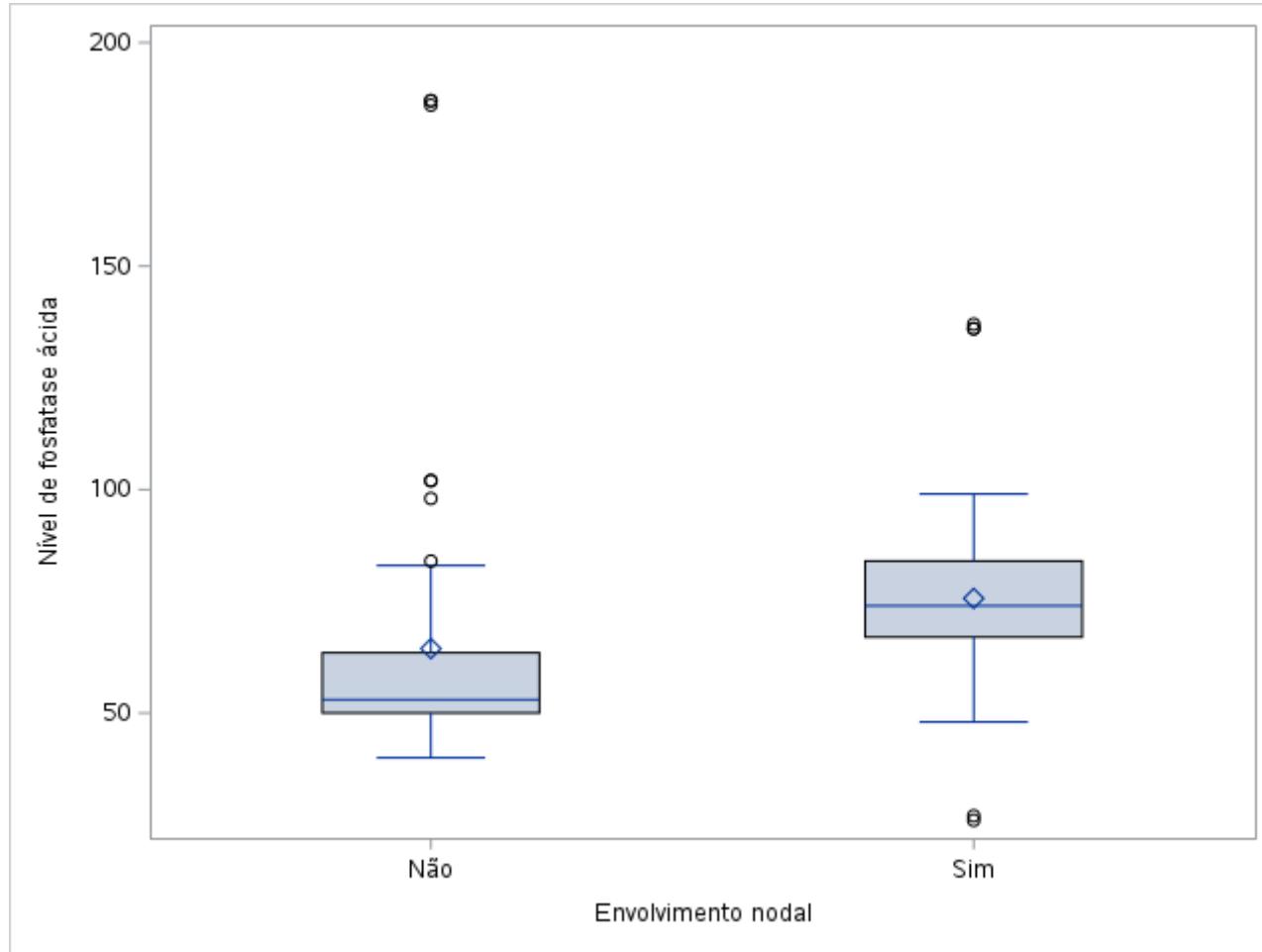
Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
26	96	99	17
27	71	99	73
48	82	136	19
48	60	136	75
49	84	137	55



Analysis Variable : X3 Nível de fosfatase ácida						
Envolvimento nodal	N Obs	N	Mean	Std Dev	Minimum	Maximum
Não	60	60	64.4166667	31.5709004	40.0000000	187.0000000
Sim	42	42	75.6428571	23.7279514	26.0000000	137.0000000

Envolvimento nodal





	Nível de fosfatase ácida	
	Mean	Std
Envolvimento nodal		
Não	64.42	31.57
Sim	75.64	23.73

The LOGISTIC Procedure

Model Information

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	0	60
2	1	42

Probability modeled is X4='1'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		138.450
SC	142.834		143.700
-2 Log L	138.209		134.450

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Likelihood Ratio	3.7590	1	0.0525	
Score	3.7362	1	0.0532	
Wald	3.3382	1	0.0677	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.3258	0.5649	5.5081	0.0189

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
X3	1	0.0140	0.00766	3.3382	0.0677

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X3	1.014	0.999	1.029

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	71.3	Somers' D	0.440
Percent Discordant	27.3	Gamma	0.446
Percent Tied	1.3	Tau-a	0.215
Pairs	2520	c	0.720

Estimated Covariance Matrix		
Parameter	Intercept	X3
Intercept	0.31912	-0.00403
X3	-0.00403	0.000059

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = 1		X4 = 0		
		Observed	Expected	Observed	Expected	
1	13	4	4.24	9	8.76	
2	7	2	2.42	5	4.58	
3	8	0	2.79	8	5.21	
4	11	2	3.89	9	7.11	
5	10	0	3.67	10	6.33	
6	12	6	4.76	6	7.24	
7	11	8	4.65	3	6.35	
8	11	9	4.93	2	6.07	
9	11	8	5.33	3	5.67	
10	8	3	5.33	5	2.67	

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

Hosmer and Lemeshow Goodness-of-Fit Test			
Chi-Square	DF	Pr > ChiSq	
28.0931	8	0.0005	

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		94.194
SC	142.834		104.694
-2 Log L	138.209		86.194

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	52.0152	3	<.0001
Score	42.1766	3	<.0001

Testing Global Null Hypothesis: BETA=0				
Test		Chi-Square	DF	Pr > ChiSq
Wald		21.9797	3	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	15.528	3.669	65.712
X2	24.739	5.640	108.512
X3	1.028	1.010	1.047

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	89.3	Somers' D	0.788	
Percent Discordant	10.5	Gamma	0.789	
Percent Tied	0.2	Tau-a	0.385	
Pairs	2520	c	0.894	

Estimated Covariance Matrix					
Parameter	Intercept	X1	X2	X3	
Intercept	1.312246	-0.49305	-0.71224	-0.0087	
X1	-0.49305	0.54179	0.302397	0.002074	
X2	-0.71224	0.302397	0.56904	0.003353	
X3	-0.0087	0.002074	0.003353	0.000082	

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	10	0	0.23	10	9.77
2	10	0	0.25	10	9.75

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
3	10	1	0.54	9	9.46	
4	10	2	2.50	8	7.50	
5	11	3	4.06	8	6.94	
6	10	2	4.18	8	5.82	
7	10	9	5.03	1	4.97	
8	10	5	6.01	5	3.99	
9	11	10	9.61	1	1.39	
10	10	10	9.58	0	0.42	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
10.7117	8	0.2186

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

Model Convergence Status

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	123.876
SC	142.834	129.126
-2 Log L	138.209	119.876

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	18.3327	1	<.0001
Score	18.1441	1	<.0001
Wald	16.1442	1	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.9555	0.2631	13.1878	0.0003
X1	1	1.9671	0.4896	16.1442	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	7.150	2.739	18.665

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	45.4	Somers' D	0.390
Percent Discordant	6.3	Gamma	0.755
Percent Tied	48.3	Tau-a	0.191
Pairs	2520	c	0.695

Estimated Covariance Matrix		
Parameter	Intercept	X1
Intercept	0.069231	-0.06923
X1	-0.06923	0.239685

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		120.029
SC	142.834		125.279
-2 Log L	138.209		116.029

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	22.1797	1	<.0001
Score	20.9969	1	<.0001
Wald	18.7463	1	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.5840	0.3881	16.6576	<.0001
X2	1	2.0659	0.4771	18.7463	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X2	7.892	3.098	20.107

