;	3 Year	AUC	predi	cted b	y all r	nodels		
RSF + Ridge	0.71	0.73	0.66	0.73	0.7	0.67	0.7	0.698
StepCox[forward] + Ridge StepCox[both] + SuperPC	0.7	0.73 0.71	0.66	0.72 0.75	0.7	0.67	0.697 0.682	0.696 0.694
StepCox[backward] + SuperPC CoxBoost + Ridge	0.62	0.71 0.72	0.64 0.65	0.75 0.71	0.64	0.73 0.67	0.682 0.692	0.694 0.688
StepCox[forward] + Enet[a=0.1] RSF + Enet[a=0.1]	0.71 0.71	0.72 0.72	0.65 0.65	0.7 0.7	0.7 0.7	0.66	0.69	0.686 0.686
_ Ridge	0.72	0.7	0.65 0.65	0.69	0.66	0.73	0.692	0.686 0.686
Enet[a=0.1] SuperPC	0.64	0.72	0.63	0.73	0.67	0.67	0.677	0.684
StepCox[forward] + SuperPC RSF + SuperPC	0.64	0.72	0.63	0.73	0.67	0.67	0.677 0.677	0.684
Lasso + SuperPC CoxBoost + SuperPC	0.64	0.72 0.72	0.63	0.73 0.73	0.67 0.67	0.67 0.67	0.677 0.677	0.684 0.684
StepCox[forward] + plsRcox StepCox[forward]	0.72	0.69	0.65 0.65	0.68	0.65 0.65	0.73	0.687 0.687	0.68
RSF + StepCox[forward] plsRcox	0.72	0.7	0.65 0.65	0.66	0.66	0.73 0.73	0.687 0.687	0.68
StepCox[forward] + Enet[a=0.3] StepCox[forward] + Enet[a=0.2]	0.71 0.71	0.71 0.71	0.64 0.64	0.69 0.69	0.69 0.69	0.65 0.65	0.682 0.682	0.676 0.676
RSF + plsRcox RSF + Enet[a=0.3]	0.73 0.71	0.7 0.71	0.64 0.64	0.67 0.69	0.65 0.69	0.72	0.685 0.682	0.676 0.676
RSF + Enet[a=0.2] Enet[a=0.3]	0.71	0.71	0.64	0.69	0.69	0.65 0.65	0.682 0.682	0.676 0.676
Enet[a=0.2]	0.71	0.71	0.64	0.69	0.69	0.65	0.682	0.676
CoxBoost + Enet[a=0.3] CoxBoost + Enet[a=0.1]	0.71	0.71	0.64	0.68	0.68	0.67	0.682 0.682	0.676 0.676
StepCox[forward] + CoxBoost RSF + Enet[a=0.8]	0.71 0.72	0.71 0.71	0.64 0.64	0.68	0.68	0.66	0.68 0.682	0.674 0.674
RSF + CoxBoost CoxBoost + Enet[a=0.2]	0.71	0.71 0.71	0.64	0.68	0.68	0.66	0.68	0.674 0.674
CoxBoost StepCox[forward] + Enet[a=0.6]	0.71	0.71	0.64	0.68	0.68	0.66	0.68	0.674 0.672
StepCox forward + Enet a=0.5 StepCox forward + Enet a=0.4	0.72 0.72	0.71 0.71	0.64 0.64	0.68	0.69	0.64	0.68 0.68	0.672 0.672
RSF + Lasso RSF + Enet[a=0.7]	0.72 0.72	0.71	0.63	0.69 0.68	0.69	0.64	0.68 0.68	0.672 0.672
RSF + Enet[a=0.7] RSF + Enet[a=0.6] RSF + Enet[a=0.5]	0.72 0.72 0.72	0.71	0.64	0.68	0.69	0.64 0.64	0.68 0.68	0.672 0.672 0.672
RSF + Enet[a=0.4]	0.72	0.71	0.64	0.68	0.69	0.64	0.68	0.672
