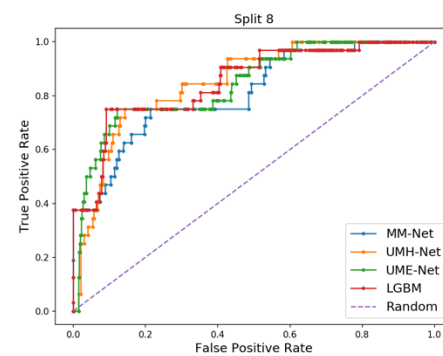
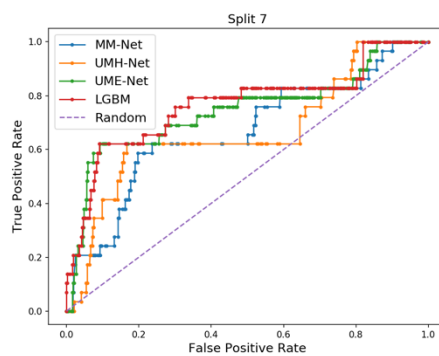
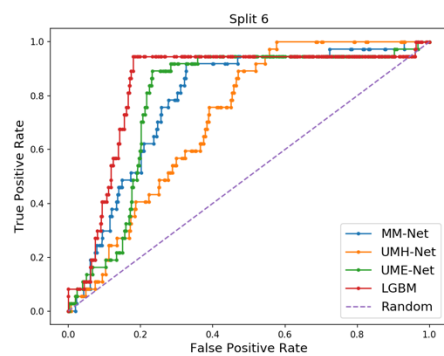
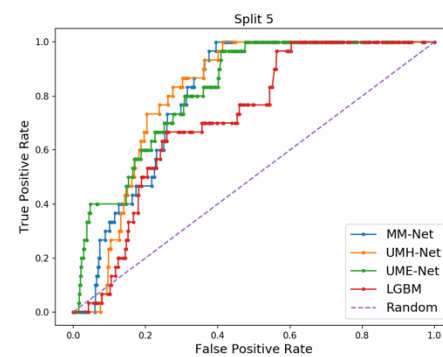
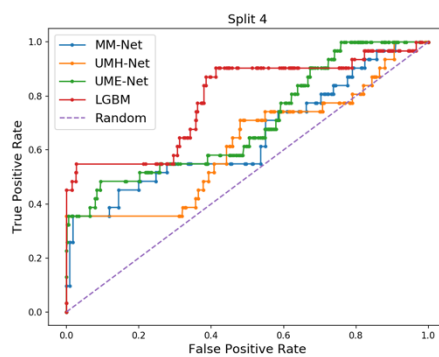
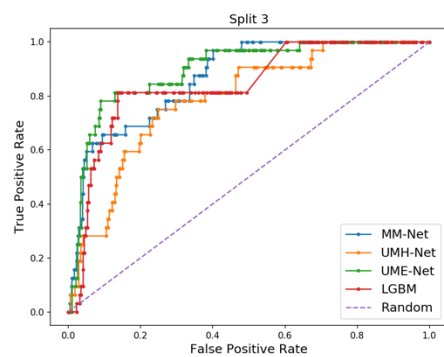
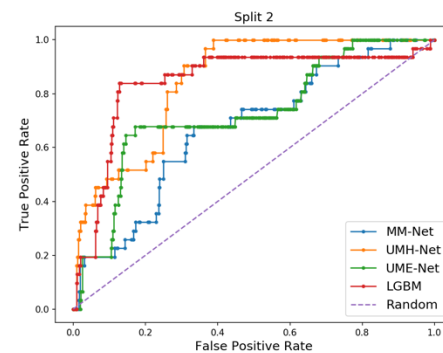
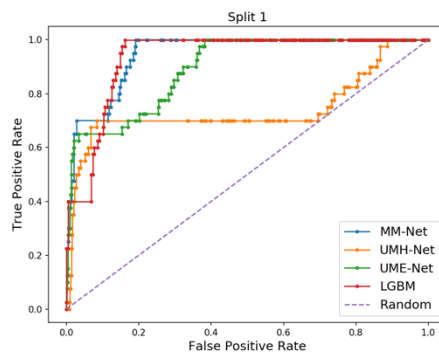
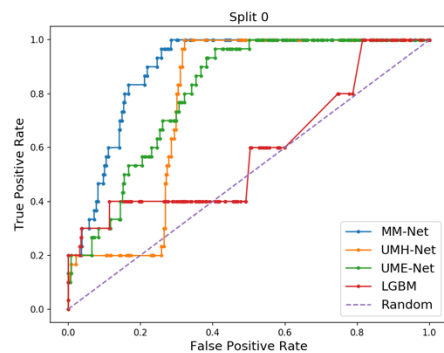


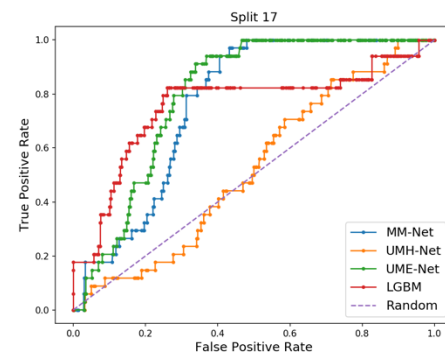
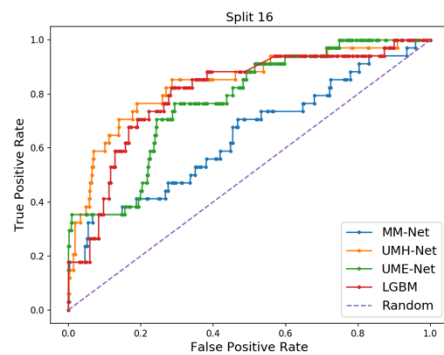
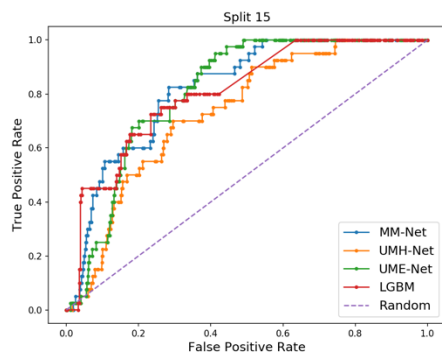
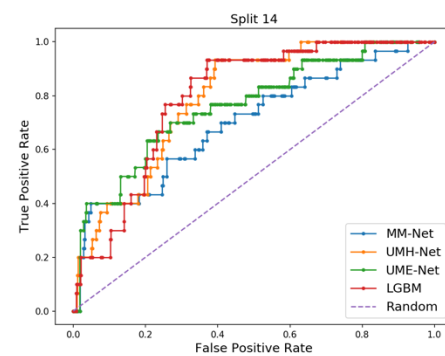
