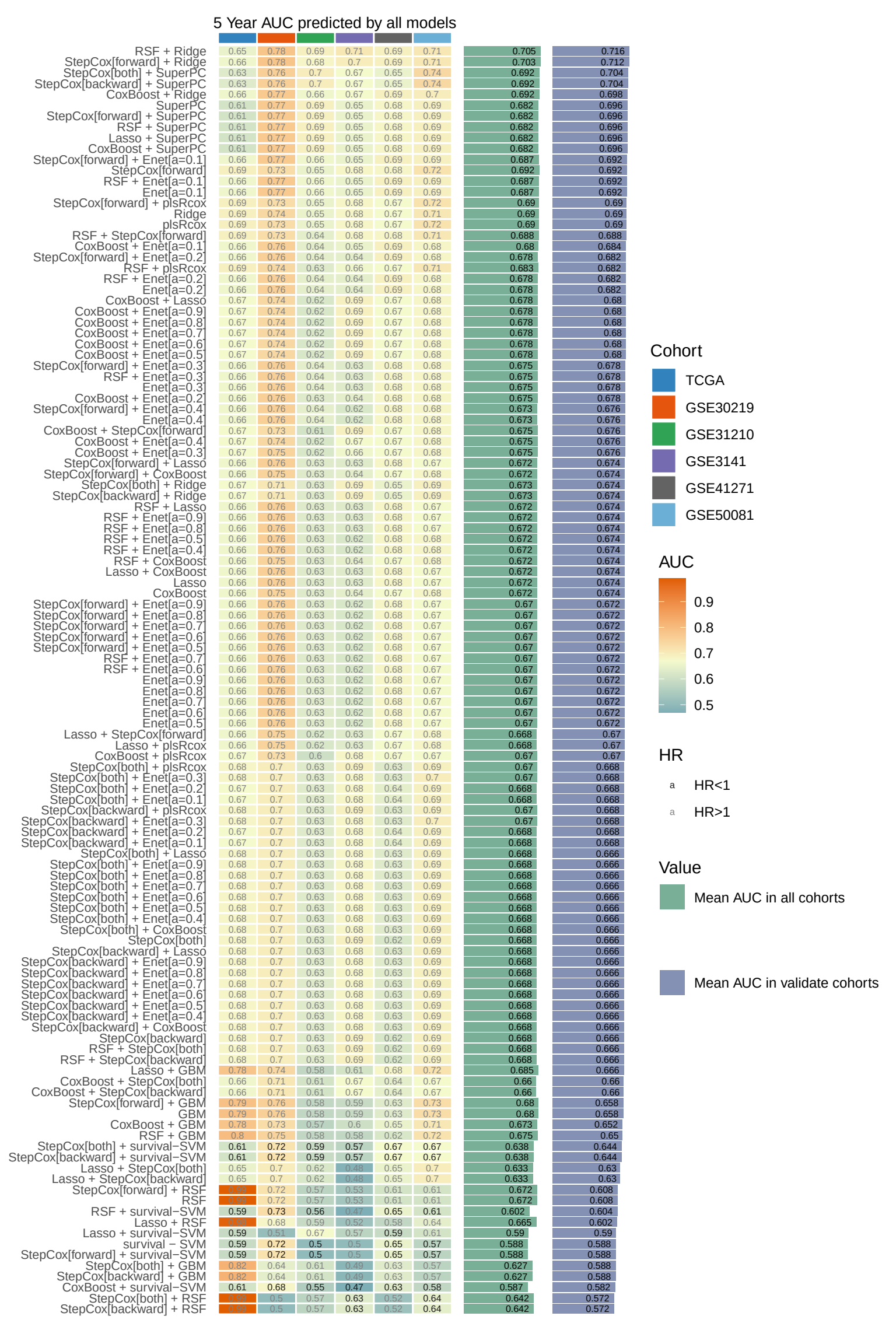
5 Year AUC predicted by all models
RSF + Ridge 0.65 0.78 0.69 0.71 0.69 0.71 0.705 0.716
StepCox[forward] + Ridge 0.66 0.78 0.68 0.7 0.69 0.71 0.703 0.712
StepCox[both] + SuperPC 0.63 0.76 0.7 0.67 0.65 0.74 0.692 0.704
StepCox[backward] + SuperPC 0.63 0.76 0.7 0.67 0.65 0.74 0.692 0.704
CoxBoost + Ridge 0.66 0.77 0.66 0.67 0.69 0.7 0.692 0.698
SuperPC 0.61 0.77 0.69 0.65 0.68 0.69 0.682 0.696
StepCox[forward] + SuperPC 0.61 0.77 0.69 0.65 0.68 0.69 0.682 0.696
RSF + SuperPC 0.61 0.77 0.69 0.65 0.68 0.69 0.682 0.696
Lasso + SuperPC 0.61 0.77 0.69 0.65 0.68 0.69 0.682 0.696
CoxBoost + SuperPC 0.61 0.77 0.69 0.65 0.68 0.69 0.682 0.696
StepCox[forward] + Enet[a=0.1] 0.66 0.77 0.66 0.65 0.69 0.69 0.687 0.692
StepCox[forward] 0.69 0.73 0.65 0.68 0.68 0.72 0.692 0.692
RSF + Enet[a=0.1] 0.66 0.77 0.66 0.65 0.69 0.69 0.687 0.692
Enet[a=0.1] 0.66 0.77 0.66 0.65 0.69 0.69 0.687 0.692
StepCox[forward] + plsRcox 0.69 0.73 0.65 0.68 0.67 0.72 0.69 0.69
Ridge 0.69 0.74 0.65 0.68 0.67 0.71 0.69 0.69
plsRcox 0.69 0.73 0.65 0.68 0.67 0.72 0.69 0.69
RSF + StepCox[forward] 0.69 0.73 0.64 0.68 0.68 0.71 0.688 0.688
CoxBoost + Enet[a=0.1] 0.66 0.76 0.64 0.65 0.69 0.68 0.68 0.684
StepCox[forward] + Enet[a=0.2] 0.66 0.76 0.64 0.64 0.69 0.68 0.678 0.682
RSF + plsRcox 0.69 0.74 0.63 0.66 0.67 0.71 0.683 0.682
RSF + Enet[a=0.2] 0.66 0.76 0.64 0.64 0.69 0.68 0.678 0.682
Enet[a=0.2] 0.66 0.76 0.64 0.64 0.69 0.68 0.678 0.682
CoxBoost + Lasso 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
CoxBoost + Enet[a=0.9] 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
CoxBoost + Enet[a=0.8] 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
CoxBoost + Enet[a=0.7] 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
CoxBoost + Enet[a=0.6] 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
CoxBoost + Enet[a=0.5] 0.67 0.74 0.62 0.69 0.67 0.68 0.678 0.68
StepCox[forward] + Enet[a=0.3] 0.66 0.76 0.64 0.63 0.68 0.68 0.675 0.678
RSF + Enet[a=0.3] 0.66 0.76 0.64 0.63 0.68 0.68 0.675 0.678
Enet[a=0.3] 0.66 0.76 0.64 0.63 0.68 0.68 0.675 0.678
CoxBoost + Enet[a=0.2] 0.66 0.76 0.63 0.64 0.68 0.68 0.675 0.678
StepCox[forward] + Enet[a=0.4] 0.66 0.76 0.64 0.62 0.68 0.68 0.673 0.676
Enet[a=0.4] 0.66 0.76 0.64 0.62 0.68 0.68 0.673 0.676
CoxBoost + StepCox[forward] 0.67 0.73 0.61 0.69 0.67 0.68 0.675 0.676
CoxBoost + Enet[a=0.4] 0.67 0.74 0.62 0.67 0.67 0.68 0.675 0.676
CoxBoost + Enet[a=0.3] 0.67 0.75 0.62 0.66 0.67 0.68 0.675 0.676
StepCox[forward] + Lasso 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
