Supplementary Figures
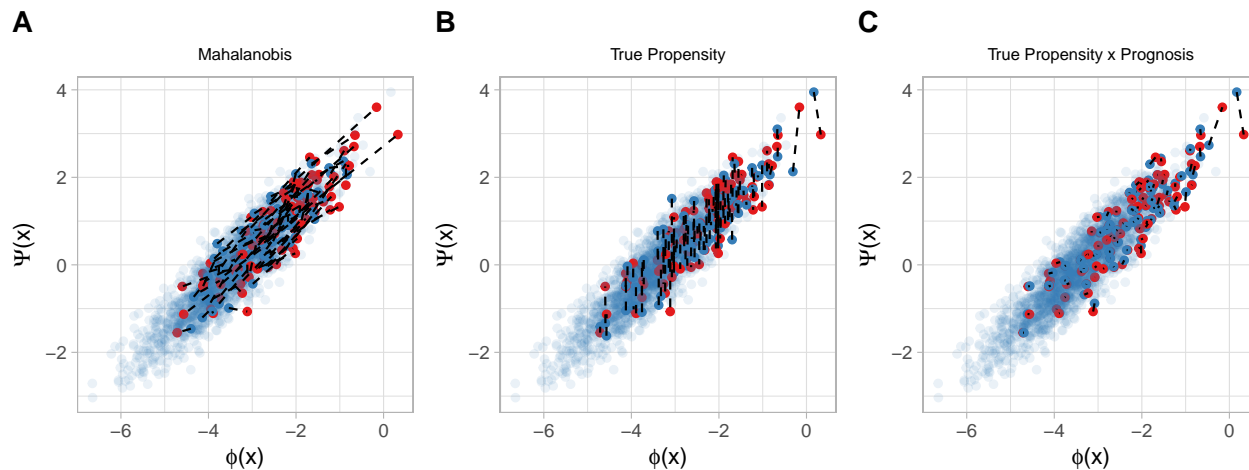
Rachael Caelie (Rocky) Aikens

5/8/2019
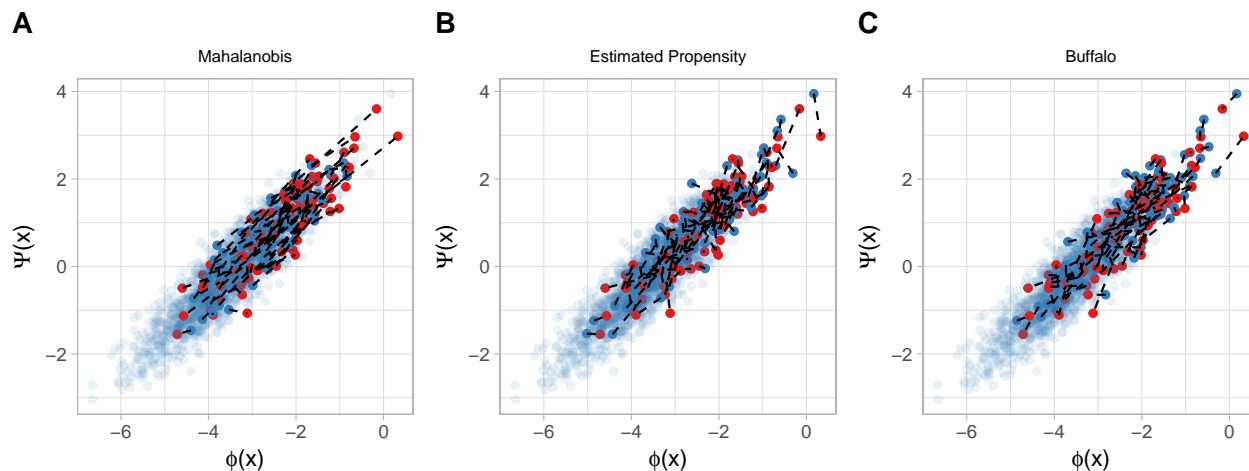
To do

- [ ] Delete text and write captions for figures 1 and 2
- [ ] Supplementary figure 3 (p = 50)
- [X] Supplementary figure 4 (mu = X1-10/3)
- [X] Supplementary figure 5 (sigma = 2)

Supplementary Figures 1 and 2: Motivating visualization when prognosis and treatment are highly corellated.

Supplementary Figure 1: Replication of Figure 1 with $\rho = 0.9$. This simulates the case that propensity and prognosis are highly correlated. When this occurs, matching on propensity will also achieve some prognostic balance, and vise-versa.
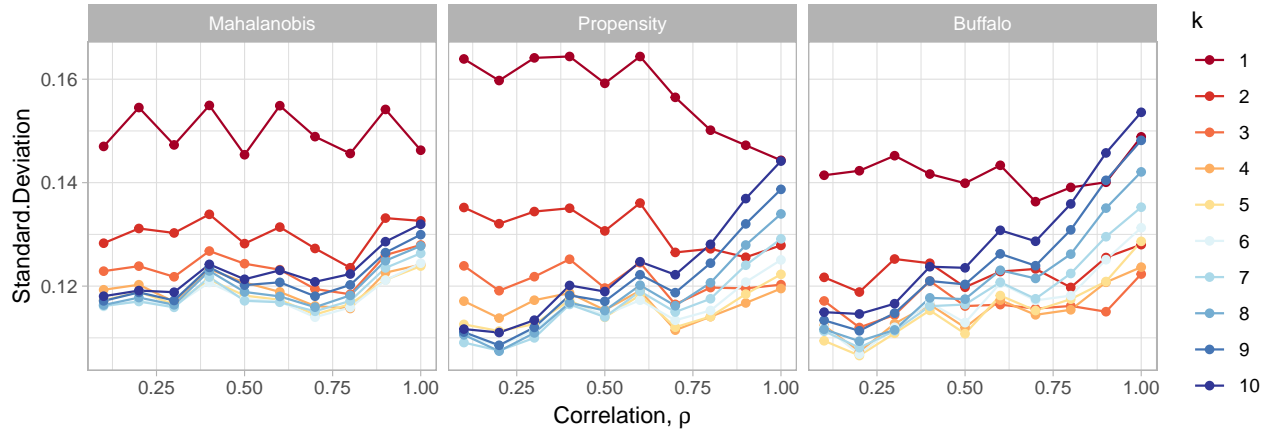
Supplementary Figure 3