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	52.6	Somers' D	0.460
Percent Discordant	6.7	Gamma	0.775
Percent Tied	40.7	Tau-a	0.225
Pairs	2520	c	0.730

Estimated Covariance Matrix		
Parameter	Intercept	X2
Intercept	0.150633	-0.15063
X2	-0.15063	0.227664

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		122.538
SC	142.834		130.413
-2 Log L	138.209		116.538

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	21.6704	2	<.0001
Score	21.0485	2	<.0001
Wald	18.1975	2	0.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.9102	0.6065	9.9193	0.0016
X1	1	1.9770	0.4973	15.8040	<.0001
X3	1	0.0137	0.00771	3.1433	0.0762

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	7.221	2.724	19.137
X3	1.014	0.999	1.029

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	79.7	Somers' D	0.600

Association of Predicted Probabilities and Observed Responses			
Percent Discordant	19.7	Gamma	0.603
Percent Tied	0.6	Tau-a	0.294
Pairs	2520	c	0.800

Estimated Covariance Matrix				
Parameter	Intercept	X1	X3	
Intercept	0.36787	-0.08769	-0.00419	
X1	-0.08769	0.247301	0.00022	
X3	-0.00419	0.00022	0.000059	

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	14	3	3.09	11	10.91	
2	13	0	2.96	13	10.04	
3	10	0	2.37	10	7.63	
4	10	5	2.62	5	7.38	
5	10	5	2.91	5	7.09	
6	10	7	3.33	3	6.67	
7	10	2	5.92	8	4.08	
8	10	5	7.03	5	2.97	
9	15	15	11.76	0	3.24	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
30.4936	7	<.0001

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	

Model Information		
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	112.643
SC	142.834	120.518
-2 Log L	138.209	106.643

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	31.5662	2	<.0001
Score	28.2044	2	<.0001
Wald	21.9174	2	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-3.6320	0.8710	17.3870	<.0001
X2	1	2.5493	0.5638	20.4437	<.0001
X3	1	0.0244	0.00840	8.4481	0.0037

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X2	12.798	4.239	38.641
X3	1.025	1.008	1.042

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	80.5	Somers' D	0.613
Percent Discordant	19.1	Gamma	0.616
Percent Tied	0.4	Tau-a	0.300
Pairs	2520	c	0.807

Estimated Covariance Matrix			
Parameter	Intercept	X2	X3
Intercept	0.758689	-0.35674	-0.00635
X2	-0.35674	0.317885	0.001878
X3	-0.00635	0.001878	0.000071

Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	9	0	0.70	9	8.30
2	10	0	0.84	10	9.16
3	10	0	0.96	10	9.04
4	10	3	1.62	7	8.38
5	9	7	3.47	2	5.53
6	11	4	5.81	7	5.19
7	10	2	5.71	8	4.29
8	10	9	6.42	1	3.58
9	10	8	6.90	2	3.10
10	13	9	9.58	4	3.42

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
20.4259	8	0.0088

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		102.083
SC	142.834		109.957
-2 Log L	138.209		96.083

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	42.1263	2	<.0001
Score	36.2932	2	<.0001
Wald	22.3503	2	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.5945	0.5644	21.1290	<.0001
X1	1	2.4502	0.6292	15.1673	<.0001
X2	1	2.4937	0.5992	17.3172	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	11.591	3.377	39.780
X2	12.106	3.740	39.180

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.5	Somers' D	0.643
Percent Discordant	8.2	Gamma	0.797
Percent Tied	19.4	Tau-a	0.315
Pairs	2520	c	0.821

Estimated Covariance Matrix			
Parameter	Intercept	X1	X2
Intercept	0.31859	-0.22512	-0.28836
X1	-0.22512	0.395833	0.171955
X2	-0.28836	0.171955	0.359087

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	35	3	2.43	32	32.57
2	12	5	5.57	7	6.43
3	37	17	17.57	20	19.43
4	18	17	16.43	1	1.57

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

Hosmer and Lemeshow Goodness-of-Fit Test			
Chi-Square	DF	Pr > ChiSq	
0.5109	2	0.7746	

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

Model Convergence Status		
Quasi-complete separation of data points detected.		

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		89.516
SC	142.834		110.516
-2 Log L	138.209		73.516

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	64.6928	7	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Score	49.0345	7	<.0001	
Wald	24.6557	7	0.0009	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-3.4464	1.2494	7.6084	0.0058
X1	1	-142.0	195.8	0.5261	0.4682
X2	1	0.0858	2.0686	0.0017	0.9669
X3	1	0.0131	0.0117	1.2525	0.2631
X1*X2	1	147.5	195.9	0.5670	0.4515
X2*X3	1	0.0376	0.0282	1.7813	0.1820
X1*X3	1	2.2272	3.0232	0.5427	0.4613
X1*X2*X3	1	-2.2664	3.0237	0.5618	0.4535

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	92.8	Somers' D	0.858
Percent Discordant	7.0	Gamma	0.859
Percent Tied	0.2	Tau-a	0.420
Pairs	2520	c	0.929

Estimated Covariance Matrix								
Parameter	Intercept	X1	X2	X3	X1X2	X2X3	X1X3	X1X2X3
Intercept	1.561097	-1.5611	-1.5611	-0.01267	1.561097	0.01267	0.01267	-0.01267
X1	-1.5611	38345.33	1.561097	0.01267	-38345.3	-0.01267	-591.688	591.688
X2	-1.5611	1.561097	4.278952	0.01267	-4.27895	-0.05395	-0.01267	0.053953
X3	-0.01267	0.01267	0.01267	0.000136	-0.01267	-0.00014	-0.00014	0.000136
X1X2	1.561097	-38345.3	-4.27895	-0.01267	38359.17	0.053953	591.688	-591.886
X2X3	0.01267	-0.01267	-0.05395	-0.00014	0.053953	0.000793	0.000136	-0.00079
X1X3	0.01267	-591.688	-0.01267	-0.00014	591.688	0.000136	9.139795	-9.13979
X1X2X3	-0.01267	591.688	0.053953	0.000136	-591.886	-0.00079	-9.13979	9.142885

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	9	0	0.13	9	8.87	
2	12	0	0.69	12	11.31	
3	10	0	0.65	10	9.35	
4	10	3	1.17	7	8.83	
5	9	3	2.53	6	6.47	
6	10	0	3.44	10	6.56	
7	10	8	5.09	2	4.91	
8	10	7	7.24	3	2.76	
9	11	10	10.36	1	0.64	
10	11	11	10.72	0	0.28	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
14.0905	8	0.0794

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	97.258
SC	142.834	115.633
-2 Log L	138.209	83.258

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	54.9509	6	<.0001
Score	44.3960	6	<.0001
Wald	20.5241	6	0.0022

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-3.7704	1.2777	8.7082	0.0032
X1	1	-0.5836	2.4451	0.0570	0.8114
X2	1	1.3750	1.8929	0.5276	0.4676
X3	1	0.0164	0.0113	2.1220	0.1452
X1*X2	1	1.7736	1.8220	0.9476	0.3303
X2*X3	1	0.0189	0.0245	0.5918	0.4417
X1*X3	1	0.0390	0.0330	1.4012	0.2365

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	90.5	Somers' D	0.812
Percent Discordant	9.3	Gamma	0.814
Percent Tied	0.2	Tau-a	0.397
Pairs	2520	c	0.906

Estimated Covariance Matrix							
Parameter	Intercept	X1	X2	X3	X1X2	X2X3	X1X3
Intercept	1.632442	-1.43882	-1.55281	-0.01255	1.018684	0.011286	0.009503

Estimated Covariance Matrix							
Parameter	Intercept	X1	X2	X3	X1X2	X2X3	X1X3
X1	-1.43882	5.978506	0.831029	0.010585	-2.77197	-0.00095	-0.07253
X2	-1.55281	0.831029	3.583188	0.011741	-1.59215	-0.04207	-0.00039
X3	-0.01255	0.010585	0.011741	0.000127	-0.00633	-0.00011	-0.0001
X1X2	1.018684	-2.77197	-1.59215	-0.00633	3.319547	0.013569	0.024461
X2X3	0.011286	-0.00095	-0.04207	-0.00011	0.013569	0.000602	-0.00005
X1X3	0.009503	-0.07253	-0.00039	-0.0001	0.024461	-0.00005	0.001087