StepCox[forward] + CoxBoost 0.66 0.75 0.63 0.64 0.67 0.68 0.672 0.674
StepCox[both] + Ridge 0.67 0.71 0.63 0.69 0.65 0.69 0.673 0.674
StepCox[backward] + Ridge 0.67 0.71 0.63 0.69 0.65 0.69 0.673 0.674
RSF + Lasso 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
RSF + Enet[a=0.9] 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
RSF + Enet[a=0.8] 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
RSF + Enet[a=0.5] 0.66 0.76 0.63 0.62 0.68 0.68 0.672 0.674
RSF + Enet[a=0.4] 0.66 0.76 0.63 0.62 0.68 0.68 0.672 0.674
RSF + CoxBoost 0.66 0.75 0.63 0.64 0.67 0.68 0.672 0.674
Lasso + CoxBoost 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
Lasso 0.66 0.76 0.63 0.63 0.68 0.67 0.672 0.674
CoxBoost 0.66 0.75 0.63 0.64 0.67 0.68 0.672 0.674
StepCox[forward] + Enet[a=0.9] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
StepCox[forward] + Enet[a=0.8] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
StepCox[forward] + Enet[a=0.7] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
StepCox[forward] + Enet[a=0.6] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
StepCox[forward] + Enet[a=0.5] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
RSF + Enet[a=0.7] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
RSF + Enet[a=0.6] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Enet[a=0.9] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Enet[a=0.8] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Enet[a=0.7] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Enet[a=0.6] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Enet[a=0.5] 0.66 0.76 0.63 0.62 0.68 0.67 0.67 0.672
Lasso + StepCox[forward] 0.66 0.75 0.62 0.63 0.67 0.68 0.668 0.67
Lasso + plsRcox 0.66 0.75 0.62 0.63 0.67 0.68 0.668 0.67
CoxBoost + plsRcox 0.67 0.73 0.6 0.68 0.67 0.67 0.67 0.67
StepCox[both] + plsRcox 0.68 0.7 0.63 0.69 0.63 0.69 0.67 0.668
StepCox[both] + Enet[a=0.3] 0.68 0.7 0.63 0.68 0.63 0.7 0.67 0.668
StepCox[both] + Enet[a=0.2] 0.67 0.7 0.63 0.68 0.64 0.69 0.668 0.668
StepCox[both] + Enet[a=0.1] 0.67 0.7 0.63 0.68 0.64 0.69 0.668 0.668
StepCox[backward] + plsRcox 0.68 0.7 0.63 0.69 0.63 0.69 0.67 0.668
StepCox[backward] + Enet[a=0.3] 0.68 0.7 0.63 0.68 0.63 0.7 0.67 0.668
StepCox[backward] + Enet[a=0.2] 0.67 0.7 0.63 0.68 0.64 0.69 0.668 0.668
StepCox[backward] + Enet[a=0.1] 0.67 0.7 0.63 0.68 0.64 0.69 0.668 0.668