Bias and MSE for MDM, propensity, and prognostic score matching when p = 50.

To do

Supplementary Figure 4

Supplementary Figure 4 Standard deviation from matching estimators when overlap between treated and control individuals is poor. Simulations were carried out as described in Section 4.1, but with $\phi(X_i) = X_{i1} - 10/3$. This kept the sample size and number of treated individuals constant while increasing the separation of treated and control individuals.

Supplementary Figure 5
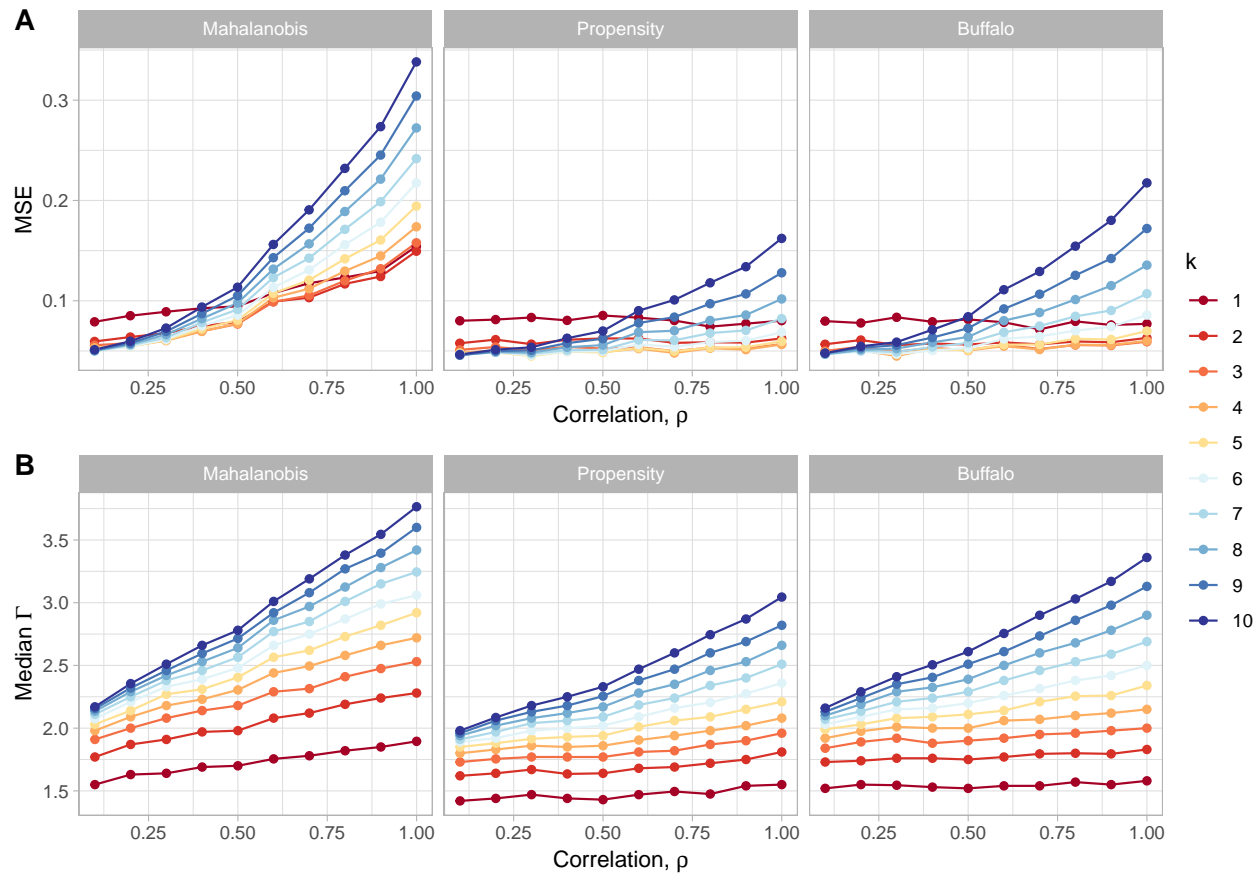
Supplementary Figure 5 MSE and median gamma design sensitivity when the random noise contributing to the outcome is increased. All simulation parameters are the same as described in Section 4.1, except that $\sigma = 2$ This increases the difficulty of fitting the prognostic score, diminishing the performance of Buffalo matching in terms of MSE and sensitivity.