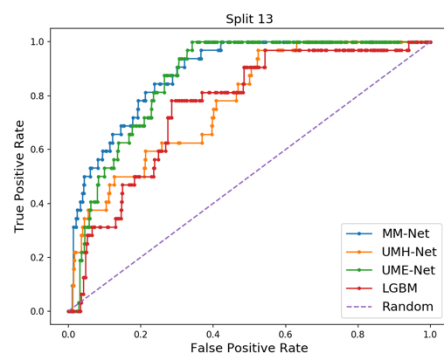
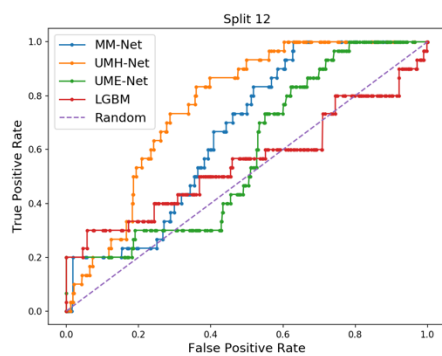
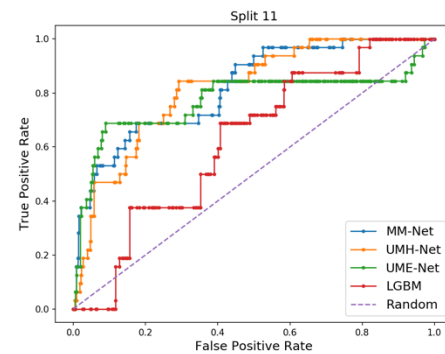
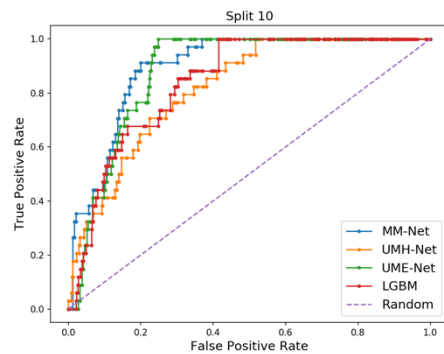
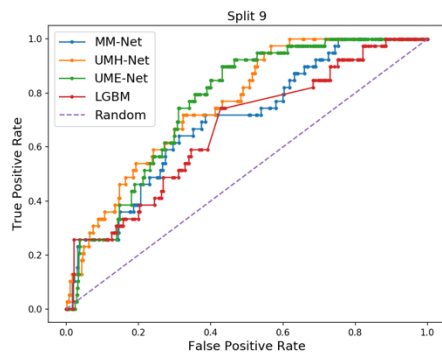
Supplementary material

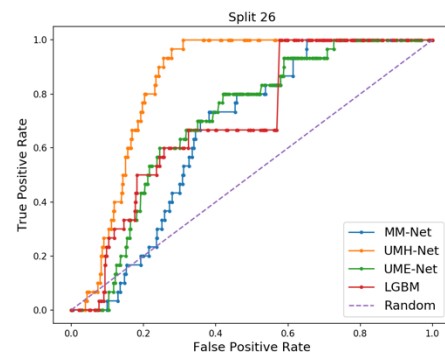
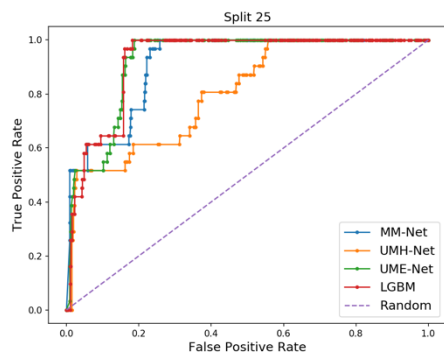
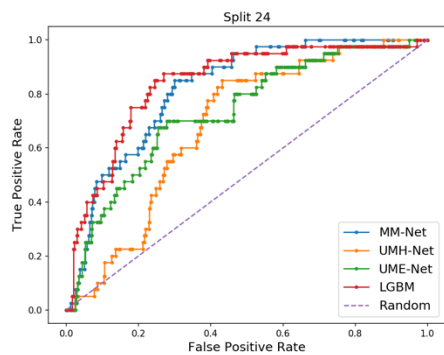
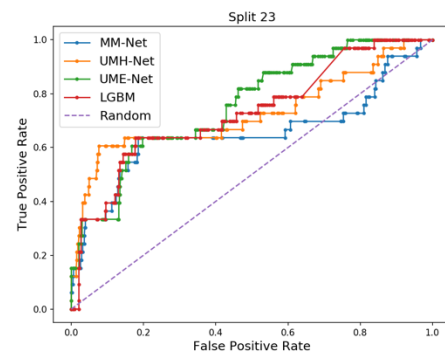
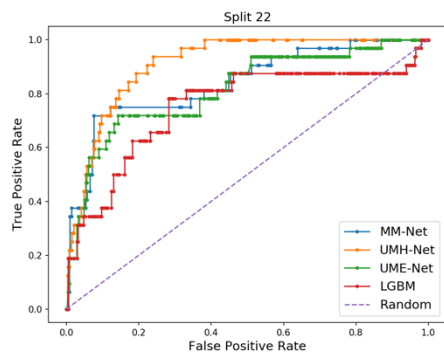
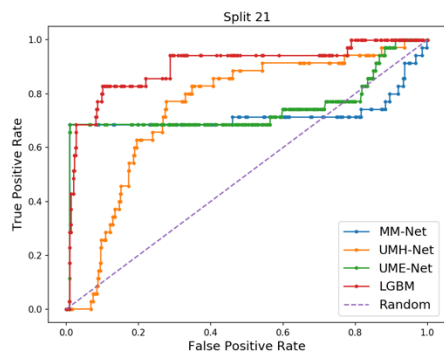
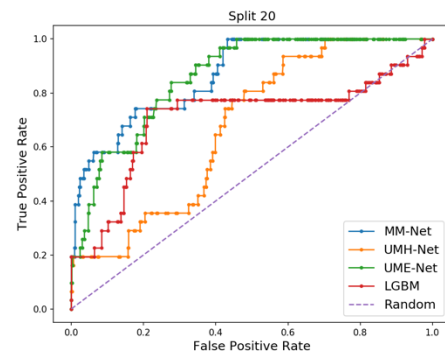
