

**Figure S1.** Initial evaluation of mixture of missingness types (MCAR-MAR-MNAR)

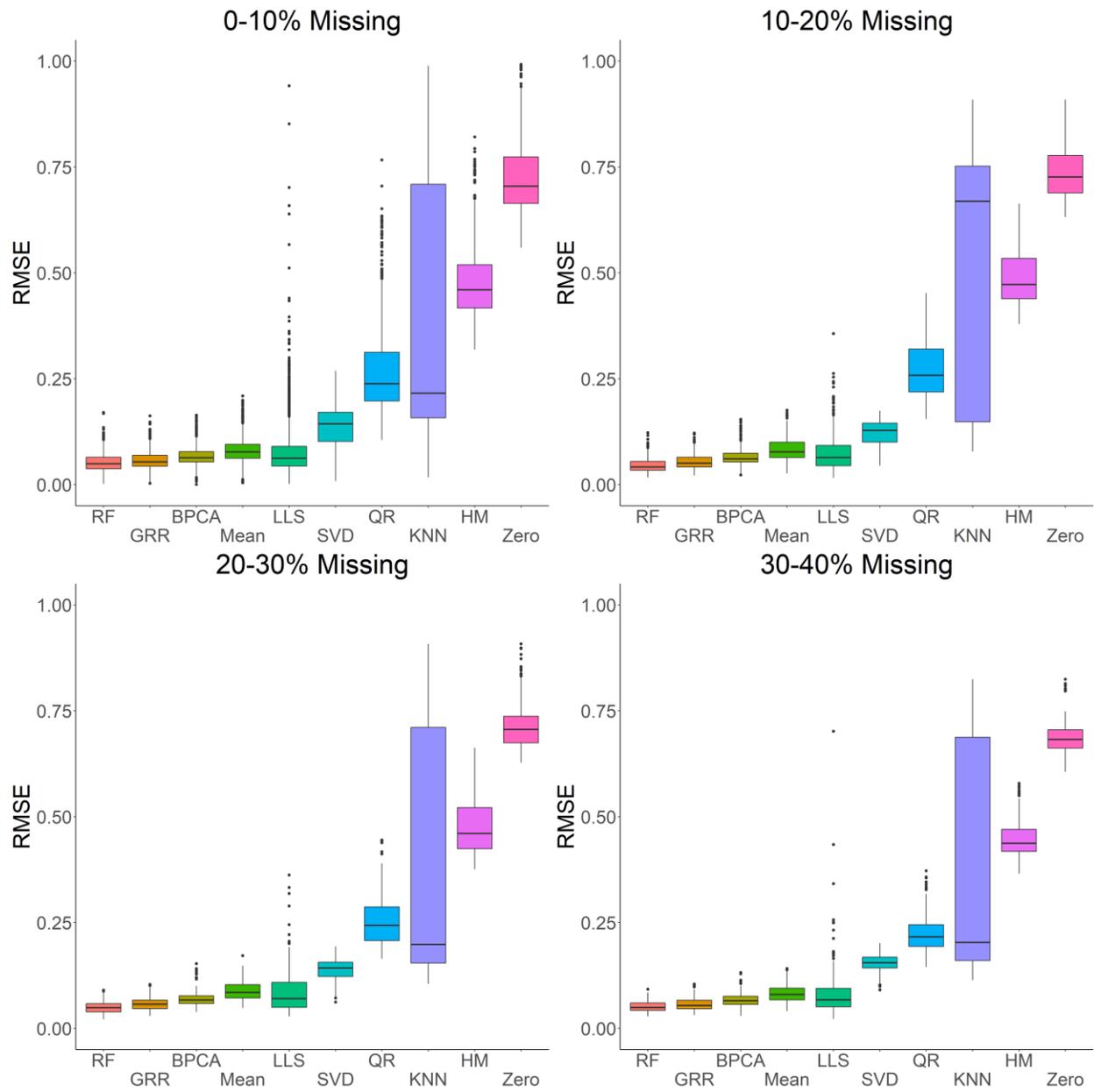
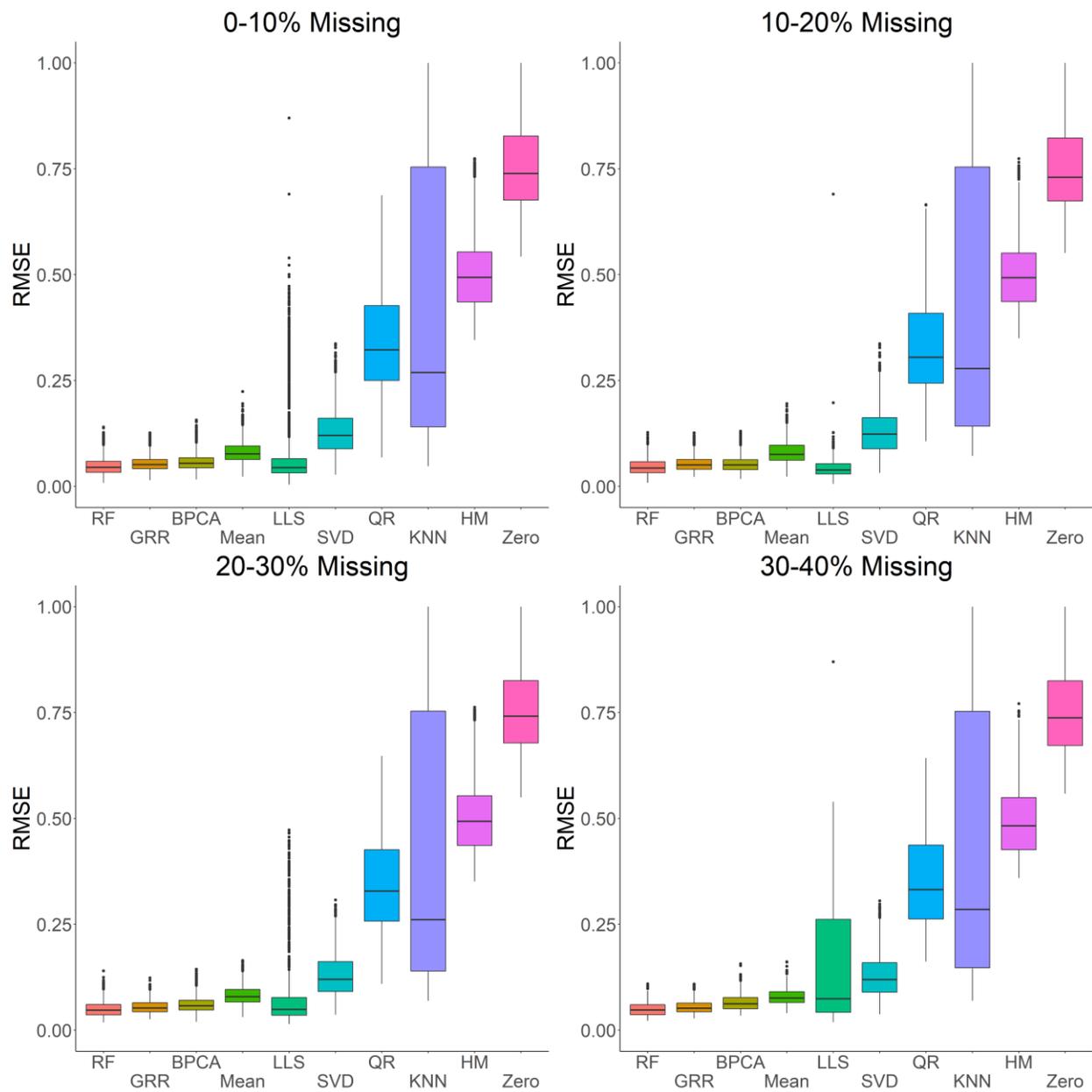
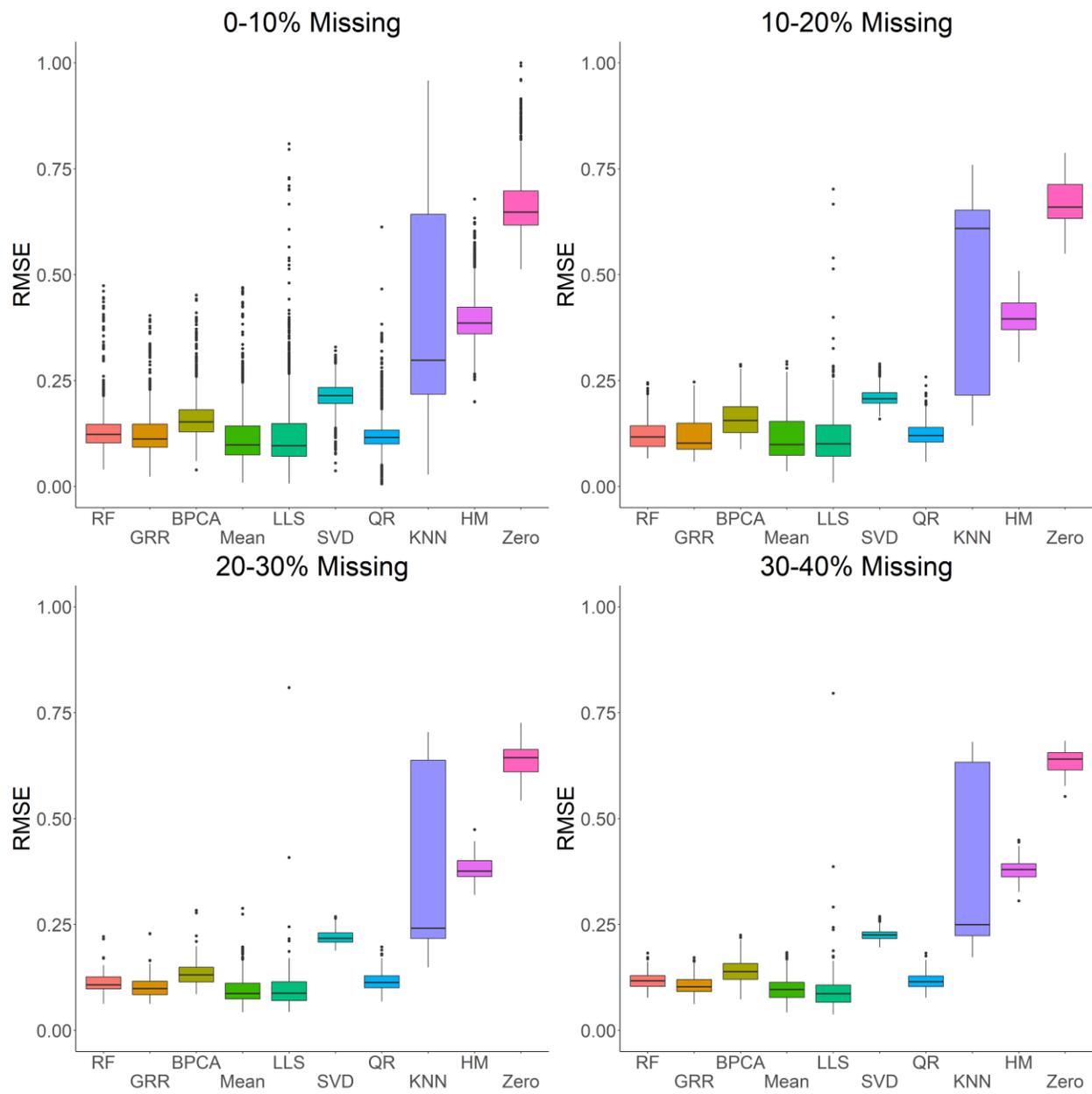


Figure S2. Initial evaluation of MAR missingness type



**Figure S3.** Initial evaluation of MCAR missingness type



**Figure S4.** Initial evaluation of MNAR missingness type

**Table S2.** Each of the various imputation methods are listed with their respective R package names and parameters.

<b>Imputation Method</b>	<b>R Package</b>	<b>Parameters</b>
Random Forest (RF)	missForest (v1.4)	maxiter=10, ntree=100, default
Glmnet Ridge regression (GRR)	DreamAI	k=10, method="RegImpute", default
Bayesian Principle Component Analysis (BPCA)	pcaMethods (v 1.64)	allVariables=TRUE, default
Mean	base R (v 4.1.1)	-
Local least squares (LLS)	pcaMethods (v 1.64)	k=3, allVariables=TRUE, default
Singular value decomposition (SVD)	bcv (v 1.0.1.4)	Default
Quantile regression(QR)	imputeLCMD (v 2.0)	tune.sigma=1, default
k-nearest neighbor (KNN)	imputation (v 2.0.3)	k=3, default
Half Minimum (HM)	base R (v 4.1.1)	-
Zero	base R (v 4.1.1)	-