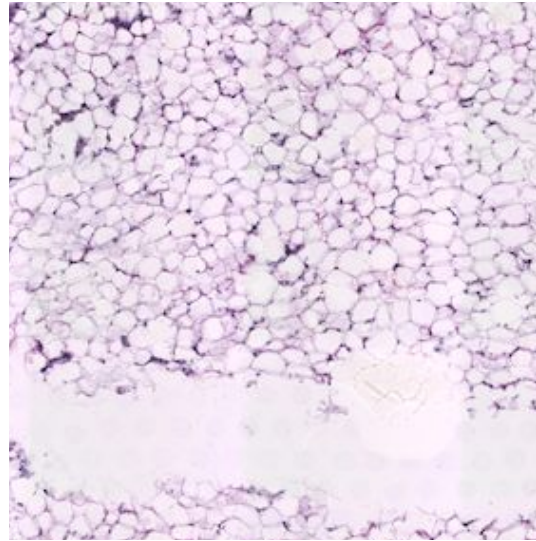
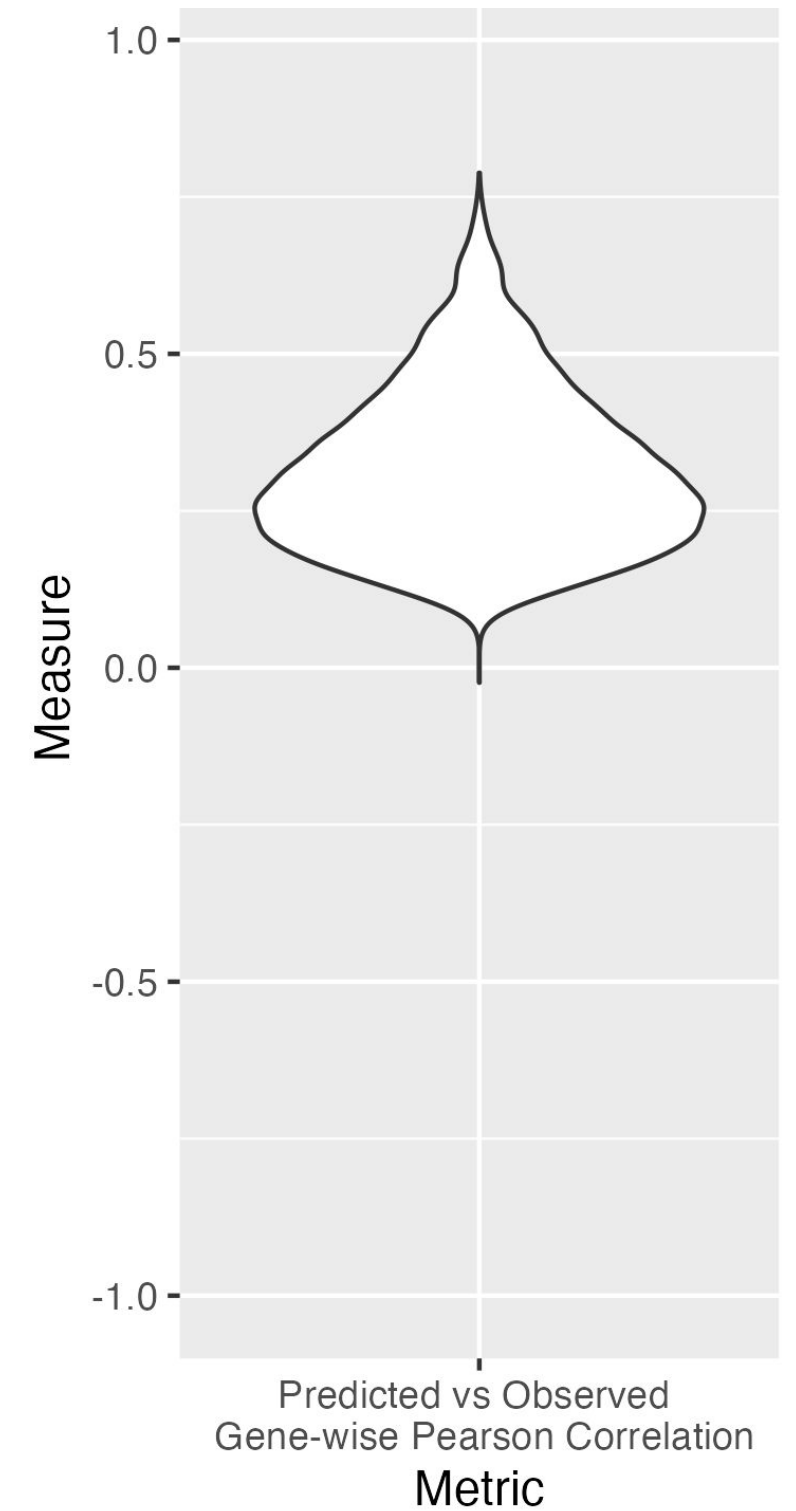
