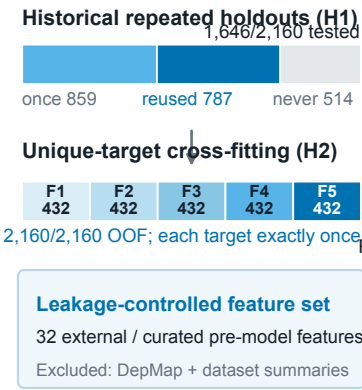


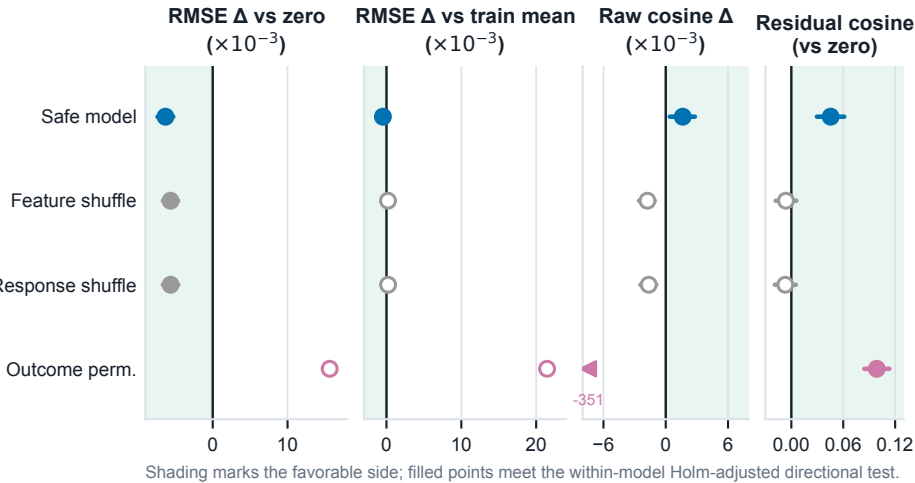
Figure 3 | Unique-target cross-fitting reveals modest predictive signal

All 2,160 perturbations receive one out-of-fold prediction; effect size, baseline choice and reliability define the claim boundary.

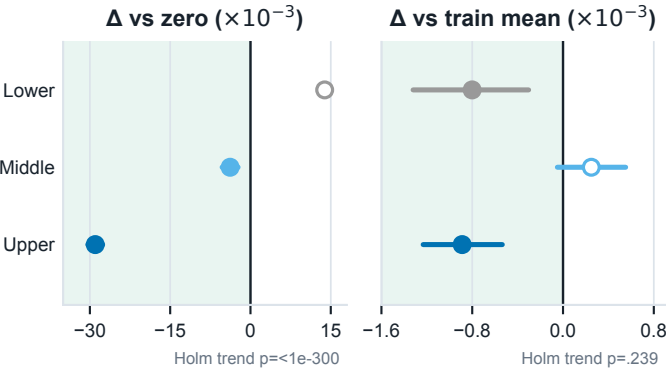
a Complete OOF target coverage



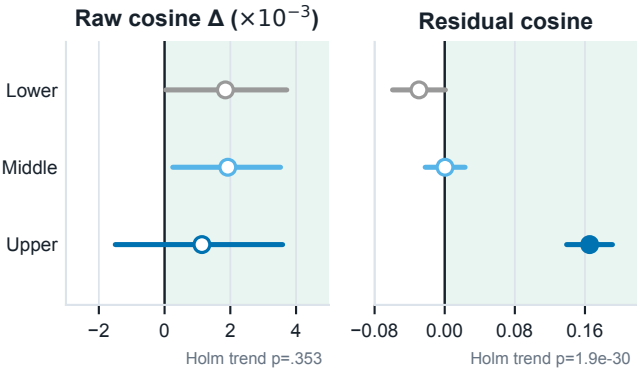
b Primary effects and negative controls



c RMSE by reliability tertile (n=720 each)



d Direction by reliability tertile



Claim boundary

RMSE improvement: 5.10% vs zero; 0.41% vs train mean. Raw cosine gain: +0.00164.

Interpretation: statistically detectable full-OOF benchmark signal, but modest practical gain and no robust evidence for strong directional prediction.