

**STAT455-HW03 Problem 3.15(a)(b) Woolf CI and Exact Cornfield****The FREQ Procedure**

Table of Group by Normal			
Group	Normal		
Frequency	Yes	No	Total
Treatmen	7	8	15
Control	0	15	15
Total	7	23	30

**Statistics for Table of Group by Normal**

Odds Ratio and Relative Risks			
Statistic	Value	95% Confidence Limits	
Relative Risk (Column 2)	0.5333	0.3322	0.8562
One or more statistics not computed -- zero cell.			

Odds Ratio	
Odds Ratio	Infy
Asymptotic Conf Limits	
95% Lower Conf Limit	.
95% Upper Conf Limit	.
Exact Conf Limits	
95% Lower Conf Limit	2.6460
95% Upper Conf Limit	Infy

**Sample Size = 30**

**STAT455-HW03 Problem 3.15(c) Profile Likelihood****The LOGISTIC Procedure**

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

Number of Observations Read	4
Number of Observations Used	3
Sum of Weights Read	30
Sum of Weights Used	30

Response Profile			
Ordered Value	Normal	Total Frequency	Total Weight
1	1=Y	1	7.000000
2	2=N	2	23.000000

**Probability modeled is Normal='1=Y'.**

**Note:** 1 observation having nonpositive frequency or weight was excluded since it does not contribute to the analysis.

Class Level Information		
Class	Value	Design Variables
Group	1=Y	1
	2=N	0

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

**Warning:** The maximum likelihood estimate may not exist.

**Warning:** The LOGISTIC procedure continues in spite of the above warning. Results shown are based on the last maximum likelihood iteration. Validity of the model fit is questionable.

**STAT455-HW03 Problem 3.15(c) Profile Likelihood****The LOGISTIC Procedure****WARNING: The validity of the model fit is questionable.**

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	34.596	24.728
SC	33.695	22.926
-2 Log L	32.596	20.728

Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	11.8679	1	0.0006
Score	9.1304	1	0.0025
Wald	0.0403	1	0.8409

Type 3 Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
Group	1	0.0403	0.8409

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	-10.6202	52.2535	0.0413	0.8389
Group	1=Y	1	10.4867	52.2560	0.0403	0.8409

Association of Predicted Probabilities and Observed Responses				
Percent Concordant	50.0	Somers' D	0.500	
Percent Discordant	0.0	Gamma	1.000	
Percent Tied	50.0	Tau-a	0.333	
Pairs	2	c	0.750	

**STAT455-HW03 Problem 3.15(c) Profile Likelihood****The LOGISTIC Procedure****WARNING: The validity of the model fit is questionable.**

Odds Ratio Estimates and Profile-Likelihood Confidence Intervals				
Effect	Unit	Estimate	95% Confidence Limits	
Group 1=Y vs 2=N	1.0000	>999.999	5.117	.

