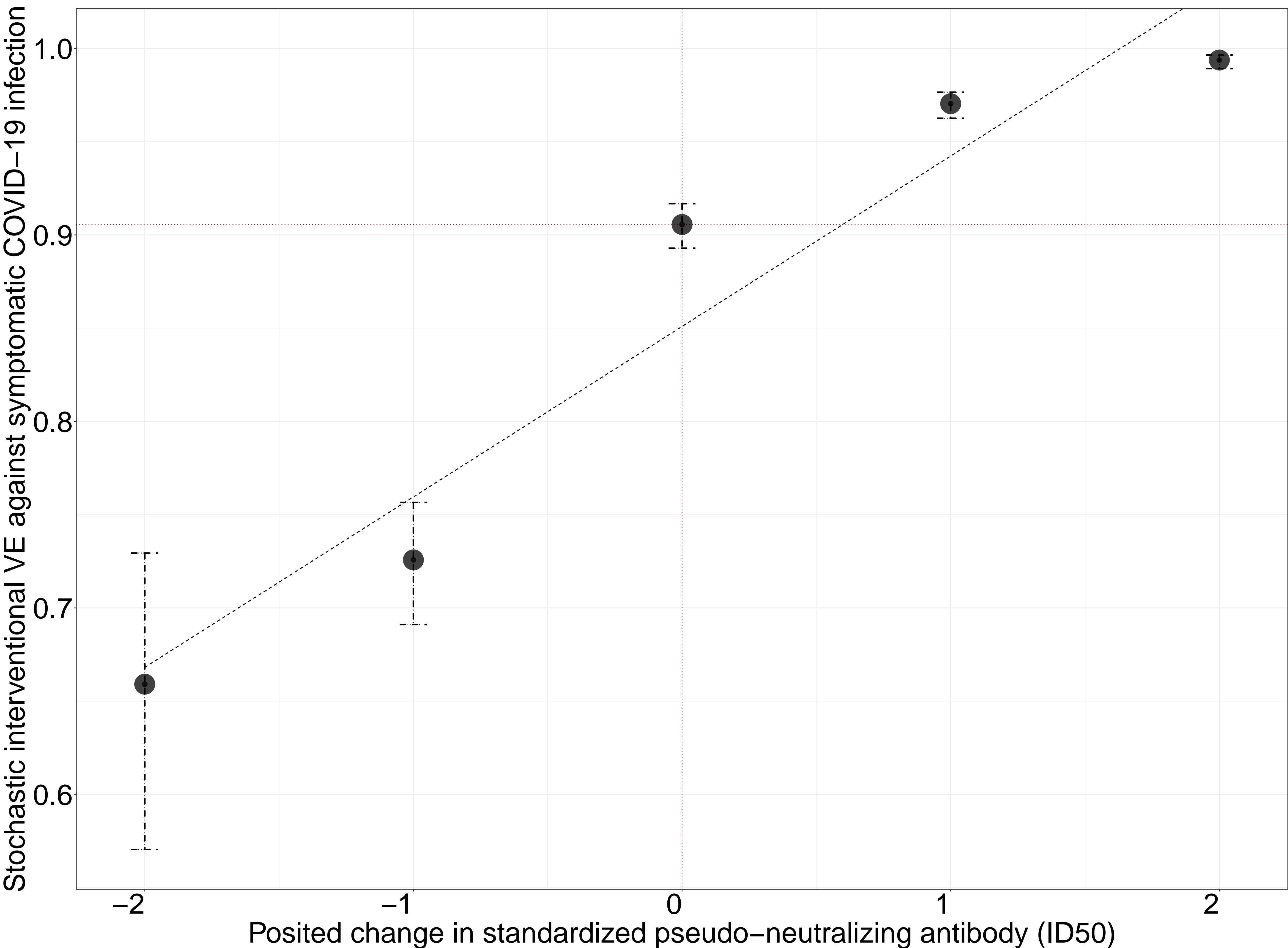


# Estimated vaccine efficacy v. symptomatic COVID–19 infection at Day 57

working MSM summary: ( $\hat{\beta}_{\text{TMLE}} = 0.0914$ , p–value = 0.1802)



Stochastic interventional vaccine efficacy v. COVID–19 infection across standardized shifts in pseudo–neutralizing antibody (ID50) levels, summarized by projection of causal dose–response curve on a linear working model.