Lasso + StepCox[forward] Lasso + plsRcox	0.71	0.71 0.71	0.64 0.64	0.67 0.67	0.68	0.66	0.678 0.678	0.672 0.672
Enet[a=0.6] Enet[a=0.5]	0.72 0.72	0.71 0.71	0.64 0.64	0.68	0.69	0.64	0.68	0.672 0.672
Enet[a=0.4] StepCox[forward] + Lasso	0.72 0.72	0.71 0.71	0.64	0.68	0.69	0.64	0.68	0.672 0.67
StepCox[forward] + Enet[a=0.9] StepCox[forward] + Enet[a=0.8]	0.72 0.72	0.71 0.71	0.63	0.68	0.69	0.64	0.678 0.678	0.67 0.67
StepCox[forward] + Enet[a=0.7] RSF + Enet[a=0.9]	0.72 0.72	0.71 0.71	0.63 0.63	0.68	0.69 0.69	0.64	0.678 0.678	0.67 0.67
Lasso + CoxBoost	0.72	0.71	0.63	0.68	0.69	0.64	0.678 0.678	0.67 0.67
Lasso Enet[a=0.9]	0.72	0.71	0.63	0.68	0.69	0.64	0.678	0.67
Enet[a=0.8] Enet[a=0.7]	0.72	0.71	0.63	0.68	0.69	0.64	0.678 0.678	0.67
CoxBoost + Lasso CoxBoost + Enet[a=0.9]	0.71	0.7 0.7	0.63	0.67 0.67	0.67 0.67	0.68	0.677 0.677	0.67
CoxBoost + Enet[a=0.8] CoxBoost + Enet[a=0.7]	0.71	0.7 0.7	0.63	0.67 0.67	0.67 0.67	0.68	0.677 0.677	0.67 0.67
CoxBoost + Enet[a=0.6] CoxBoost + Enet[a=0.5]	0.71 0.71	0.7 0.7	0.63	0.67 0.67	0.67 0.67	0.68	0.677 0.677	0.67 0.67
CoxBoost + Enet[a=0.4] StepCox[both] + Ridge	0.71	0.7	0.64	0.67 0.66	0.67 0.66	0.67	0.677 0.675	0.67 0.668
StepCox[backward] + Ridge	0.71	0.68	0.64	0.66	0.66 0.65	0.7	0.675 0.673	0.668
StepCox[both] + Enet[a=0.1] StepCox[backward] + Enet[a=0.1] StepCox[both] + plsRcox	0.71	0.68	0.64	0.66 0.67	0.65 0.63	0.7	0.673 0.672	0.666 0.664
StepCox[both] + Enet[a=0.9] StepCox[both] + Enet[a=0.8]	0.71	0.68	0.63	0.67 0.67	0.64	0.7	0.672 0.672	0.664 0.664
StepCox[both] + Enet[a=0.7]	0.71	0.68	0.63	0.67 0.67	0.64	0.7 0.7	0.672	0.664
StepCox[both] + Enet[a=0.6] StepCox[both] + Enet[a=0.5]	0.71	0.68	0.63	0.67	0.64	0.7	0.672 0.672	0.664 0.664
StepCox[both] + Enet[a=0.4] StepCox[both] + Enet[a=0.3]	0.71	0.68	0.63	0.67	0.64	0.7	0.672	0.664 0.664
StepCox[both] + Enet[a=0.2] StepCox[both]	0.71 0.71	0.68 0.68	0.63 0.64	0.67 0.67	0.64 0.63	0.7	0.672 0.672	0.664 0.664
StepCox[backward] + plsRcox StepCox[backward] + Enet[a=0.9]	0.71 0.71	0.68 0.68	0.64	0.67 0.67	0.63 0.64	0.7 0.7	0.672 0.672	0.664 0.664
StepCox[backward] + Enet[a=0.8] StepCox[backward] + Enet[a=0.7]	0.71	0.68	0.63	0.67 0.67	0.64	0.7	0.672 0.672	0.664 0.664