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.49	10	9.51	
2	10	0	0.52	10	9.48	
3	10	1	0.79	9	9.21	
4	10	2	1.87	8	8.13	
5	10	3	3.30	7	6.70	
6	10	2	3.62	8	6.38	
7	12	8	5.78	4	6.22	
8	11	8	7.11	3	3.89	
9	10	9	9.59	1	0.41	
10	9	9	8.93	0	0.07	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
5.2155	8	0.7343

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	

Model Information		
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	97.464
SC	142.834	113.213
-2 Log L	138.209	85.464

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	52.7453	5	<.0001
Score	43.1149	5	<.0001
Wald	22.5598	5	0.0004

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-4.5214	1.2670	12.7358	0.0004
X1	1	2.3721	0.9823	5.8314	0.0157
X2	1	1.6998	1.8964	0.8035	0.3701
X3	1	0.0236	0.00986	5.7474	0.0165
X1*X2	1	0.7404	1.5044	0.2422	0.6226

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
X2*X3	1	0.0184	0.0239	0.5962	0.4401

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	89.7	Somers' D	0.796
Percent Discordant	10.1	Gamma	0.798
Percent Tied	0.2	Tau-a	0.390
Pairs	2520	c	0.898

Estimated Covariance Matrix						
Parameter	Intercept	X1	X2	X3	X1X2	X2X3
Intercept	1.605188	-0.80749	-1.60519	-0.01061	0.807488	0.010613
X1	-0.80749	0.964968	0.807488	0.003298	-0.96497	-0.0033
X2	-1.60519	0.807488	3.596308	0.010613	-1.25104	-0.04033
X3	-0.01061	0.003298	0.010613	0.000097	-0.0033	-0.0001
X1X2	0.807488	-0.96497	-1.25104	-0.0033	2.263107	0.008445
X2X3	0.010613	-0.0033	-0.04033	-0.0001	0.008445	0.000569

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.34	10	9.66	
2	10	0	0.36	10	9.64	
3	10	1	0.68	9	9.32	
4	12	3	2.97	9	9.03	
5	10	2	3.28	8	6.72	
6	11	2	4.55	9	6.45	
7	10	9	5.12	1	4.88	
8	10	9	6.88	1	3.12	
9	10	7	9.03	3	0.97	
10	9	9	8.79	0	0.21	

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

Hosmer and Lemeshow Goodness-of-Fit Test			
Chi-Square	DF	Pr > ChiSq	
17.1315	8	0.0288	

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		95.872
SC	142.834		111.621
-2 Log L	138.209		83.872

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	54.3372	5	<.0001
Score	44.1637	5	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Wald	19.9062	5	0.0013	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-4.1533	1.2410	11.2012	0.0008
X1	1	-0.5924	2.5671	0.0533	0.8175
X2	1	2.7128	0.8385	10.4660	0.0012
X3	1	0.0202	0.0102	3.9606	0.0466
X1*X2	1	1.3727	1.6964	0.6548	0.4184
X1*X3	1	0.0415	0.0353	1.3815	0.2398

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	89.8	Somers' D	0.799
Percent Discordant	10.0	Gamma	0.800
Percent Tied	0.2	Tau-a	0.391
Pairs	2520	c	0.899

Estimated Covariance Matrix						
Parameter	Intercept	X1	X2	X3	X1X2	X1X3
Intercept	1.54003	-1.54003	-0.85959	-0.01075	0.859588	0.010752
X1	-1.54003	6.589816	0.859588	0.010752	-2.70637	-0.08185
X2	-0.85959	0.859588	0.70316	0.004232	-0.70316	-0.00423
X3	-0.01075	0.010752	0.004232	0.000103	-0.00423	-0.0001
X1X2	0.859588	-2.70637	-0.70316	-0.00423	2.877732	0.023836
X1X3	0.010752	-0.08185	-0.00423	-0.0001	0.023836	0.001246

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.41	10	9.59	
2	10	0	0.43	10	9.57	
3	10	1	0.74	9	9.26	
4	11	2	2.26	9	8.74	
5	12	5	4.61	7	7.39	

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
6	10	0	4.19	10	5.81
7	10	9	4.84	1	5.16
8	10	7	6.04	3	3.96
9	10	9	9.58	1	0.42
10	9	9	8.89	0	0.11

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
16.5581	8	0.0351

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	96.324
SC	142.834	112.074
-2 Log L	138.209	84.324

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	53.8847	5	<.0001
Score	43.7892	5	<.0001
Wald	21.4871	5	0.0007

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-4.5073	1.2342	13.3377	0.0003
X1	1	0.9274	1.7984	0.2659	0.6061
X2	1	2.3734	1.6753	2.0069	0.1566
X3	1	0.0208	0.0110	3.5899	0.0581
X2*X3	1	0.0115	0.0227	0.2565	0.6125
X1*X3	1	0.0279	0.0276	1.0208	0.3123

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	91.0	Somers' D	0.822
Percent Discordant	8.8	Gamma	0.823
Percent Tied	0.2	Tau-a	0.402
Pairs	2520	c	0.911

Estimated Covariance Matrix						
Parameter	Intercept	X1	X2	X3	X2X3	X1X3
Intercept	1.52315	-0.73226	-1.20908	-0.01168	0.007682	0.003472
X1	-0.73226	3.234199	-0.3415	0.006077	0.009386	-0.045
X2	-1.20908	-0.3415	2.806768	0.009364	-0.03414	0.010041
X3	-0.01168	0.006077	0.009364	0.00012	-0.00009	-0.00006
X2X3	0.007682	0.009386	-0.03414	-0.00009	0.000517	-0.00015
X1X3	0.003472	-0.045	0.010041	-0.00006	-0.00015	0.000761

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	10	0	0.30	10	9.70
2	10	0	0.32	10	9.68
3	10	1	0.55	9	9.45
4	10	2	2.28	8	7.72
5	9	3	3.23	6	5.77
6	10	1	3.91	9	6.09
7	10	6	4.81	4	5.19
8	12	11	7.03	1	4.97
9	11	8	9.81	3	1.19
10	10	10	9.76	0	0.24

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
13.9799	8	0.0823

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	97.258
SC	142.834	115.633
-2 Log L	138.209	83.258

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	54.9509	6	<.0001
Score	44.3960	6	<.0001
Wald	20.5241	6	0.0022

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-3.7704	1.2777	8.7082	0.0032
X1	1	-0.5836	2.4451	0.0570	0.8114
X2	1	1.3750	1.8929	0.5276	0.4676
X3	1	0.0164	0.0113	2.1220	0.1452
X1*X2	1	1.7736	1.8220	0.9476	0.3303
X2*X3	1	0.0189	0.0245	0.5918	0.4417
X1*X3	1	0.0390	0.0330	1.4012	0.2365

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	90.5	Somers' D	0.812
Percent Discordant	9.3	Gamma	0.814
Percent Tied	0.2	Tau-a	0.397
Pairs	2520	c	0.906

Estimated Covariance Matrix							
Parameter	Intercept	X1	X2	X3	X1X2	X2X3	X1X3
Intercept	1.632442	-1.43882	-1.55281	-0.01255	1.018684	0.011286	0.009503

Estimated Covariance Matrix							
Parameter	Intercept	X1	X2	X3	X1X2	X2X3	X1X3
X1	-1.43882	5.978506	0.831029	0.010585	-2.77197	-0.00095	-0.07253
X2	-1.55281	0.831029	3.583188	0.011741	-1.59215	-0.04207	-0.00039
X3	-0.01255	0.010585	0.011741	0.000127	-0.00633	-0.00011	-0.0001
X1X2	1.018684	-2.77197	-1.59215	-0.00633	3.319547	0.013569	0.024461
X2X3	0.011286	-0.00095	-0.04207	-0.00011	0.013569	0.000602	-0.00005
X1X3	0.009503	-0.07253	-0.00039	-0.0001	0.024461	-0.00005	0.001087