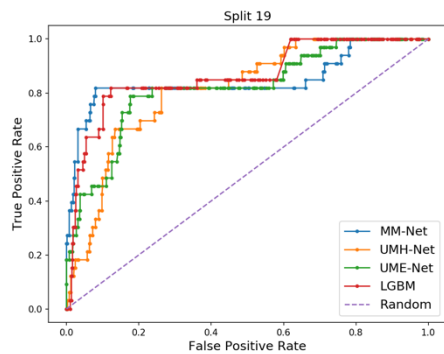
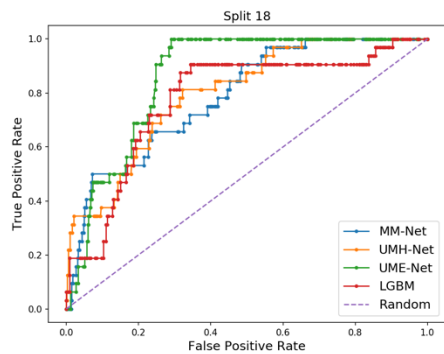
Table S1. This table lists performance scores, including MCC (Matthew’s correlation coefficient), AUPRC (area under the precision-recall curve), and AUROC (area under the receiver operating characteristic curve) of the drug response prediction models (UME-Net, UME-Net_{org}, UME-Net_{pairs}, UMH-Net, MM-Net, and LGBT). The differences between the different models are described in the text and Table 2 of the main manuscript. To compute