StepCox backward + Enet a=0.6 StepCox backward + Enet a=0.5	0.71 0.71	0.68 0.68	0.63 0.63	0.67 0.67	0.64 0.64	0.7	0.672 0.672	0.664 0.664
StebCox[backward] + Enet[a=0.4]	0.71	0.68	0.63	0.67 0.67	0.64	0.7	0.672 0.672	0.664 0.664
StepCox[backward] + Enet[a=0.3] StepCox[backward] + Enet[a=0.2]	0.71	0.68	0.63	0.67 0.67	0.64	0.7	0.672 0.672	0.664 0.664
StepCox[backward] RSF + StepCox[both] RSF + StepCox[backward]	0.71	0.68	0.64	0.67	0.63	0.7	0.672	0.664
StepCox[both] + Lasso	0.71	0.68	0.64	0.67	0.63	0.7	0.672 0.67	0.664
StepCox[both] + CoxBoost StepCox[backward] + Lasso	0.71	0.68	0.63	0.67	0.63	0.7	0.67	0.662 0.662
StepCox[backward] + CoxBoost CoxBoost_+ StepCox[forward]	0.71	0.68	0.63	0.67 0.66	0.63	0.7	0.67 0.67	0.662 0.662
CoxBoost + plsRcox CoxBoost + StepCox[both]	0.71 0.71	0.69 0.68	0.62 0.63	0.66 0.65	0.66 0.64	0.67	0.668 0.665	0.66 0.656
CoxBoost + StepCox[backward] Lasso + StepCox[both]	0.71	0.68	0.63	0.65	0.64	0.68	0.665 0.657	0.656 0.648
Lasso + StepCox[backward]	0.7	0.66 0.68	0.61 0.56	0.63 0.63	0.66 0.64	0.68 0.71	0.657 0.672	0.648 0.644
Lasso + GBM StepCox[forward] + GBM GBM	0.82	0.7	0.53	0.63 0.63	0.6	0.72	0.667 0.667	0.636 0.636
StepCox[both] + survival–SVM StepCox[backward] + survival–SVM	0.64 0.64	0.67 0.67	0.56 0.56	0.59 0.59	0.66 0.66	0.69 0.69	0.635 0.635	0.634 0.634
_ RSF + GBM	0.83	0.69	0.55	0.61	0.59	0.73	0.667	0.634
CoxBoost + GBM StepCox[forward] + RSF RSF	1.01	0.67	0.55	0.62	0.61	0.7	0.66	0.63
Lasso + RSF	1.01	0.67	0.55	0.61 0.63	0.58 0.55	0.62	0.67	0.602
CoxBoost + survival–SVM StepCox[both] + GBM	0.57 0.84	0.66	0.58 0.53	0.57 0.52	0.61 0.6	0.58	0.595 0.615	0.6
StepCox[backward] + GBM Lasso + survival–SVM	0.84	0.6 0.49	0.53 0.61	0.52 0.57	0.6 <b>0.56</b>	0.6	0.615 0.565	0.57 0.566
RSF + survival-SVM survival - SVM	0.59 0.58	0.68 0.67	0.54 0.51	0.38	0.62 0.62	0.57 0.53	0.563 0.558	0.558 0.554
StepCox[forward] + survival–SVM StepCox[both] + RSF	0.58	0.67	0.51	0.44 0.55	0.62	0.53	0.558 0.613	0.554 0.536
StepCox[backward] + RSF	1	0.48	0.48	0.55	0.51	0.66	0.613	0.536

## Cohort



GSE30219

GSE31210

GSE3141

GSE41271 GSE50081

## HR

- a HR<1
- a HR>1

## 1.0 0.8

0.6

0.4

## Value

Mean AUC in all cohorts

Mean AUC in validate cohorts