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.49	10	9.51	
2	10	0	0.52	10	9.48	
3	10	1	0.79	9	9.21	
4	10	2	1.87	8	8.13	
5	10	3	3.30	7	6.70	
6	10	2	3.62	8	6.38	
7	12	8	5.78	4	6.22	
8	11	8	7.11	3	3.89	
9	10	9	9.59	1	0.41	
10	9	9	8.93	0	0.07	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
5.2155	8	0.7343

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	

Model Information		
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209	94.194	
SC	142.834	104.694	
-2 Log L	138.209	86.194	

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	52.0152	3	<.0001
Score	42.1766	3	<.0001
Wald	21.9797	3	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	15.528	3.669	65.712
X2	24.739	5.640	108.512
X3	1.028	1.010	1.047

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	89.3	Somers' D	0.788
Percent Discordant	10.5	Gamma	0.789
Percent Tied	0.2	Tau-a	0.385
Pairs	2520	c	0.894

Estimated Covariance Matrix					
Parameter	Intercept	X1	X2	X3	
Intercept	1.312246	-0.49305	-0.71224	-0.0087	
X1	-0.49305	0.54179	0.302397	0.002074	
X2	-0.71224	0.302397	0.56904	0.003353	
X3	-0.0087	0.002074	0.003353	0.000082	

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.23	10	9.77	
2	10	0	0.25	10	9.75	
3	10	1	0.54	9	9.46	
4	10	2	2.50	8	7.50	
5	11	3	4.06	8	6.94	
6	10	2	4.18	8	5.82	
7	10	9	5.03	1	4.97	
8	10	5	6.01	5	3.99	
9	11	10	9.61	1	1.39	
10	10	10	9.58	0	0.42	

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

Hosmer and Lemeshow Goodness-of-Fit Test			
Chi-Square	DF	Pr > ChiSq	
10.7117	8	0.2186	

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		102.083
SC	142.834		109.957
-2 Log L	138.209		96.083

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	42.1263	2	<.0001
Score	36.2932	2	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Wald	22.3503	2	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.5945	0.5644	21.1290	<.0001
X1	1	2.4502	0.6292	15.1673	<.0001
X2	1	2.4937	0.5992	17.3172	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	11.591	3.377	39.780
X2	12.106	3.740	39.180

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	72.5	Somers' D	0.643	
Percent Discordant	8.2	Gamma	0.797	
Percent Tied	19.4	Tau-a	0.315	
Pairs	2520	c	0.821	

Estimated Covariance Matrix				
Parameter	Intercept	X1	X2	
Intercept	0.31859	-0.22512	-0.28836	
X1	-0.22512	0.395833	0.171955	
X2	-0.28836	0.171955	0.359087	

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	35	3	2.43	32	32.57
2	12	5	5.57	7	6.43
3	37	17	17.57	20	19.43
4	18	17	16.43	1	1.57

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
0.5109	2	0.7746

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

Stepwise Selection Procedure

Step 0. Intercept entered:

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

$$-2 \text{ Log L} = 138.209$$

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.3567	0.2012	3.1430	0.0763

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
49.0345	7	<.0001

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
X1	1	18.1441	<.0001
X2	1	20.9969	<.0001
X3	1	3.7362	0.0532

Step 1. Effect X2 entered:

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		120.029
SC	142.834		125.279
-2 Log L	138.209		116.029

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Likelihood Ratio	22.1797	1	<.0001	
Score	20.9969	1	<.0001	
Wald	18.7463	1	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.5840	0.3881	16.6576	<.0001
X2	1	2.0659	0.4771	18.7463	<.0001

Odds Ratio Estimates		
Effect	Point Estimate	95% Wald Confidence Limits

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X2	7.892	3.098	20.107

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	52.6	Somers' D	0.460
Percent Discordant	6.7	Gamma	0.775
Percent Tied	40.7	Tau-a	0.225
Pairs	2520	c	0.730

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
36.8610	6	<.0001

Analysis of Effects Eligible for Removal			
Effect	DF	Wald Chi-Square	Pr > ChiSq
X2	1	18.7463	<.0001

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

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
X1	1	18.9236	<.0001
X3	1	10.9756	0.0009

Step 2. Effect X1 entered:

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	102.083
SC	142.834	109.957

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
-2 Log L	138.209	96.083

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	42.1263	2	<.0001
Score	36.2932	2	<.0001
Wald	22.3503	2	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.5945	0.5644	21.1290	<.0001
X1	1	2.4502	0.6292	15.1673	<.0001
X2	1	2.4937	0.5992	17.3172	<.0001

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	11.591	3.377	39.780
X2	12.106	3.740	39.180

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.5	Somers' D	0.643
Percent Discordant	8.2	Gamma	0.797
Percent Tied	19.4	Tau-a	0.315
Pairs	2520	c	0.821

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
13.7274	5	0.0174

Analysis of Effects Eligible for Removal			
Effect	DF	Wald Chi-Square	Pr > ChiSq
X1	1	15.1673	<.0001

Analysis of Effects Eligible for Removal				
Effect	DF	Wald Chi-Square	Pr > ChiSq	
X2	1	17.3172	<.0001	

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

Analysis of Effects Eligible for Entry				
Effect	DF	Score Chi-Square	Pr > ChiSq	
X3	1	11.9368	0.0006	
X1*X2	1	0.5109	0.4748	

Step 3. Effect X3 entered:

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		94.194
SC	142.834		104.694
-2 Log L	138.209		86.194

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Likelihood Ratio	52.0152	3	<.0001	
Score	42.1766	3	<.0001	
Wald	21.9797	3	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	15.528	3.669	65.712
X2	24.739	5.640	108.512
X3	1.028	1.010	1.047

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	89.3	Somers' D	0.788
Percent Discordant	10.5	Gamma	0.789
Percent Tied	0.2	Tau-a	0.385
Pairs	2520	c	0.894

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
4.7892	4	0.3096

Analysis of Effects Eligible for Removal			
Effect	DF	Wald Chi-Square	Pr > ChiSq
X1	1	13.8836	0.0002
X2	1	18.0894	<.0001
X3	1	9.4624	0.0021

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

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
X1*X2	1	0.1118	0.7381
X2*X3	1	0.4760	0.4903
X1*X3	1	1.3408	0.2469

Step 4. Effect X1*X3 entered:

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

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	140.209	94.584
SC	142.834	107.709
-2 Log L	138.209	84.584

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	53.6251	4	<.0001
Score	43.4489	4	<.0001
Wald	20.7087	4	0.0004

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-4.6889	1.1937	15.4286	<.0001
X1	1	0.7043	1.8542	0.1443	0.7041
X2	1	3.1410	0.7520	17.4459	<.0001
X3	1	0.0228	0.0101	5.1272	0.0236
X1*X3	1	0.0315	0.0289	1.1932	0.2747

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X2	23.126	5.297	100.972

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	90.7	Somers' D	0.816
Percent Discordant	9.1	Gamma	0.818
Percent Tied	0.2	Tau-a	0.399
Pairs	2520	c	0.908

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
4.3308	3	0.2279

Analysis of Effects Eligible for Removal			
Effect	DF	Wald Chi-Square	Pr > ChiSq
X2	1	17.4459	<.0001
X1*X3	1	1.1932	0.2747

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

Analysis of Effects Eligible for Entry			
Effect	DF	Score Chi-Square	Pr > ChiSq
X1*X2	1	0.6841	0.4082
X2*X3	1	0.2576	0.6118

Note: No (additional) effects met the 0.3 significance level for entry into the model.

