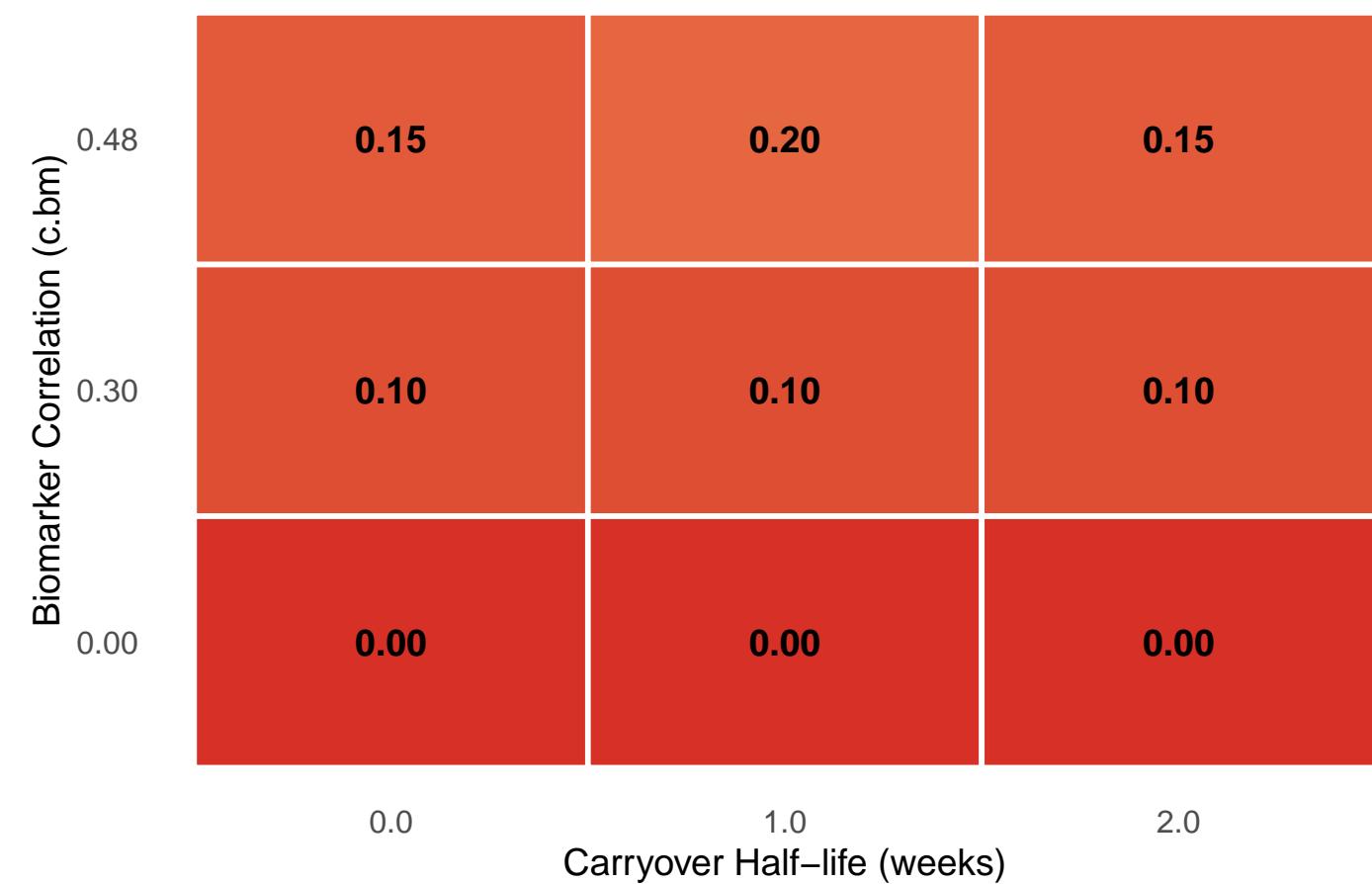


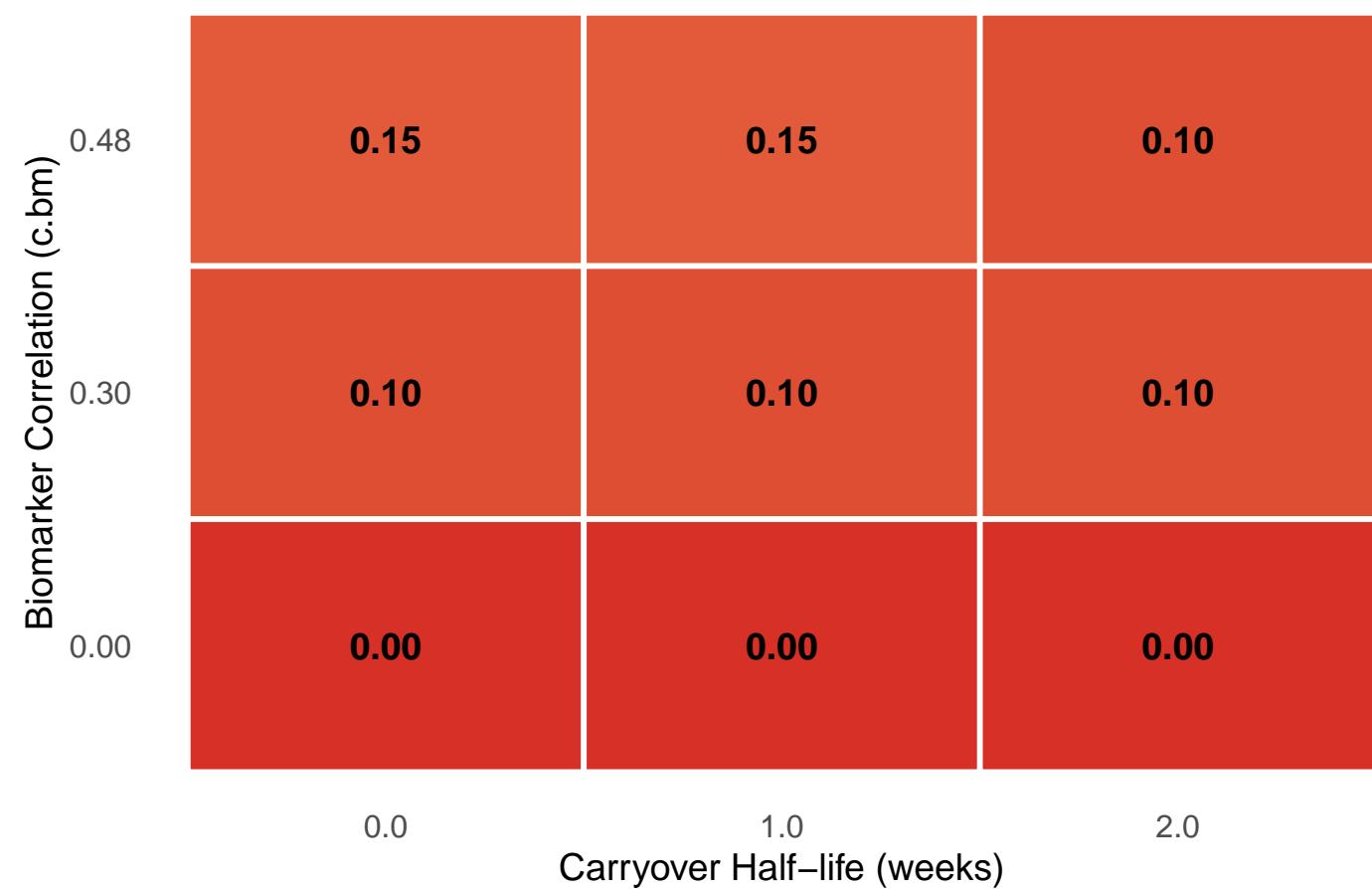
# Statistical Power Across All Parameter Combinations

Monte Carlo simulation (N=70 participants, 20 iterations per combination)