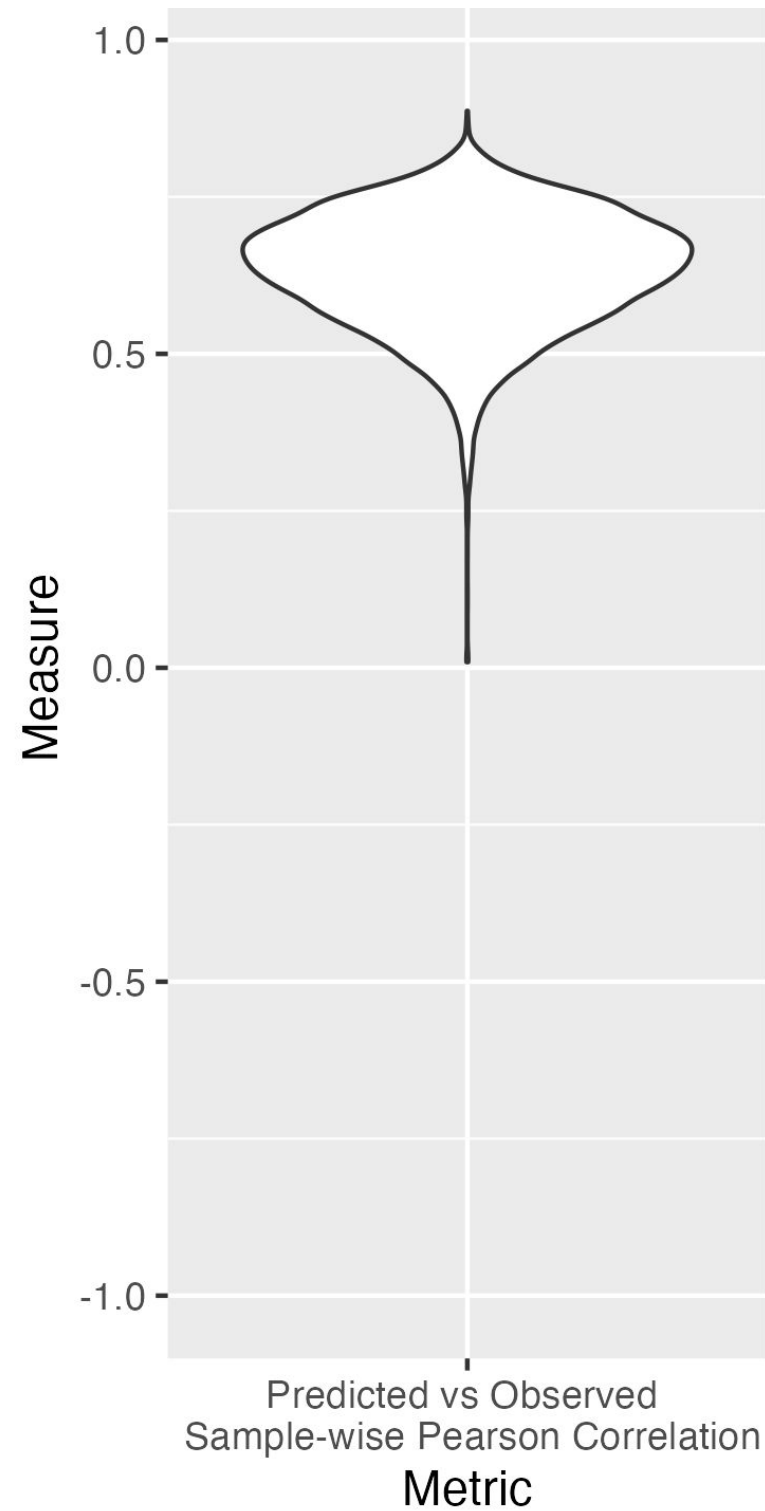