Summary of Stepwise Selection								
Step	Effect		DF	Number In	Score Chi-Square	Wald Chi-Square	Pr > ChiSq	Variable Label
	Entered	Removed						
1	X2		1	1	20.9969		<.0001	Estágio do tumor
2	X1		1	2	18.9236		<.0001	Resultado da radiografia
3	X3		1	3	11.9368		0.0006	Nível de fosfatase ácida
4	X1*X3		1	4	1.3408		0.2469	

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.27	10	9.73	
2	10	0	0.30	10	9.70	
3	10	1	0.55	9	9.45	
4	10	2	2.28	8	7.72	
5	10	3	3.90	7	6.10	
6	10	2	4.14	8	5.86	
7	12	8	5.86	4	6.14	
8	11	8	6.63	3	4.37	
9	10	9	9.31	1	0.69	
10	9	9	8.77	0	0.23	

Hosmer and Lemeshow Goodness-of-Fit Test			
Chi-Square	DF	Pr > ChiSq	
5.8827	8	0.6604	

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209	94.194	
SC	142.834	104.694	
-2 Log L	138.209	86.194	

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	52.0152	3	<.0001
Score	42.1766	3	<.0001

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Wald	21.9797	3	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	15.528	3.669	65.712
X2	24.739	5.640	108.512
X3	1.028	1.010	1.047

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	89.3	Somers' D	0.788	
Percent Discordant	10.5	Gamma	0.789	
Percent Tied	0.2	Tau-a	0.385	
Pairs	2520	c	0.894	

Estimated Covariance Matrix					
Parameter	Intercept	X1	X2	X3	
Intercept	1.312246	-0.49305	-0.71224	-0.0087	
X1	-0.49305	0.54179	0.302397	0.002074	
X2	-0.71224	0.302397	0.56904	0.003353	
X3	-0.0087	0.002074	0.003353	0.000082	

Partition for the Hosmer and Lemeshow Test					
Group	Total	X4 = Sim		X4 = Não	
		Observed	Expected	Observed	Expected
1	10	0	0.23	10	9.77
2	10	0	0.25	10	9.75

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
3	10	1	0.54	9	9.46	
4	10	2	2.50	8	7.50	
5	11	3	4.06	8	6.94	
6	10	2	4.18	8	5.82	
7	10	9	5.03	1	4.97	
8	10	5	6.01	5	3.99	
9	11	10	9.61	1	1.39	
10	10	10	9.58	0	0.42	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
10.7117	8	0.2186

Obs	_LINK_	_TYPE_	_STATUS_	_NAME_	Intercept	X1	X2	X3	_LNLIKE_	_ESTTYPE_
1	LOGIT	PARMS	0 Converged	X4	-5.10392	2.742629	3.208363981	0.027809	-43.0969	MLE
2	LOGIT	COV	0 Converged	Intercept	1.31225	-0.49305	-0.71223906	-0.008701	-43.0969	MLE
3	LOGIT	COV	0 Converged	X1	-0.49305	0.54179	0.302397316	0.002074	-43.0969	MLE
4	LOGIT	COV	0 Converged	X2	-0.71224	0.302397	0.569040191	0.003353	-43.0969	MLE
5	LOGIT	COV	0 Converged	X3	-0.00870	0.002074	0.003353139	0.000082	-43.0969	MLE

Obs	ID	X1	X2	X3	X4	_FROM_	_INTO_	IP_Não	IP_Sim	XP_Não	XP_Sim	_LEVEL_	phat	lcl	ucl
1	2	negativo	menos grave	56	Não	Não	Não	0.97199	0.02801	0.97152	0.02848	Sim	0.02801	0.00632	0.11547
2	3	negativo	menos grave	50	Não	Não	Não	0.97619	0.02381	0.97582	0.02418	Sim	0.02381	0.00502	0.10549
3	4	negativo	menos grave	52	Não	Não	Não	0.97486	0.02514	0.97446	0.02554	Sim	0.02514	0.00542	0.10868
4	5	negativo	menos grave	50	Não	Não	Não	0.97619	0.02381	0.97582	0.02418	Sim	0.02381	0.00502	0.10549
5	6	negativo	menos grave	49	Não	Não	Não	0.97683	0.02317	0.97647	0.02353	Sim	0.02317	0.00483	0.10394
6	7	positivo	menos grave	46	Não	Não	Não	0.74689	0.25311	0.72378	0.27622	Sim	0.25311	0.08557	0.55103
7	8	positivo	menos grave	62	Não	Não	Não	0.65411	0.34589	0.62280	0.37720	Sim	0.34589	0.14021	0.63164
8	10	positivo	menos grave	55	Não	Não	Não	0.69674	0.30326	0.66914	0.33086	Sim	0.30326	0.11408	0.59534
9	14	positivo	menos grave	67	Sim	Sim	Não	0.62201	0.37799	0.67544	0.32456	Sim	0.37799	0.16082	0.65835

Obs	ID	X1	X2	X3	X4	_FROM_	_INTO_	IP_Não	IP_Sim	XP_Não	XP_Sim	_LEVEL_	phat	lcl	ucl
10	15	negativo	menos grave	47	Não	Não	Não	0.97805	0.02195	0.97773	0.02227	Sim	0.02195	0.00447	0.10094
11	16	negativo	menos grave	49	Não	Não	Não	0.97683	0.02317	0.97647	0.02353	Sim	0.02317	0.00483	0.10394
12	17	negativo	menos grave	50	Não	Não	Não	0.97619	0.02381	0.97582	0.02418	Sim	0.02381	0.00502	0.10549
13	18	negativo	menos grave	78	Não	Não	Não	0.94954	0.05046	0.94841	0.05159	Sim	0.05046	0.01403	0.16561
14	19	negativo	menos grave	83	Não	Não	Não	0.94245	0.05755	0.94105	0.05895	Sim	0.05755	0.01659	0.18104
15	20	negativo	menos grave	98	Não	Não	Não	0.91518	0.08482	0.91249	0.08751	Sim	0.08482	0.02646	0.24012
16	21	negativo	menos grave	52	Não	Não	Não	0.97486	0.02514	0.97446	0.02554	Sim	0.02514	0.00542	0.10868
17	23	negativo	menos grave	99	Sim	Sim	Não	0.91300	0.08700	0.93812	0.06188	Sim	0.08700	0.02724	0.24485
18	24	negativo	menos grave	187	Não	Não	Sim	0.47593	0.52407	0.32775	0.67225	Sim	0.52407	0.14438	0.87783
19	25	positivo	menos grave	136	Sim	Sim	Sim	0.19455	0.80545	0.21461	0.78539	Sim	0.80545	0.48305	0.94830
20	27	negativo	mais grave	40	Não	Não	Não	0.68637	0.31363	0.67510	0.32490	Sim	0.31363	0.17272	0.50002
21	28	negativo	mais grave	50	Não	Não	Não	0.62366	0.37634	0.61209	0.38791	Sim	0.37634	0.23118	0.54771
22	29	negativo	mais grave	50	Não	Não	Não	0.62366	0.37634	0.61209	0.38791	Sim	0.37634	0.23118	0.54771
23	31	negativo	mais grave	55	Não	Não	Não	0.59051	0.40949	0.57867	0.42133	Sim	0.40949	0.26254	0.57461
24	32	negativo	mais grave	59	Não	Não	Não	0.56337	0.43663	0.55116	0.44884	Sim	0.43663	0.28792	0.59769
25	34	positivo	mais grave	51	Sim	Sim	Sim	0.09404	0.90596	0.09827	0.90173	Sim	0.90596	0.70789	0.97456
26	35	negativo	mais grave	49	Sim	Sim	Não	0.63016	0.36984	0.64946	0.35054	Sim	0.36984	0.22502	0.54259
27	36	negativo	mais grave	48	Não	Não	Não	0.63662	0.36338	0.62513	0.37487	Sim	0.36338	0.21892	0.53755
28	38	negativo	mais grave	102	Não	Não	Sim	0.28071	0.71929	0.24910	0.75090	Sim	0.71929	0.50748	0.86436
29	39	negativo	mais grave	76	Não	Não	Sim	0.44573	0.55427	0.42946	0.57054	Sim	0.55427	0.38950	0.70791
30	42	positivo	mais grave	84	Sim	Sim	Sim	0.03981	0.96019	0.04083	0.95917	Sim	0.96019	0.83346	0.99147
31	46	positivo	mais grave	78	Sim	Sim	Sim	0.04670	0.95330	0.04801	0.95199	Sim	0.95330	0.81658	0.98943
32	47	negativo	mais grave	70	Sim	Sim	Sim	0.48724	0.51276	0.50082	0.49918	Sim	0.51276	0.35558	0.66746
33	48	negativo	mais grave	67	Sim	Sim	Não	0.50809	0.49191	0.52204	0.47796	Sim	0.49191	0.33771	0.64767
34	49	negativo	mais grave	82	Sim	Sim	Sim	0.40498	0.59502	0.41806	0.58194	Sim	0.59502	0.42072	0.74826
35	50	negativo	mais grave	67	Sim	Sim	Não	0.50809	0.49191	0.52204	0.47796	Sim	0.49191	0.33771	0.64767
36	51	positivo	mais grave	72	Sim	Sim	Sim	0.05472	0.94528	0.05640	0.94360	Sim	0.94528	0.79743	0.98698
37	52	positivo	mais grave	89	Sim	Sim	Sim	0.03482	0.96518	0.03565	0.96435	Sim	0.96518	0.84602	0.99290
38	54	negativo	menos grave	49	Não	Não	Não	0.97683	0.02317	0.97647	0.02353	Sim	0.02317	0.00483	0.10394
39	55	negativo	menos grave	55	Não	Não	Não	0.97273	0.02727	0.97229	0.02771	Sim	0.02727	0.00609	0.11372
40	57	negativo	menos grave	53	Não	Não	Não	0.97417	0.02583	0.97376	0.02624	Sim	0.02583	0.00564	0.11032
41	59	negativo	menos grave	48	Não	Não	Não	0.97745	0.02255	0.97711	0.02289	Sim	0.02255	0.00464	0.10243
42	60	positivo	menos grave	45	Não	Não	Não	0.75211	0.24789	0.72948	0.27052	Sim	0.24789	0.08276	0.54629
43	61	positivo	menos grave	63	Não	Não	Não	0.64779	0.35221	0.61594	0.38406	Sim	0.35221	0.14421	0.63694
44	63	positivo	menos grave	54	Não	Não	Não	0.70258	0.29742	0.67550	0.32450	Sim	0.29742	0.11063	0.59028
45	64	negativo	menos grave	61	Não	Não	Não	0.96794	0.03206	0.96737	0.03263	Sim	0.03206	0.00763	0.12480