the average score for each metric and model, the predictions were aggregated via mean across the data splits. In addition, for each metric and pair of models, we compute the pair t-test and report the p-values to assess statistical significance of the means.

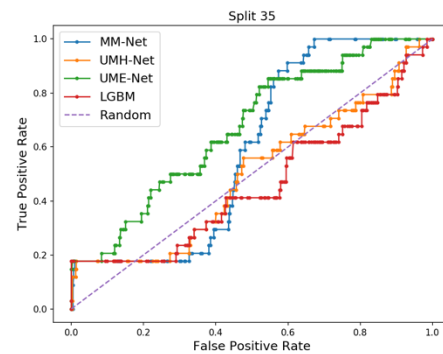
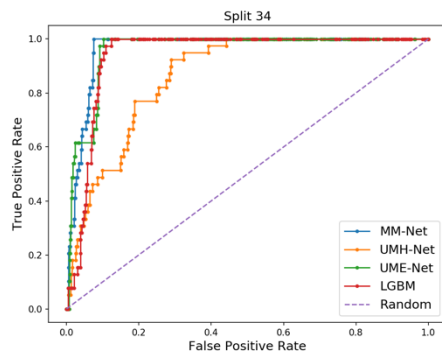
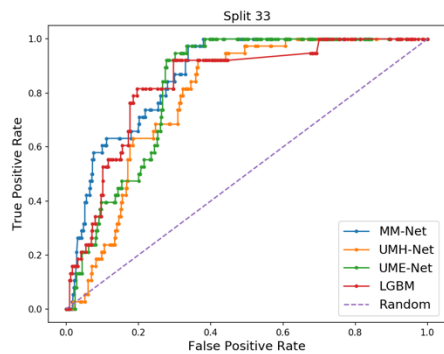
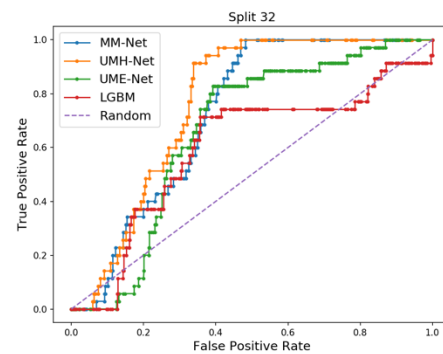
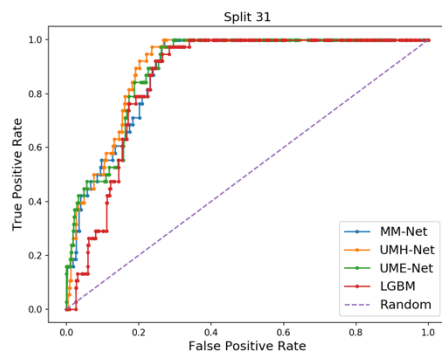
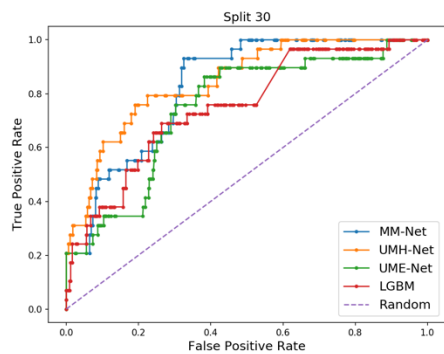
