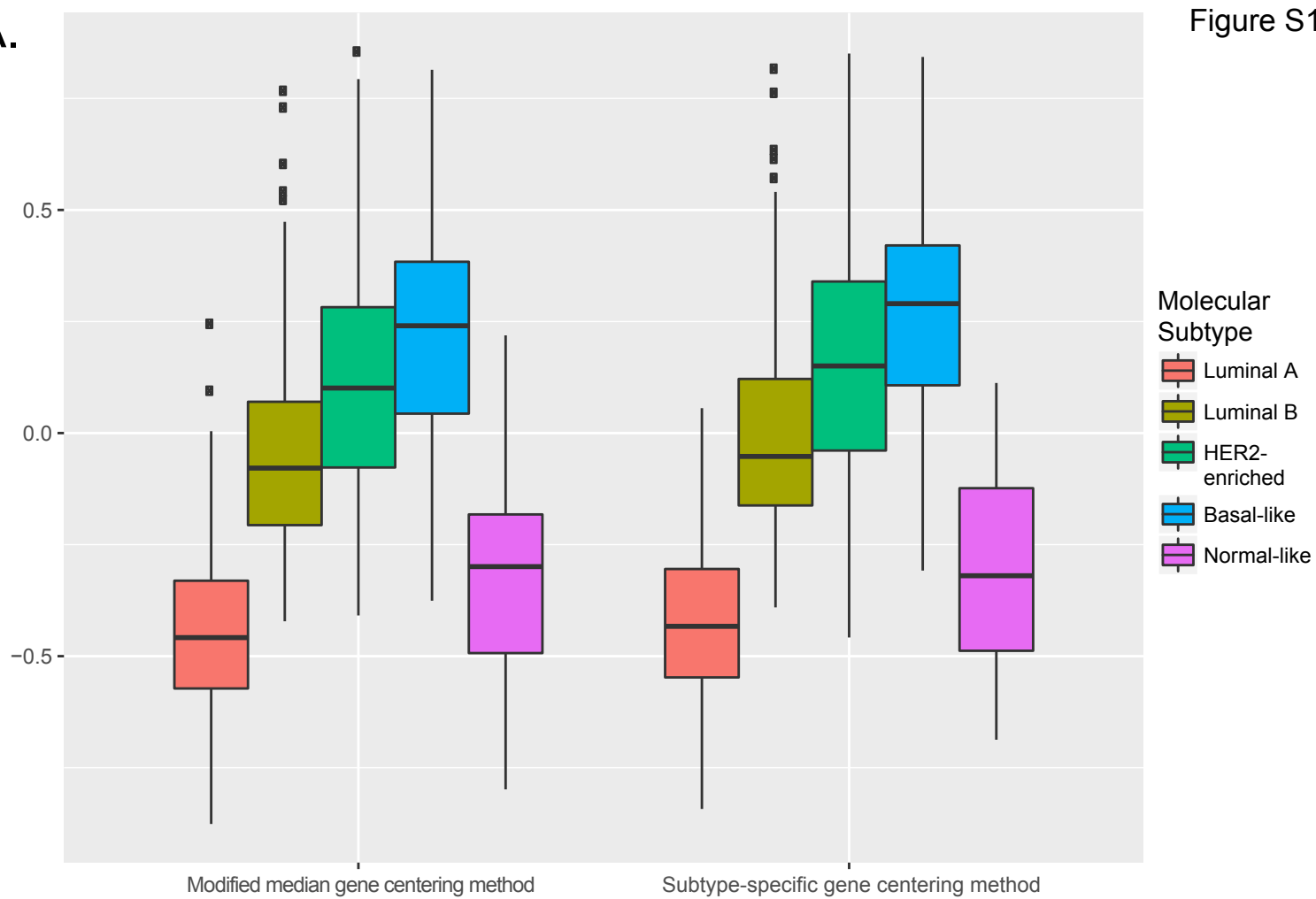


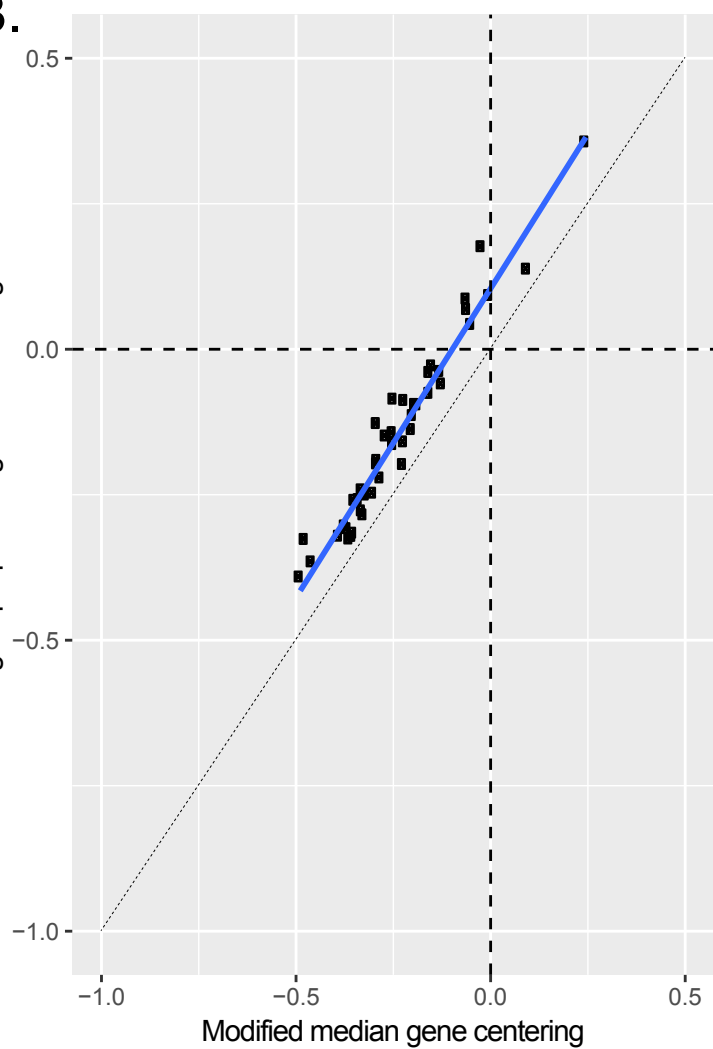
A.

Proliferation Scores



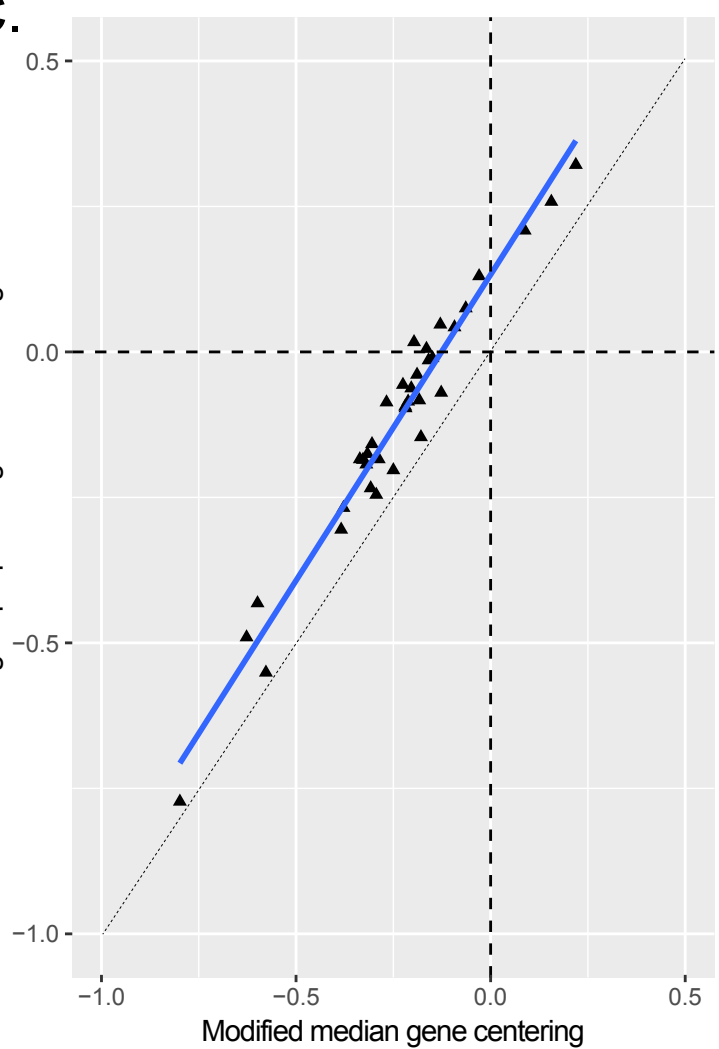
B.

Subgroup-specific gene centering



C.

Subgroup-specific gene centering



Supplementary Figure S1. (A) Median proliferation scores for each molecular subtype (except Normal-like) computed using the modified median gene centering method are generally lower compared to the median scores obtained using the subgroup-specific gene centering method. (B) There were 44 discordant cases that were either classified as Luminal A by the modified median method or Luminal B by the subgroup-specific method. Despite a strong correlation between the two methods (Spearman's rho of 0.99, $p < 0.01$), the scatterplot shows that proliferation scores computed using the subgroup-specific method of these 44 cases are higher, thus driving the classification of these samples into the more aggressive Luminal B subtype. (C) Among cases that were not classified as Normal-like by the subgroup-specific gene centering method ($n=36$), proliferation scores were also higher when computed using the subgroup-specific method compared to the modified median method. The proliferation scores remained strongly correlated between the two pre-processing methods (Spearman's rho of 0.94, $p < 0.01$).