Obs	ID	X1	X2	X3	X4	_FROM_	_INTO_	IP_Não	IP_Sim	XP_Não	XP_Sim	_LEVEL_	phat	lcl	ucl
46	67	positivo	menos grave	68	Sim	Sim	Não	0.61545	0.38455	0.66843	0.33157	Sim	0.38455	0.16512	0.66375
47	69	negativo	menos grave	50	Não	Não	Não	0.97619	0.02381	0.97582	0.02418	Sim	0.02381	0.00502	0.10549
48	70	negativo	menos grave	51	Não	Não	Não	0.97553	0.02447	0.97515	0.02485	Sim	0.02447	0.00522	0.10707
49	71	negativo	menos grave	79	Não	Não	Não	0.94819	0.05181	0.94702	0.05298	Sim	0.05181	0.01451	0.16855
50	72	negativo	menos grave	84	Não	Não	Não	0.94092	0.05908	0.93947	0.06053	Sim	0.05908	0.01714	0.18436
51	74	negativo	menos grave	51	Não	Não	Não	0.97553	0.02447	0.97515	0.02485	Sim	0.02447	0.00522	0.10707
52	75	negativo	menos grave	76	Não	Não	Não	0.95214	0.04786	0.95110	0.04890	Sim	0.04786	0.01310	0.15994
53	76	negativo	menos grave	98	Sim	Sim	Não	0.91518	0.08482	0.93982	0.06018	Sim	0.08482	0.02646	0.24012
54	77	negativo	menos grave	186	Não	Não	Sim	0.48287	0.51713	0.33822	0.66178	Sim	0.51713	0.14262	0.87333
55	78	positivo	menos grave	137	Sim	Sim	Sim	0.19023	0.80977	0.20982	0.79018	Sim	0.80977	0.48709	0.95020
56	79	negativo	mais grave	81	Sim	Sim	Sim	0.41169	0.58831	0.42478	0.57522	Sim	0.58831	0.41571	0.74161
57	81	negativo	mais grave	51	Não	Não	Não	0.61711	0.38289	0.60550	0.39450	Sim	0.38289	0.23738	0.55292
58	84	negativo	mais grave	56	Não	Não	Não	0.58377	0.41623	0.57185	0.42815	Sim	0.41623	0.26888	0.58025
59	85	negativo	mais grave	60	Não	Não	Não	0.55651	0.44349	0.54419	0.45581	Sim	0.44349	0.29425	0.60367
60	88	negativo	mais grave	48	Sim	Sim	Não	0.63662	0.36338	0.65638	0.34362	Sim	0.36338	0.21892	0.53755
61	89	negativo	mais grave	49	Não	Não	Não	0.63016	0.36984	0.61864	0.38136	Sim	0.36984	0.22502	0.54259
62	90	positivo	mais grave	64	Não	Não	Sim	0.06743	0.93257	0.04145	0.95855	Sim	0.93257	0.76782	0.98300
63	95	positivo	mais grave	85	Sim	Sim	Sim	0.03876	0.96124	0.03974	0.96026	Sim	0.96124	0.83608	0.99178
64	97	positivo	mais grave	77	Sim	Sim	Sim	0.04795	0.95205	0.04932	0.95068	Sim	0.95205	0.81355	0.98905
65	98	negativo	mais grave	71	Sim	Sim	Sim	0.48029	0.51971	0.49378	0.50622	Sim	0.51971	0.36141	0.67414
66	99	positivo	mais grave	79	Sim	Sim	Sim	0.04548	0.95452	0.04673	0.95327	Sim	0.95452	0.81954	0.98980
67	100	negativo	mais grave	70	Sim	Sim	Sim	0.48724	0.51276	0.50082	0.49918	Sim	0.51276	0.35558	0.66746
68	101	negativo	mais grave	67	Sim	Sim	Não	0.50809	0.49191	0.52204	0.47796	Sim	0.49191	0.33771	0.64767
69	102	negativo	mais grave	82	Sim	Sim	Sim	0.40498	0.59502	0.41806	0.58194	Sim	0.59502	0.42072	0.74826
70	103	negativo	mais grave	67	Sim	Sim	Não	0.50809	0.49191	0.52204	0.47796	Sim	0.49191	0.33771	0.64767
71	106	positivo	mais grave	27	Sim	Sim	Sim	0.16827	0.83173	0.18132	0.81868	Sim	0.83173	0.55279	0.95184
72	108	negativo	menos grave	75	Não	Não	Não	0.95339	0.04661	0.95239	0.04761	Sim	0.04661	0.01265	0.15720
73	109	negativo	menos grave	99	Sim	Sim	Não	0.91300	0.08700	0.93812	0.06188	Sim	0.08700	0.02724	0.24485
74	110	negativo	menos grave	187	Não	Não	Sim	0.47593	0.52407	0.32775	0.67225	Sim	0.52407	0.14438	0.87783
75	111	positivo	menos grave	136	Sim	Sim	Sim	0.19455	0.80545	0.21461	0.78539	Sim	0.80545	0.48305	0.94830
76	112	negativo	mais grave	82	Sim	Sim	Sim	0.40498	0.59502	0.41806	0.58194	Sim	0.59502	0.42072	0.74826
77	114	negativo	mais grave	50	Não	Não	Não	0.62366	0.37634	0.61209	0.38791	Sim	0.37634	0.23118	0.54771
78	115	negativo	mais grave	50	Não	Não	Não	0.62366	0.37634	0.61209	0.38791	Sim	0.37634	0.23118	0.54771
79	116	negativo	mais grave	40	Não	Não	Não	0.68637	0.31363	0.67510	0.32490	Sim	0.31363	0.17272	0.50002
80	117	negativo	mais grave	55	Não	Não	Não	0.59051	0.40949	0.57867	0.42133	Sim	0.40949	0.26254	0.57461
81	118	negativo	mais grave	59	Não	Não	Não	0.56337	0.43663	0.55116	0.44884	Sim	0.43663	0.28792	0.59769