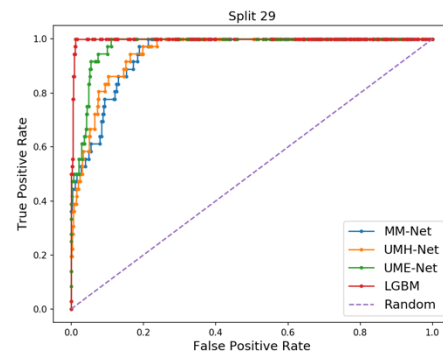
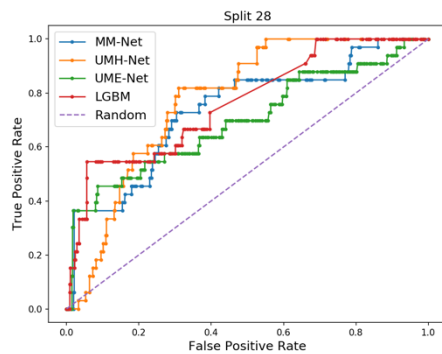
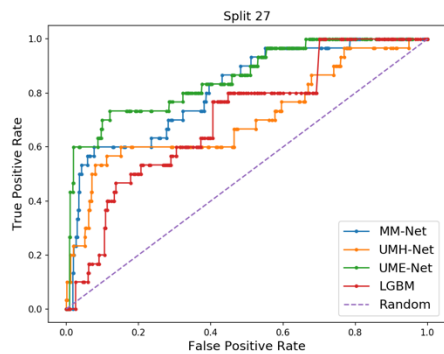
Compared models	Paired t-test			Wilcoxon signed-rank test		
	AUPRC	AUROC	MCC	AUPRC	AUROC	MCC
MM-Net vs UMH-Net	0	0.9973	0	0	0.8056	0
MM-Net vs UME-Net	0.8247	0.2374	0.261	0.7596	0.2798	0.1938
MM-Net vs LGBM	0.1873	0.414	0.01	0.1799	0.3444	0.0215
MM-Net vs UME-Net _{org}	0.0012	0.0137	0	0.0018	0.0068	0.0002
MM-Net vs UME-Net _{pairs}	0.0001	0	0	0	0	0
UMH-Net vs UME-Net	0	0.4204	0	0	0.4221	0