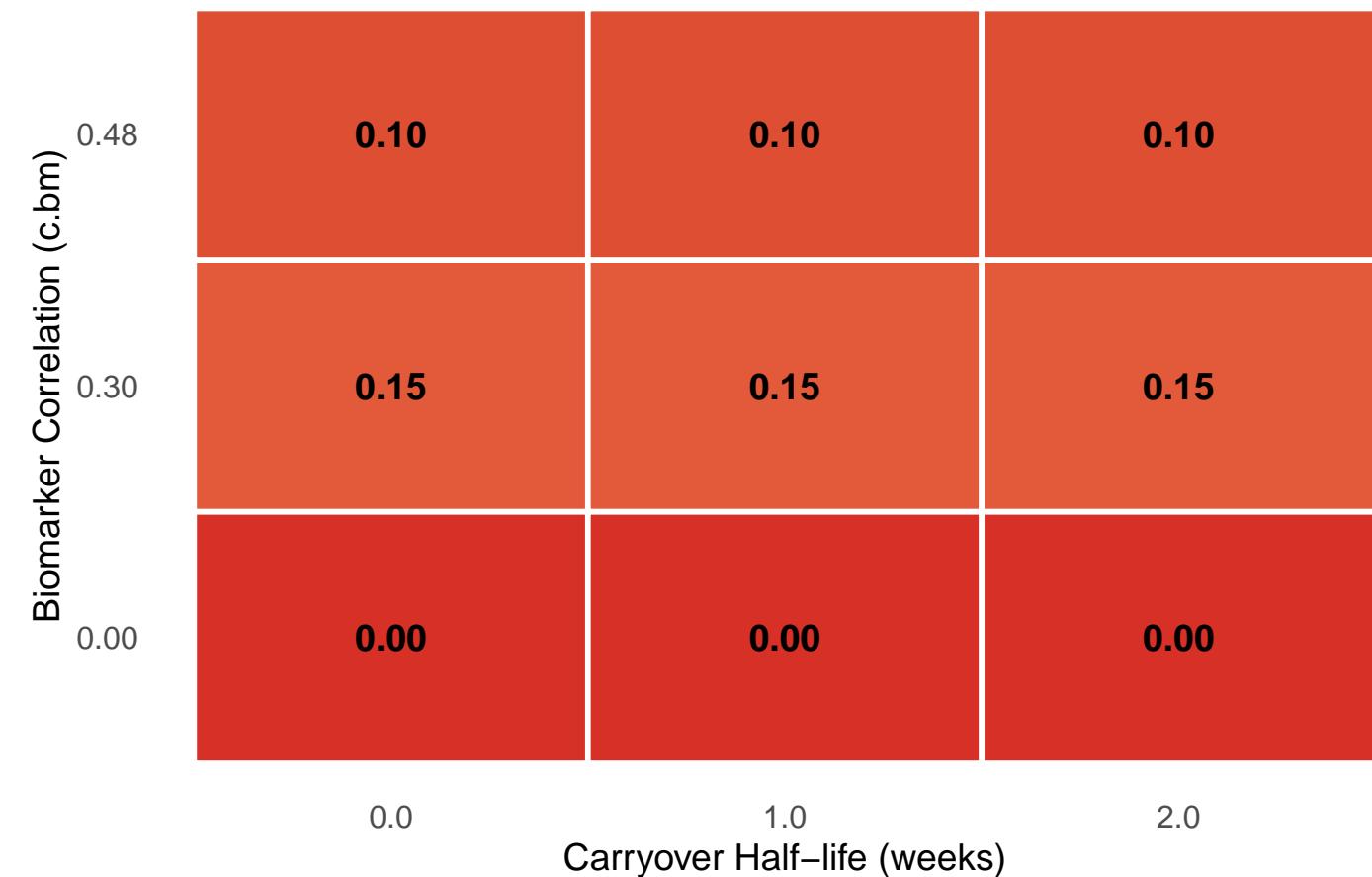
**Hybrid Design  
WITHOUT Carryover Model**