Base relational equivalence

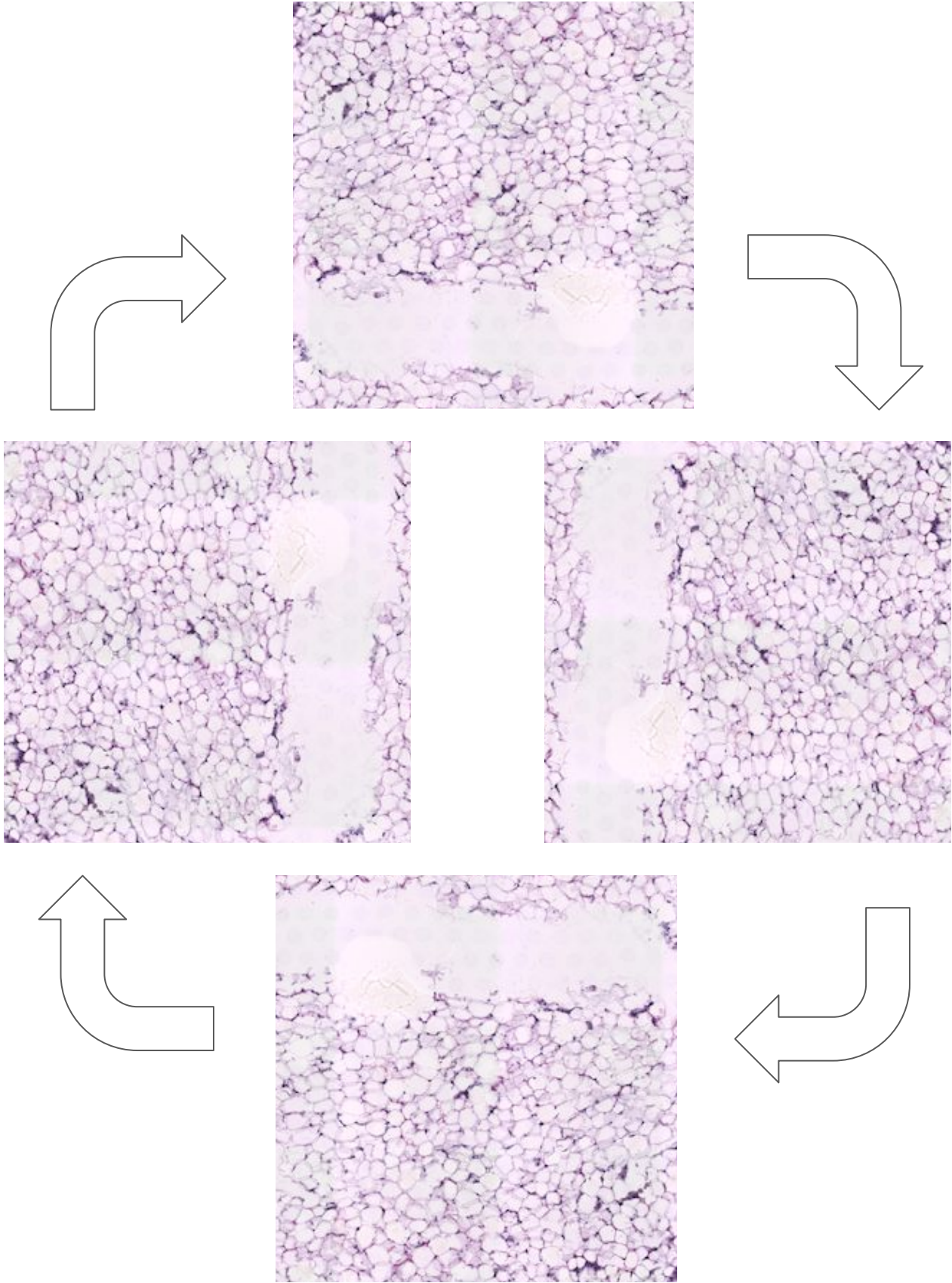


GEX
Transformed
vs
Observed

**Results: High cosine correlation
between transformed and observed**