UMH-Net vs LGBM	0.0019	0.4017	0.0365	0.0175	0.2437	0.0649
UMH-Net vs UME-Net _{org}	0.0189	0.0268	0.188	0.0907	0.0413	0.2078
UMH-Net vs UME-Net _{pairs}	0.7303	0	0.6566	0.3677	0	0.7774
UME-Net vs LGBM	0.1491	0.8464	0.0692	0.2058	0.9249	0.1047
UME-Net vs UME-Net _{org}	0.0037	0.0008	0.0007	0.0004	0.0004	0.0016
UME-Net vs UME-Net _{pairs}	0.0001	0	0	0	0	0
LGBM vs UME-Net _{org}	0.2251	0.0047	0.3331	0.1032	0.0012	0.1907
LGBM vs UME-Net _{pairs}	0.018	0	0.0181	0.0222	0	0.0361
UME-Net _{org} vs UME-Net _{pairs}	0.1103	0.009	0.0867	0.0716	0.0132	0.0756
MM-Net vs UMH-Net	0	0.9973	0	0	0.8056	0

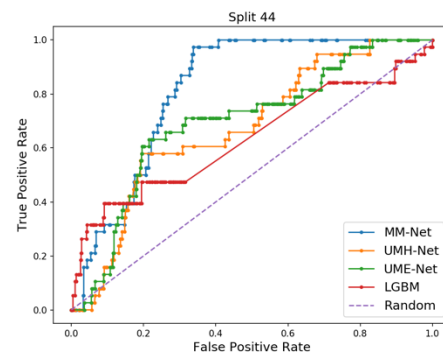
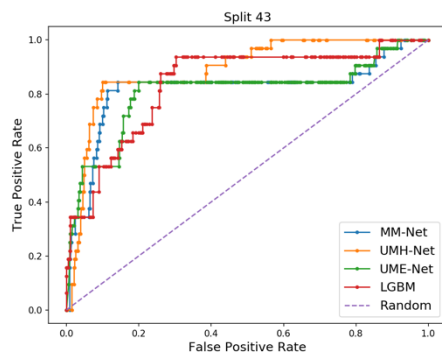
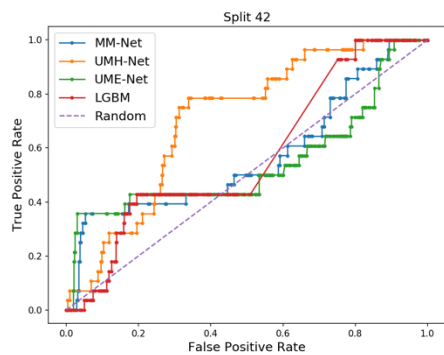
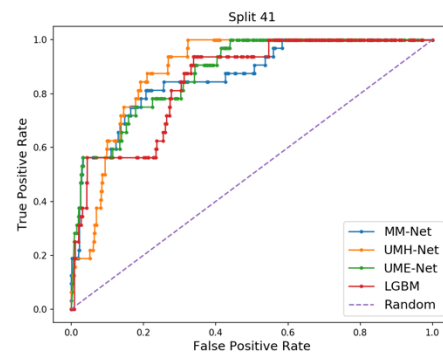
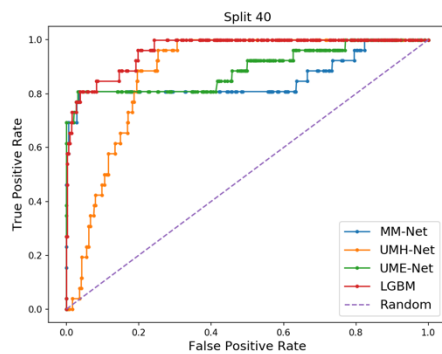
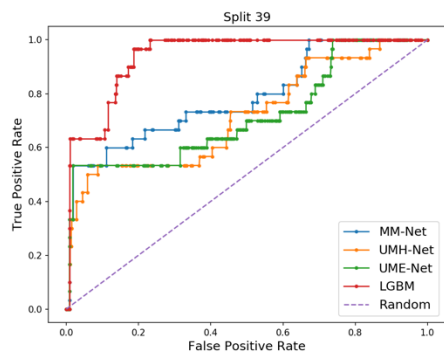
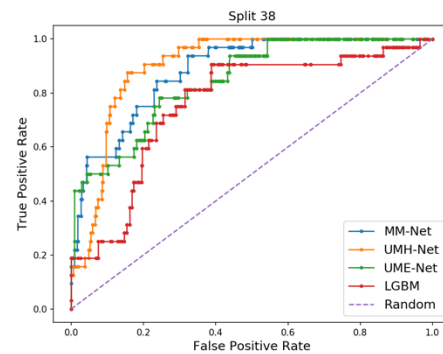
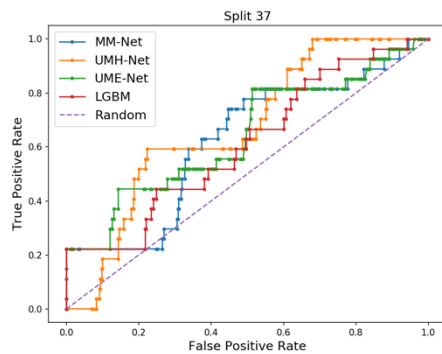
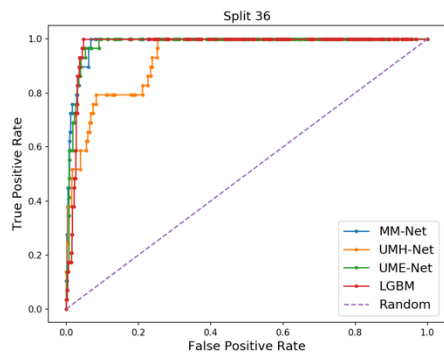
Below are the AUROC plots for the 100 data splits

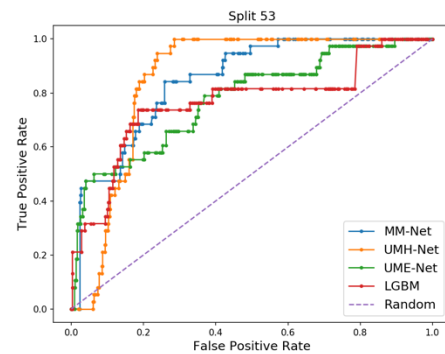
