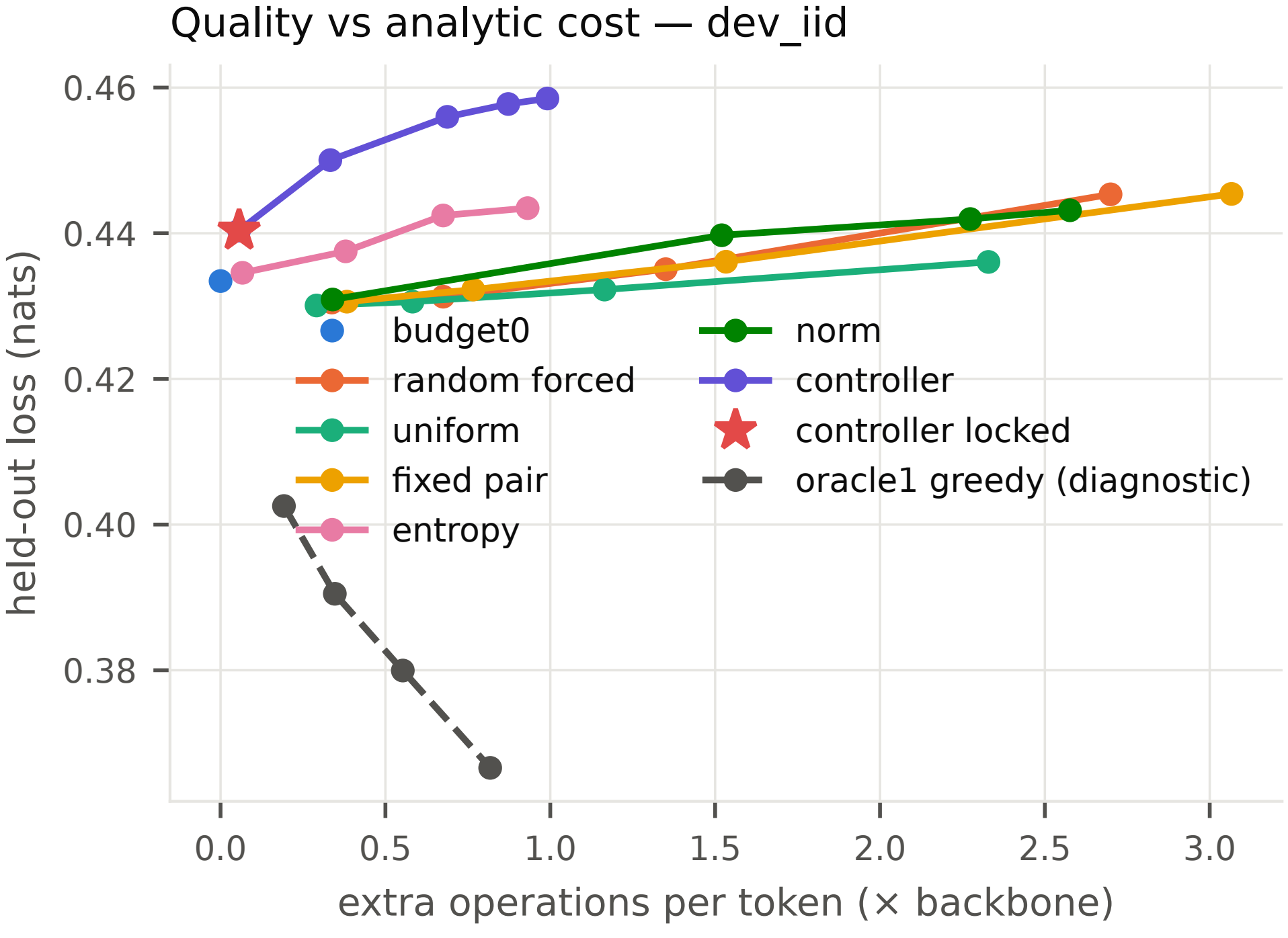

Quality vs analytic cost — dev_iid
held-out loss (nats)
0.46
0.44
0.42
0.40
0.38
0.0
0.5
1.0
1.5
2.0
2.5
3.0
extra operations per token (× backbone)
budget0
random forced
uniform
fixed pair
entropy
norm
controller
controller locked
oracle1 greedy (diagnostic)