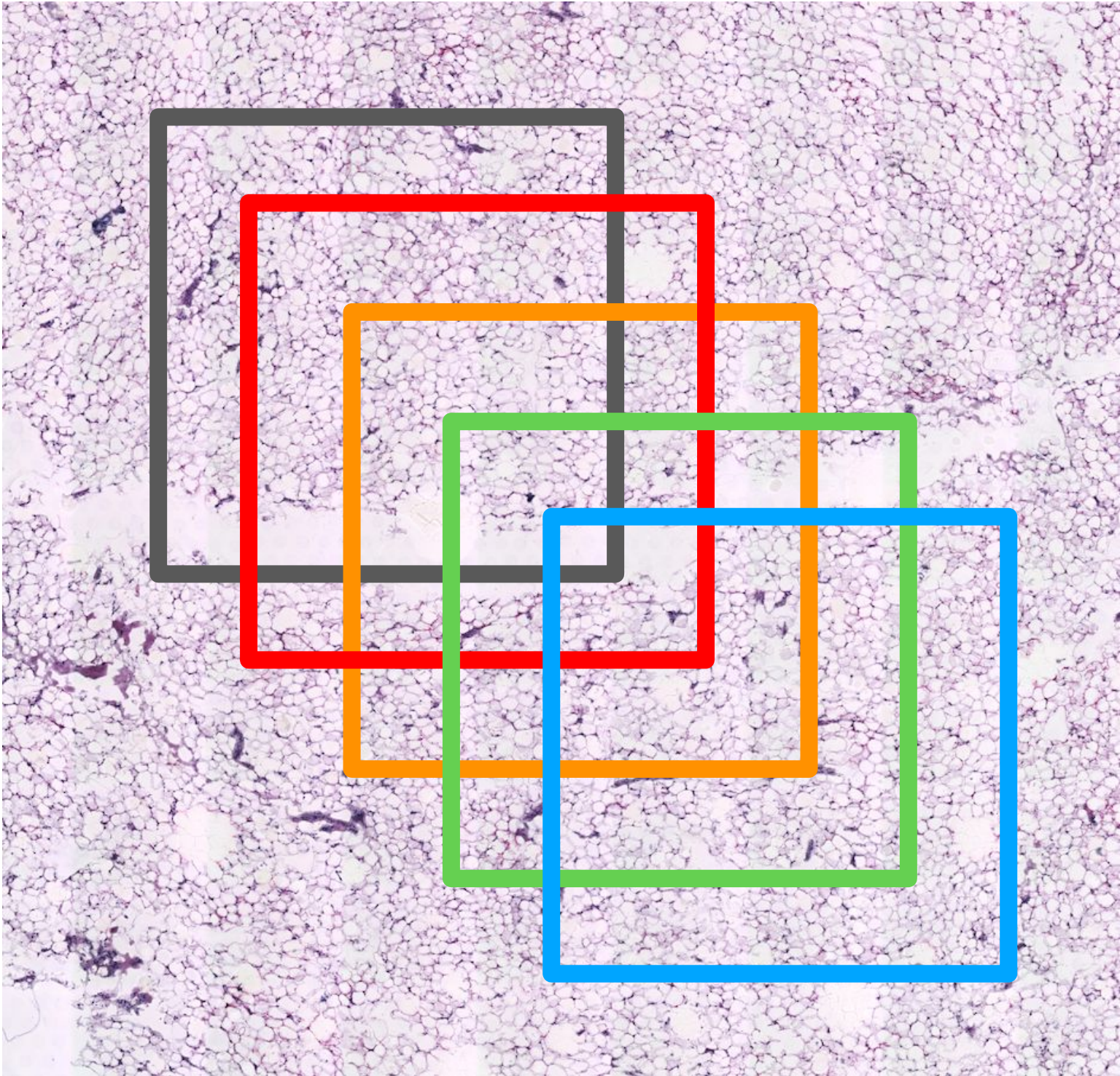
Spatial Rotation



Results: No statistically significant difference across rotations

Rotation comparison	P-value (non-adjusted)
0 vs 90 degrees	0.98476