StepCox[both] + Lasso 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.9] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.8] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.7] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.6] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.5] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + Enet[a=0.4] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] + CoxBoost 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[both] 0.68 0.7 0.63 0.69 0.62 0.69 0.668 0.666
StepCox[backward] + Lasso 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.9] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.8] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.7] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.6] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.5] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + Enet[a=0.4] 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] + CoxBoost 0.68 0.7 0.63 0.68 0.63 0.69 0.668 0.666
StepCox[backward] 0.68 0.7 0.63 0.69 0.62 0.69 0.668 0.666
RSF + StepCox[both] 0.68 0.7 0.63 0.69 0.62 0.69 0.668 0.666
RSF + StepCox[backward] 0.68 0.7 0.63 0.69 0.62 0.69 0.668 0.666
Lasso + GBM 0.78 0.74 0.58 0.61 0.68 0.72 0.685 0.666
CoxBoost + StepCox[both] 0.66 0.71 0.61 0.67 0.64 0.67 0.66 0.66
CoxBoost + StepCox[backward] 0.66 0.71 0.61 0.67 0.64 0.67 0.66 0.66
StepCox[forward] + GBM 0.79 0.76 0.58 0.59 0.63 0.73 0.68 0.658
GBM 0.79 0.76 0.58 0.59 0.63 0.73 0.68 0.658
CoxBoost + GBM 0.78 0.73 0.57 0.6 0.65 0.71 0.673 0.652
RSF + GBM 0.8 0.75 0.58 0.58 0.62 0.72 0.675 0.65
StepCox[both] + survival−SVM 0.61 0.72 0.59 0.57 0.67 0.67 0.638 0.644
StepCox[backward] + survival−SVM 0.61 0.72 0.59 0.57 0.67 0.67 0.638 0.644
Lasso + StepCox[both] 0.65 0.7 0.62 0.48 0.65 0.7 0.633 0.63
Lasso + StepCox[backward] 0.65 0.7 0.62 0.48 0.65 0.7 0.633 0.63
StepCox[forward] + RSF 0.89 0.72 0.57 0.53 0.61 0.61 0.672 0.608
RSF 0.89 0.72 0.57 0.53 0.61 0.61 0.672 0.608
RSF + survival−SVM 0.59 0.73 0.56 0.47 0.65 0.61 0.602 0.604
Lasso + RSF 0.89 0.68 0.59 0.52 0.58 0.64 0.665 0.602
Lasso + survival−SVM 0.59 0.51 0.67 0.57 0.59 0.61 0.59 0.59
survival − SVM 0.59 0.72 0.5 0.5 0.65 0.57 0.588 0.588
StepCox[forward] + survival−SVM 0.59 0.72 0.5 0.5 0.65 0.57 0.588 0.588
StepCox[both] + GBM 0.82 0.64 0.61 0.49 0.63 0.57 0.627 0.588
StepCox[backward] + GBM 0.82 0.64 0.61 0.49 0.63 0.57 0.627 0.588
CoxBoost + survival−SVM 0.61 0.68 0.55 0.47 0.63 0.58 0.587 0.582
StepCox[both] + RSF 0.93 0.5 0.57 0.63 0.52 0.64 0.642 0.572
StepCox[backward] + RSF 0.93 0.5 0.57 0.63 0.52 0.64 0.642 0.572
Cohort
TCGA
GSE30219
GSE31210
GSE3141
GSE41271
GSE50081
AUC
0.9
0.8
0.7
0.6
0.5
HR
a HR<1
a HR>1
Value
Mean AUC in all cohorts
Mean AUC in validate cohorts