Obs	ID	X1	X2	X3	X4	_FROM_	_INTO_	IP_Não	IP_Sim	XP_Não	XP_Sim	_LEVEL_	phat	lcl	ucl
82	119	positivo	mais grave	48	Sim	Sim	Sim	0.10139	0.89861	0.10624	0.89376	Sim	0.89861	0.69173	0.97223
83	120	positivo	mais grave	51	Sim	Sim	Sim	0.09404	0.90596	0.09827	0.90173	Sim	0.90596	0.70789	0.97456
84	121	negativo	mais grave	49	Sim	Sim	Não	0.63016	0.36984	0.64946	0.35054	Sim	0.36984	0.22502	0.54259
85	122	negativo	mais grave	48	Não	Não	Não	0.63662	0.36338	0.62513	0.37487	Sim	0.36338	0.21892	0.53755
86	124	negativo	mais grave	102	Não	Não	Sim	0.28071	0.71929	0.24910	0.75090	Sim	0.71929	0.50748	0.86436
87	127	negativo	mais grave	66	Não	Não	Não	0.51504	0.48496	0.50173	0.49827	Sim	0.48496	0.33163	0.64118
88	128	positivo	mais grave	84	Sim	Sim	Sim	0.03981	0.96019	0.04083	0.95917	Sim	0.96019	0.83346	0.99147
89	130	positivo	mais grave	76	Sim	Sim	Sim	0.04924	0.95076	0.05066	0.94934	Sim	0.95076	0.81046	0.98866
90	131	negativo	mais grave	70	Sim	Sim	Sim	0.48724	0.51276	0.50082	0.49918	Sim	0.51276	0.35558	0.66746
91	132	positivo	mais grave	78	Sim	Sim	Sim	0.04670	0.95330	0.04801	0.95199	Sim	0.95330	0.81658	0.98943
92	135	negativo	mais grave	82	Sim	Sim	Sim	0.40498	0.59502	0.41806	0.58194	Sim	0.59502	0.42072	0.74826
93	136	negativo	mais grave	67	Sim	Sim	Não	0.50809	0.49191	0.52204	0.47796	Sim	0.49191	0.33771	0.64767
94	137	positivo	mais grave	72	Sim	Sim	Sim	0.05472	0.94528	0.05640	0.94360	Sim	0.94528	0.79743	0.98698
95	138	positivo	mais grave	89	Sim	Sim	Sim	0.03482	0.96518	0.03565	0.96435	Sim	0.96518	0.84602	0.99290
96	139	positivo	mais grave	26	Sim	Sim	Sim	0.17220	0.82780	0.18589	0.81411	Sim	0.82780	0.54514	0.95069
97	140	negativo	menos grave	49	Não	Não	Não	0.97683	0.02317	0.97647	0.02353	Sim	0.02317	0.00483	0.10394
98	141	negativo	menos grave	55	Não	Não	Não	0.97273	0.02727	0.97229	0.02771	Sim	0.02727	0.00609	0.11372
99	142	negativo	menos grave	51	Não	Não	Não	0.97553	0.02447	0.97515	0.02485	Sim	0.02447	0.00522	0.10707
100	143	negativo	menos grave	53	Não	Não	Não	0.97417	0.02583	0.97376	0.02624	Sim	0.02583	0.00564	0.11032
101	144	negativo	menos grave	51	Não	Não	Não	0.97553	0.02447	0.97515	0.02485	Sim	0.02447	0.00522	0.10707
102	146	positivo	menos grave	45	Não	Não	Não	0.75211	0.24789	0.72948	0.27052	Sim	0.24789	0.08276	0.54629

The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

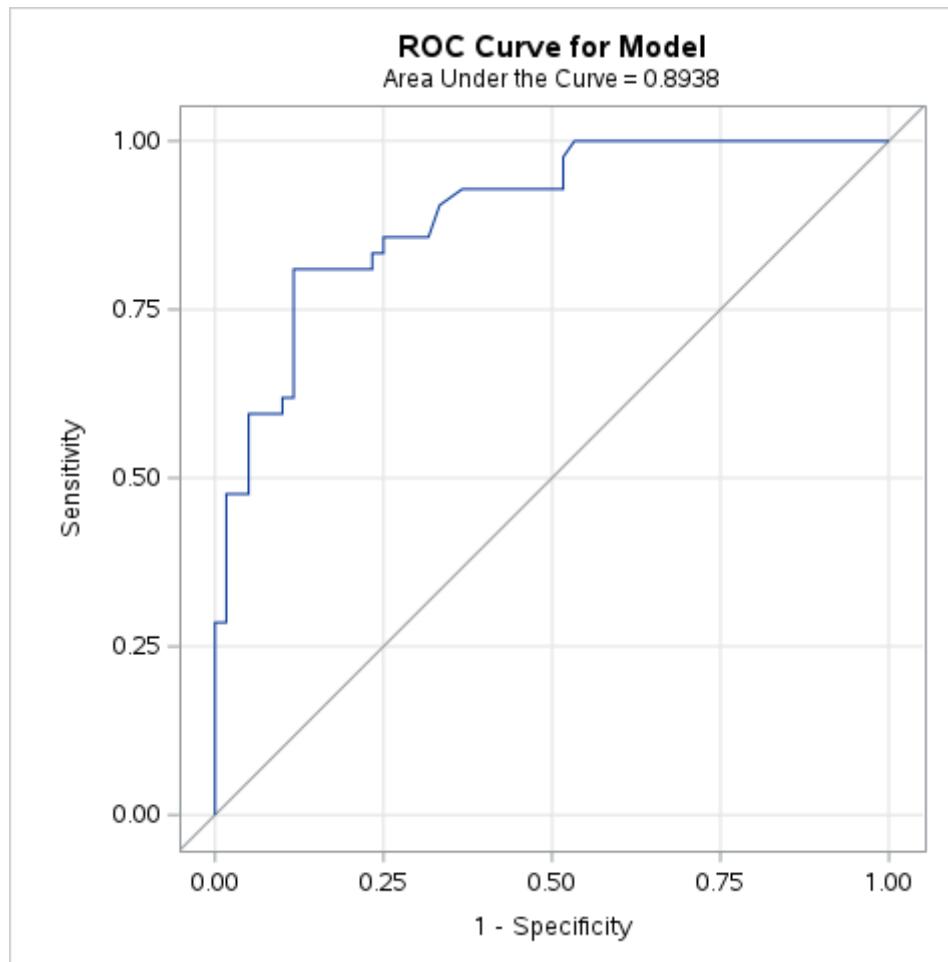
Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209		94.194
SC	142.834		104.694
-2 Log L	138.209		86.194

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Likelihood Ratio	52.0152	3	<.0001	
Score	42.1766	3	<.0001	
Wald	21.9797	3	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates				
Effect	Point Estimate	95% Wald Confidence Limits		
X1	15.528	3.669		65.712
X2	24.739	5.640		108.512
X3	1.028	1.010		1.047

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	89.3	Somers' D	0.788
Percent Discordant	10.5	Gamma	0.789
Percent Tied	0.2	Tau-a	0.385
Pairs	2520	c	0.894



The LOGISTIC Procedure

Model Information		
Data Set	TRABALHO.DF	
Response Variable	X4	Envolvimento nodal

Model Information		
Number of Response Levels	2	
Model	binary logit	
Optimization Technique	Fisher's scoring	

Number of Observations Read	102
Number of Observations Used	102

Response Profile		
Ordered Value	X4	Total Frequency
1	Não	60
2	Sim	42

Probability modeled is X4='Sim'.

