Logistic Regression
Outline 3-18-10

I. The 2x2 Case ~~(pg 29-31)~~

A. OR
B. Ln(OR)
C. SE ln(OR)
D. CI on ln(OR)
E. CI on OR

II Logistic Regression

A. The $\pi(x)$ logistic function ~~(pg 7, 11)~~
B. The logit version $g(x) = \beta_0 + \beta_1 x$ ~~(pg 7, 11)~~
C. Interpretation of betas ~~(pg 24, 29, 34)~~
E. Estimation of $\hat{\pi}(x)$ for a particular set of values ~~(pg 25 middle, don't worry about variance computation)~~
F. The connection of logistic regression elements to I. A-E ~~(pg 29-31)~~

III Logistic Regression testing

A. The Wald test ~~(pg 13)~~
B. The -2 ln Likelihood test ~~(pg 13) (pg 9)~~
C. Testing a reduced model vs a full model ~~(pg 19-21)~~
D. Confounding and associated logistic model ~~(pg 47)~~
E. Effect modification and associated logistic model ~~(pg 50)~~

IV. The Comparison of Different Groups with Binary Outcome. ~~(pg 33, 34, 35)~~

A. Odds ratio estimation of groups versus the reference group. ~~(pg 33-35)~~
B. Odds ratio estimation comparing groups that are not the reference group. (See class notes)

V. Estimation of OR in Interaction Models

A. Estimation of the OR associated with the risk factor for particular values of the effect modifier. ~~(Pg 51 - 56)~~

VI. Other Topics

A. Calculation of OR for a C unit change in a continuous risk factor. ~~(Pg 39 - 41)~~