

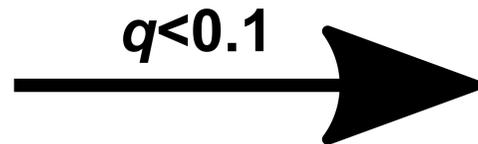
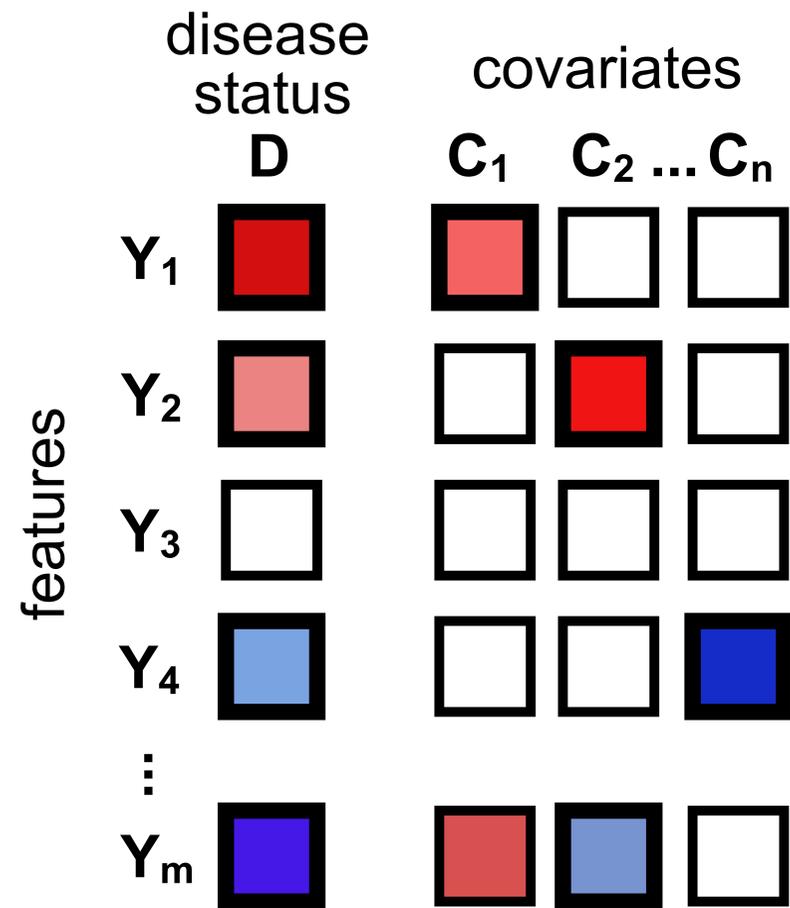
Naive association testing

between all feature-covariate pairs

Confounder modeling and *post hoc* testing

for all significant covariates, C_i

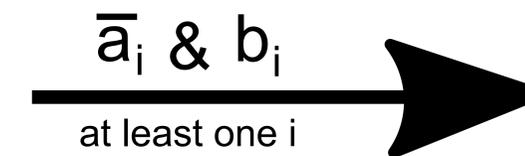
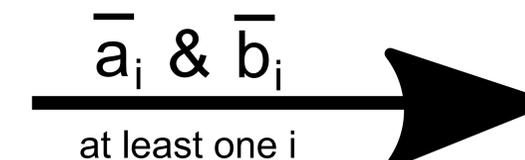
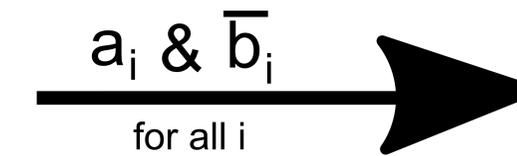
Feature status determination



a_i Significance of **disease status** beyond that of covariate?

$$\frac{m(Y_1 \sim D + C_i)}{m(Y_1 \sim C_i)}$$

b_i Significance of **covariate** beyond that of disease status?

$$\frac{m(Y_1 \sim D + C_i)}{m(Y_1 \sim D)}$$


CONFIDENTLY DECONFOUNDED

Disease signal not reducible to any covariate

AMBIGUOUSLY DECONFOUNDED

Disease and covariate signal concurrently lost

CONFOUNDED

Disease signal reducible to at least one covariate