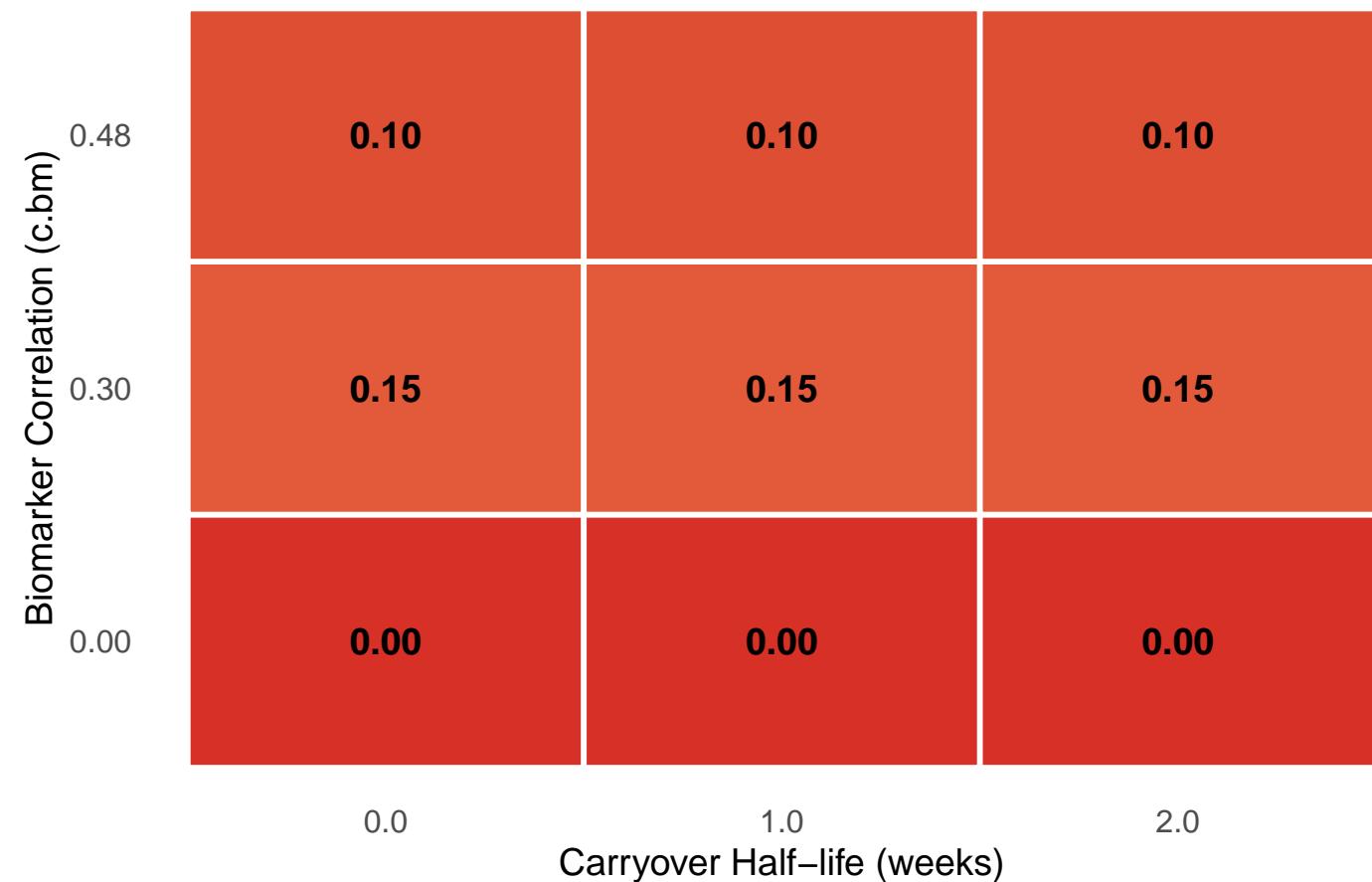
**Hybrid Design  
WITH Carryover Model**



**Crossover Design  
WITHOUT Carryover Model**



**Crossover Design  
WITH Carryover Model**



Power

1.0
0.8
0.6
0.4
0.2
0.0

Each heatmap shows power to detect biomarkerxTreatment interaction  
Biomarker correlation levels: 0 (no interaction), 0.3 (moderate), 0.48 (strong)  
Fixed parameters: autocorr = 0.6 (reduced from Hendrickson 0.8), treatment effect = 5.0