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

Model Fit Statistics			
Criterion	Intercept Only	Intercept and Covariates	
AIC	140.209	94.194	
SC	142.834	104.694	
-2 Log L	138.209	86.194	

Testing Global Null Hypothesis: BETA=0				
Test	Chi-Square	DF	Pr > ChiSq	
Likelihood Ratio	52.0152	3	<.0001	
Score	42.1766	3	<.0001	
Wald	21.9797	3	<.0001	

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-5.1039	1.1455	19.8514	<.0001
X1	1	2.7426	0.7361	13.8836	0.0002
X2	1	3.2084	0.7543	18.0894	<.0001

Analysis of Maximum Likelihood Estimates					
Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
X3	1	0.0278	0.00904	9.4624	0.0021

Odds Ratio Estimates			
Effect	Point Estimate	95% Wald Confidence Limits	
X1	15.528	3.669	65.712
X2	24.739	5.640	108.512
X3	1.028	1.010	1.047

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	89.3	Somers' D	0.788	
Percent Discordant	10.5	Gamma	0.789	
Percent Tied	0.2	Tau-a	0.385	
Pairs	2520	c	0.894	

Estimated Covariance Matrix					
Parameter	Intercept	X1	X2	X3	
Intercept	1.312246	-0.49305	-0.71224	-0.0087	
X1	-0.49305	0.54179	0.302397	0.002074	
X2	-0.71224	0.302397	0.56904	0.003353	
X3	-0.0087	0.002074	0.003353	0.000082	

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
1	10	0	0.23	10	9.77	
2	10	0	0.25	10	9.75	
3	10	1	0.54	9	9.46	
4	10	2	2.50	8	7.50	
5	11	3	4.06	8	6.94	
6	10	2	4.18	8	5.82	
7	10	9	5.03	1	4.97	
8	10	5	6.01	5	3.99	
9	11	10	9.61	1	1.39	

Partition for the Hosmer and Lemeshow Test						
Group	Total	X4 = Sim		X4 = Não		
		Observed	Expected	Observed	Expected	
10	10	10	9.58	0	0.42	

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
10.7117	8	0.2186

Obs	ID	X1	X2	X3	X4	F_X4	I_X4	P_Não	P_Sim
1	2	0	0	56	0		Não	0.97199	0.02801
2	3	0	0	50	0		Não	0.97619	0.02381
3	5	0	0	50	0		Não	0.97619	0.02381
4	7	1	0	46	0		Não	0.74689	0.25311
5	8	1	0	62	0		Não	0.65411	0.34589
6	9	0	0	56	1		Não	0.97199	0.02801
7	10	1	0	55	0		Não	0.69674	0.30326
8	11	0	0	62	0		Não	0.96707	0.03293
9	12	0	0	71	0		Não	0.95809	0.04191
10	13	0	0	65	0		Não	0.96430	0.03570
11	14	1	0	67	1		Não	0.62201	0.37799
12	15	0	0	47	0		Não	0.97805	0.02195
13	17	0	0	50	0		Não	0.97619	0.02381
14	20	0	0	98	0		Não	0.91518	0.08482
15	21	0	0	52	0		Não	0.97486	0.02514
16	22	0	0	75	0		Não	0.95339	0.04661
17	23	0	0	99	1		Não	0.91300	0.08700
18	24	0	0	187	0		Sim	0.47593	0.52407
19	25	1	0	136	1		Sim	0.19455	0.80545
20	26	0	1	82	1		Sim	0.40498	0.59502
21	27	0	1	40	0		Não	0.68637	0.31363
22	31	0	1	55	0		Não	0.59051	0.40949
23	32	0	1	59	0		Não	0.56337	0.43663
24	33	1	1	48	1		Sim	0.10139	0.89861
25	34	1	1	51	1		Sim	0.09404	0.90596

Obs	ID	X1	X2	X3	X4	F_X4	I_X4	P_Não	P_Sim
26	36	0	1	48	0		Não	0.63662	0.36338
27	40	0	1	95	0		Sim	0.32163	0.67837
28	41	0	1	66	0		Não	0.51504	0.48496
29	42	1	1	84	1		Sim	0.03981	0.96019
30	44	1	1	76	1		Sim	0.04924	0.95076
31	45	0	1	70	1		Sim	0.48724	0.51276
32	46	1	1	78	1		Sim	0.04670	0.95330
33	47	0	1	70	1		Sim	0.48724	0.51276
34	49	0	1	82	1		Sim	0.40498	0.59502
35	50	0	1	67	1		Não	0.50809	0.49191
36	52	1	1	89	1		Sim	0.03482	0.96518
37	54	0	0	49	0		Não	0.97683	0.02317
38	56	0	0	51	0		Não	0.97553	0.02447
39	57	0	0	53	0		Não	0.97417	0.02583
40	58	0	0	51	0		Não	0.97553	0.02447
41	59	0	0	48	0		Não	0.97745	0.02255
42	60	1	0	45	0		Não	0.75211	0.24789
43	62	0	0	57	1		Não	0.97122	0.02878
44	63	1	0	54	0		Não	0.70258	0.29742
45	64	0	0	61	0		Não	0.96794	0.03206
46	65	0	0	70	0		Não	0.95920	0.04080
47	66	0	0	66	0		Não	0.96333	0.03667
48	68	0	0	48	0		Não	0.97745	0.02255
49	69	0	0	50	0		Não	0.97619	0.02381
50	71	0	0	79	0		Não	0.94819	0.05181
51	72	0	0	84	0		Não	0.94092	0.05908
52	73	0	0	97	0		Não	0.91732	0.08268
53	74	0	0	51	0		Não	0.97553	0.02447
54	75	0	0	76	0		Não	0.95214	0.04786
55	77	0	0	186	0		Sim	0.48287	0.51713
56	78	1	0	137	1		Sim	0.19023	0.80977
57	80	0	1	41	0		Não	0.68035	0.31965
58	81	0	1	51	0		Não	0.61711	0.38289
59	84	0	1	56	0		Não	0.58377	0.41623
60	85	0	1	60	0		Não	0.55651	0.44349
61	86	1	1	49	1		Sim	0.09888	0.90112

Obs	ID	X1	X2	X3	X4	F_X4	I_X4	P_Não	P_Sim
62	87	1	1	51	1		Sim	0.09404	0.90596
63	88	0	1	48	1		Não	0.63662	0.36338
64	89	0	1	49	0		Não	0.63016	0.36984
65	90	1	1	64	0		Sim	0.06743	0.93257
66	91	0	1	101	0		Sim	0.28636	0.71364
67	92	0	1	77	0		Sim	0.43888	0.56112
68	93	0	1	96	0		Sim	0.31559	0.68441
69	94	0	1	67	0		Não	0.50809	0.49191
70	95	1	1	85	1		Sim	0.03876	0.96124
71	97	1	1	77	1		Sim	0.04795	0.95205
72	100	0	1	70	1		Sim	0.48724	0.51276
73	101	0	1	67	1		Não	0.50809	0.49191
74	104	1	1	72	1		Sim	0.05472	0.94528
75	107	0	0	52	0		Não	0.97486	0.02514
76	108	0	0	75	0		Não	0.95339	0.04661
77	109	0	0	99	1		Não	0.91300	0.08700
78	110	0	0	187	0		Sim	0.47593	0.52407
79	111	1	0	136	1		Sim	0.19455	0.80545
80	114	0	1	50	0		Não	0.62366	0.37634
81	115	0	1	50	0		Não	0.62366	0.37634
82	116	0	1	40	0		Não	0.68637	0.31363
83	117	0	1	55	0		Não	0.59051	0.40949
84	118	0	1	59	0		Não	0.56337	0.43663
85	119	1	1	48	1		Sim	0.10139	0.89861
86	122	0	1	48	0		Não	0.63662	0.36338
87	124	0	1	102	0		Sim	0.28071	0.71929
88	125	0	1	76	0		Sim	0.44573	0.55427
89	128	1	1	84	1		Sim	0.03981	0.96019
90	129	1	1	81	1		Sim	0.04312	0.95688
91	130	1	1	76	1		Sim	0.04924	0.95076
92	131	0	1	70	1		Sim	0.48724	0.51276
93	132	1	1	78	1		Sim	0.04670	0.95330
94	133	0	1	70	1		Sim	0.48724	0.51276
95	134	0	1	67	1		Não	0.50809	0.49191
96	136	0	1	67	1		Não	0.50809	0.49191
97	138	1	1	89	1		Sim	0.03482	0.96518

Obs	ID	X1	X2	X3	X4	F_X4	I_X4	P_Não	P_Sim
98	139	1	1	26	1		Sim	0.17220	0.82780
99	140	0	0	49	0		Não	0.97683	0.02317
100	143	0	0	53	0		Não	0.97417	0.02583
101	144	0	0	51	0		Não	0.97553	0.02447
102	146	1	0	45	0		Não	0.75211	0.24789

The FREQ Procedure

Frequency	Table of X4 by I_X4		
	I_X4(Into: X4)		Total
X4(Envolvimento nodal)	Não	Sim	
Não	54	10	64
Sim	10	28	38
Total	64	38	102