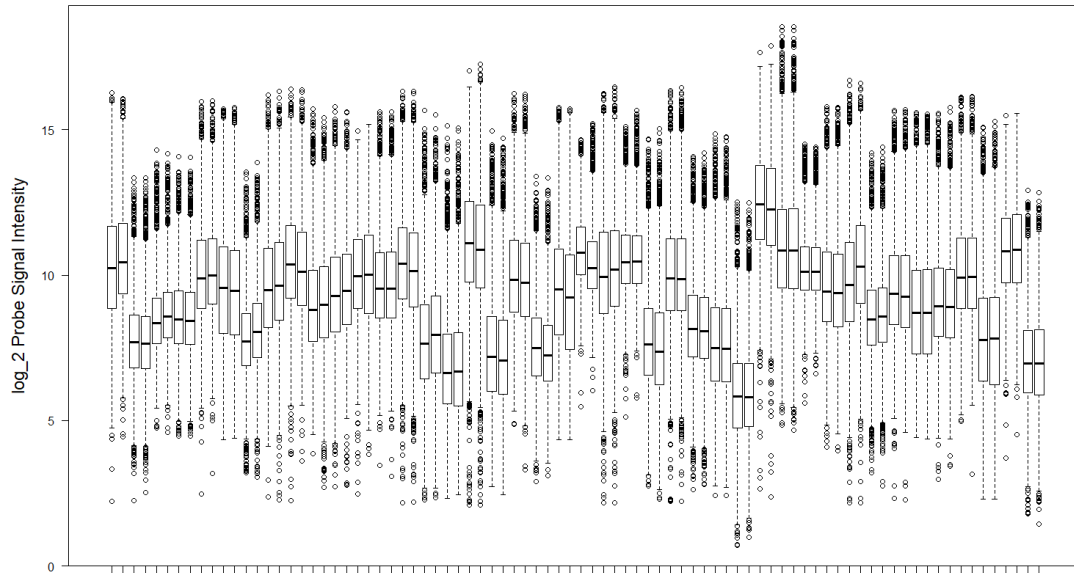
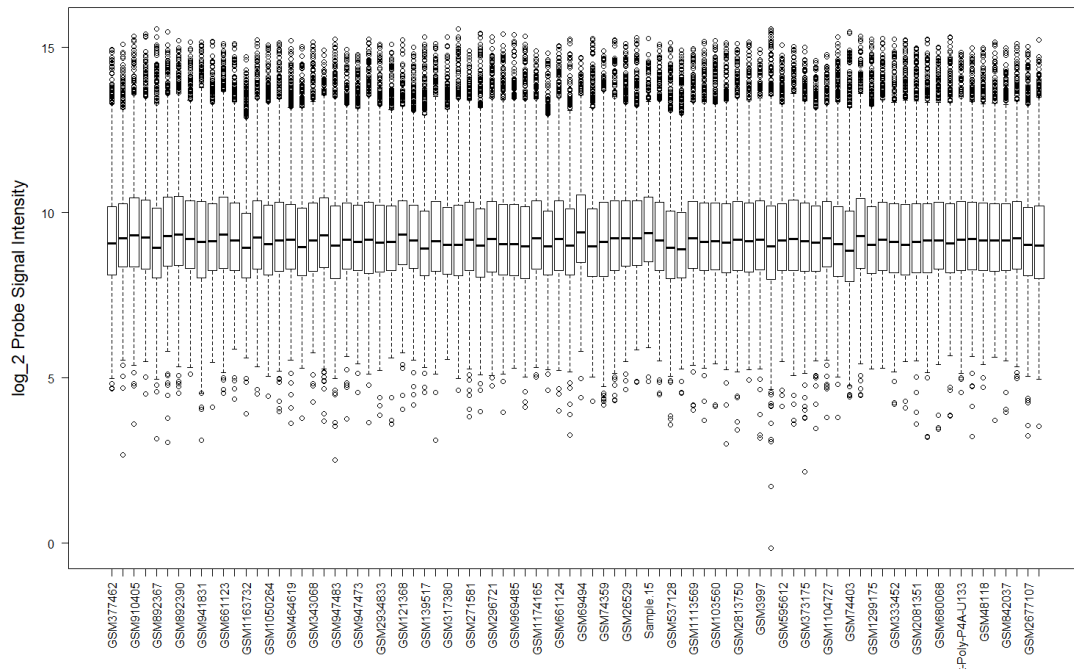


Pre-batch correction gene expression profiles - 2 samples x 42 cohorts



Post-batch correction gene expression profiles - 2 samples x 42 cohorts



Supplemental Digital Content 1: Boxplots showing the gene expression distributions for samples before and after batch correction. Two samples were randomly sampled from each cohort (N = 84). It appears that the study-specific batch effects have been removed after batch correction since the means and variances are approximately the same across the samples. The rationale for batch correction is to account for batch effects. Batch effects are non-biological differences (e.g. the time of day that an assay is performed) that make samples from different batches difficult to compare. We corrected for batch effects using an empirical Bayes method (R package *sva*), which was demonstrated to be superior to other methods. Each patient cohort was considered a separate batch for batch correction.