0 vs 180 degrees	0.38078
0 vs 270 degrees	0.31341

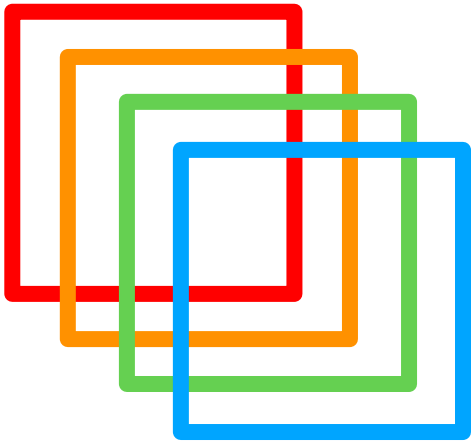
Spatial Displacement



Main:



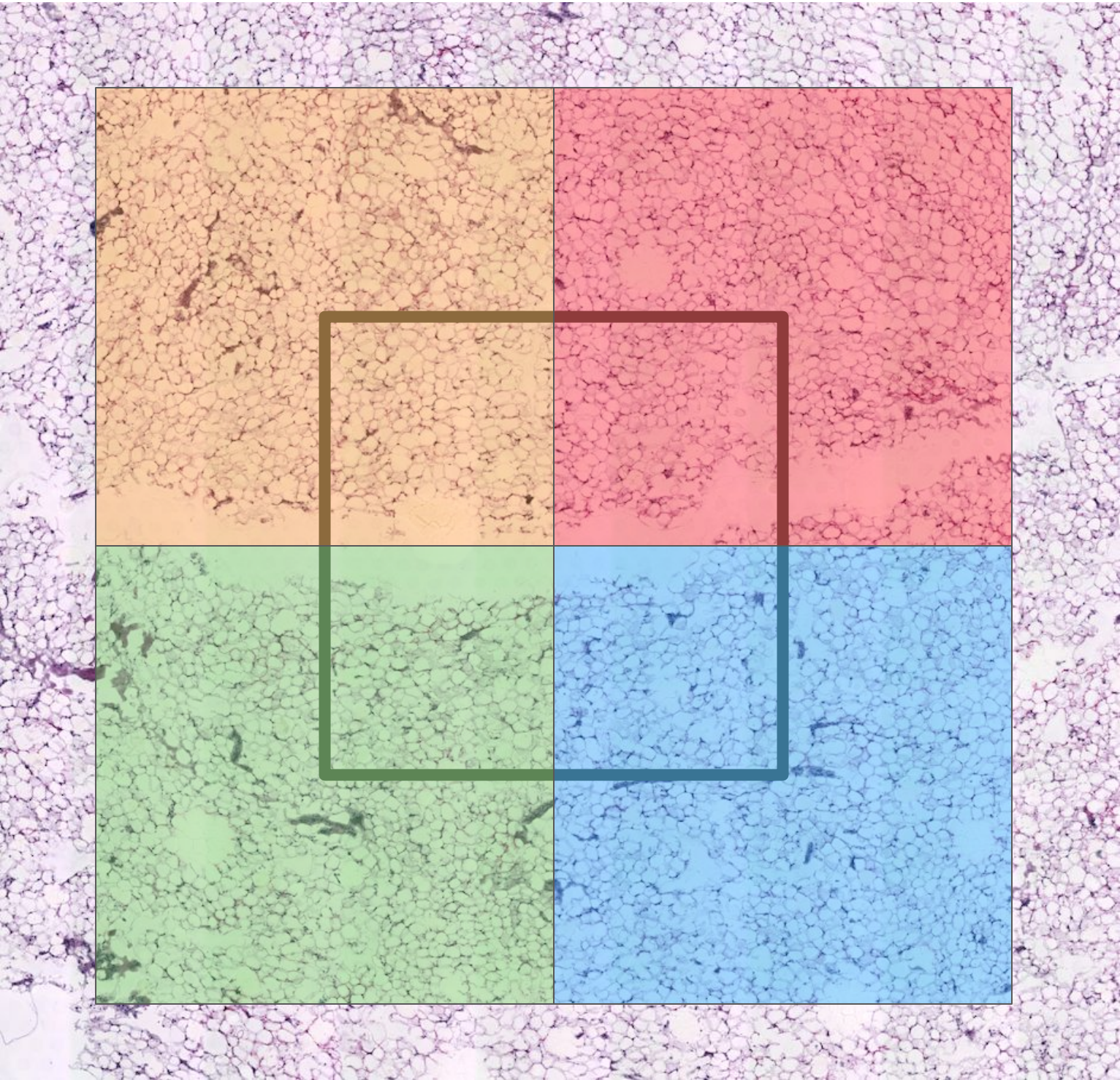
Displaced:



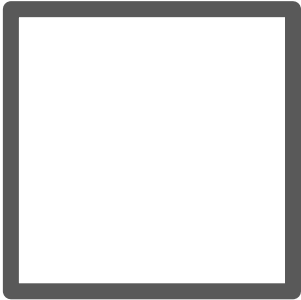
Results: Increasing statistical significant difference with displacement

Displacement comparison	P-value (non-adjusted)
0 vs 10 displaced pixels	0.07971
0 vs 20 displaced pixels	0.00024
0 vs 30 displaced pixels	0.00000

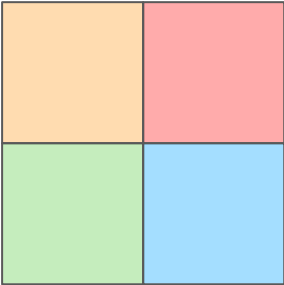
Spatial Similarity



Main:



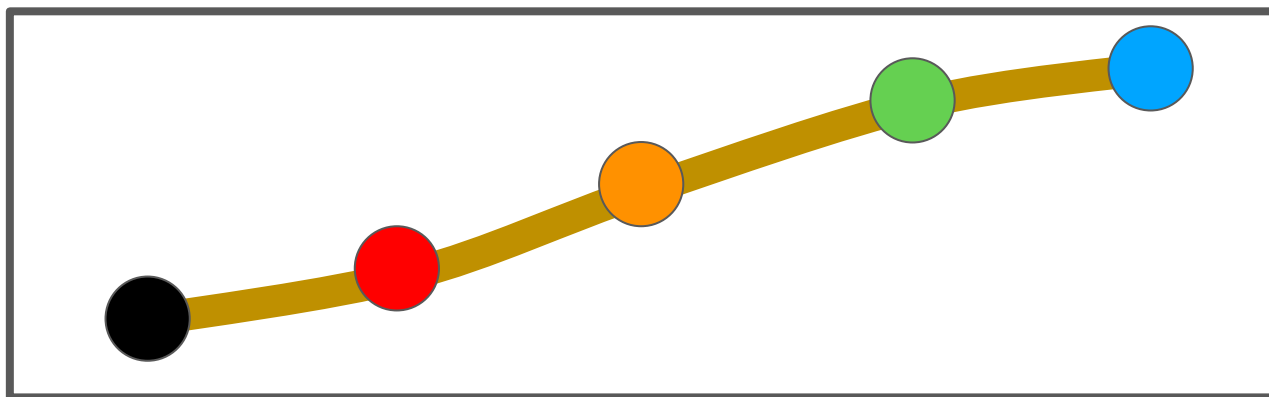
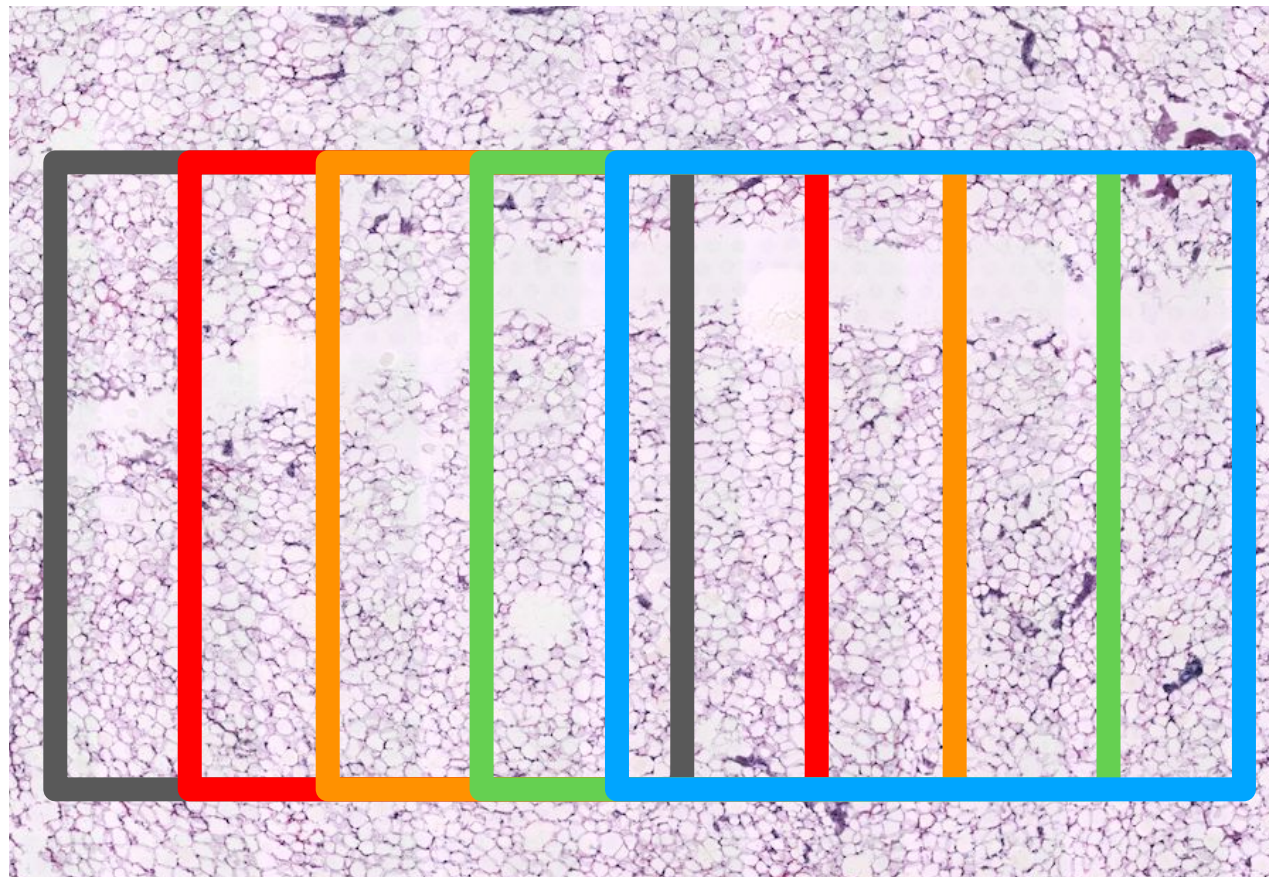
Similar:



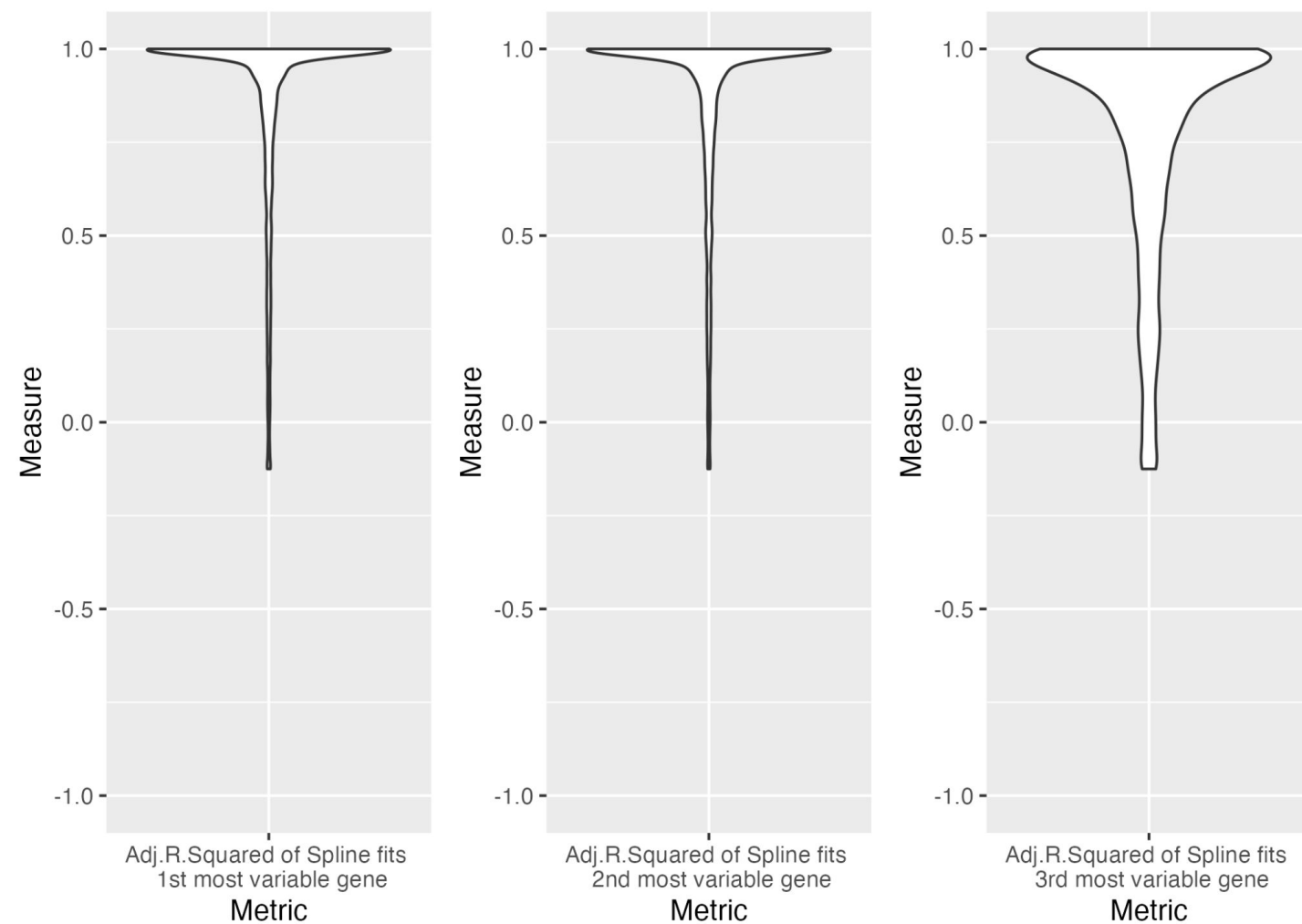
Results: No statistical significant difference across spatially similar spots

Similarity comparison	P-value (non-adjusted)
0,0 vs -3,-3 x,y coord displace	0.56382
0,0 vs 3,-3 x,y coord displace	0.81988
0,0 vs -3,3 x,y coord displace	0.40157
0,0 vs 3,3 x,y coord displace	0.56382

Spatial Signal



Results: Spline fits well as displacement is incremented



Adj.R-squared: 0.844571155864712