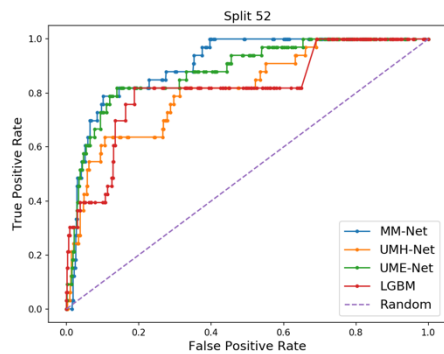
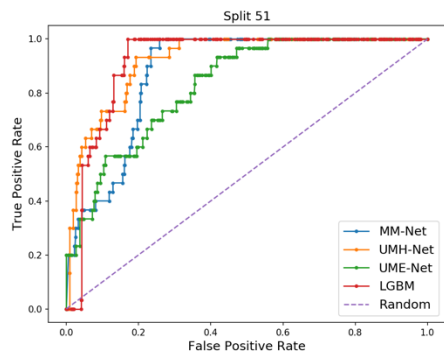
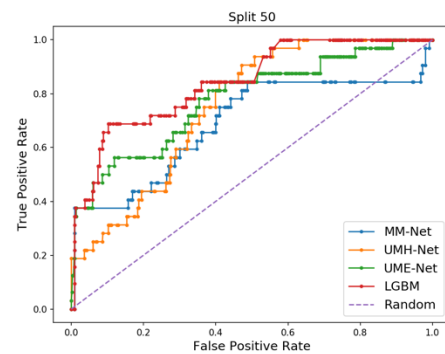
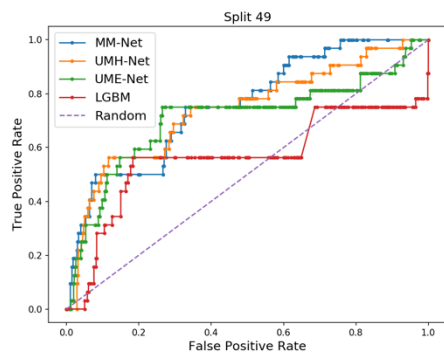
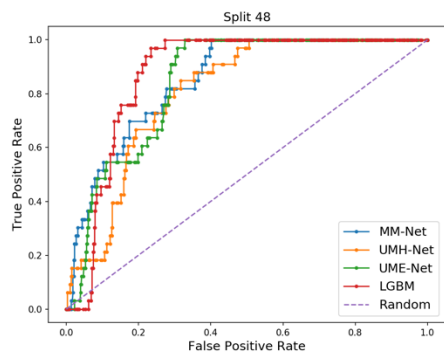
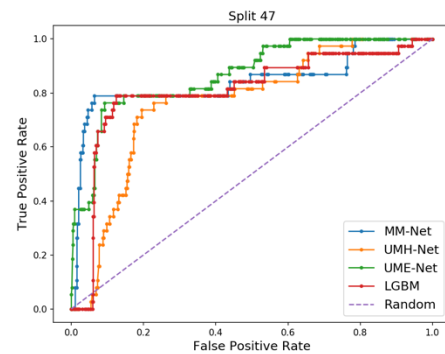
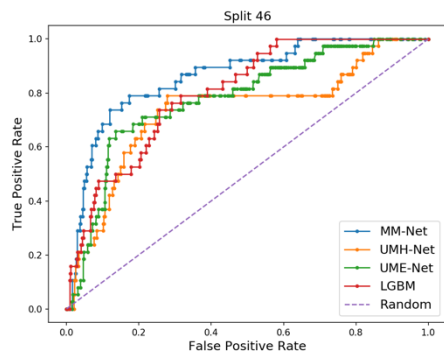
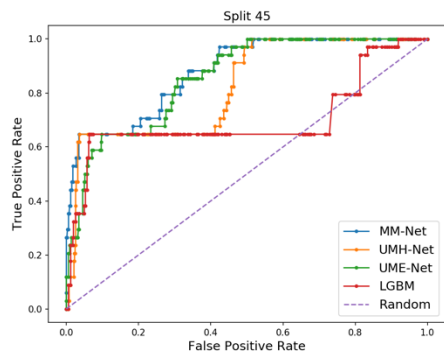


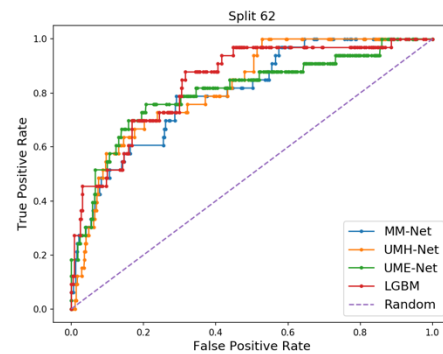
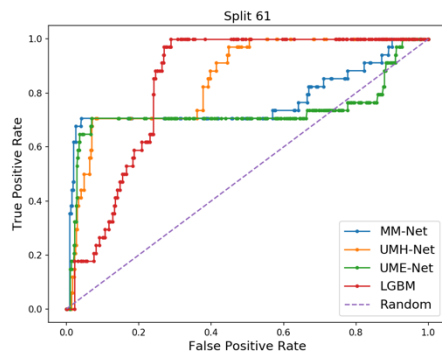
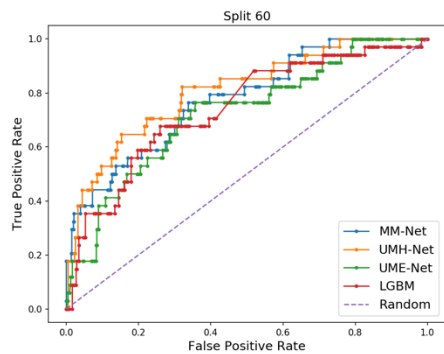
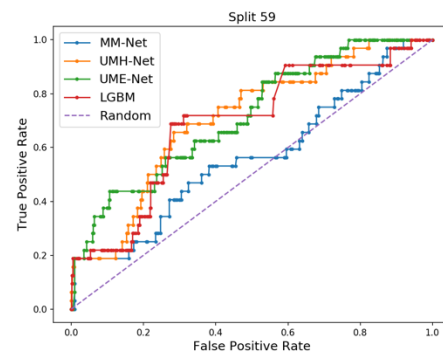
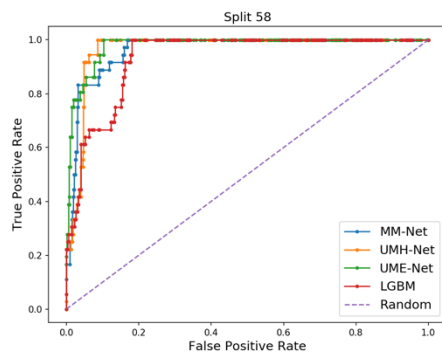
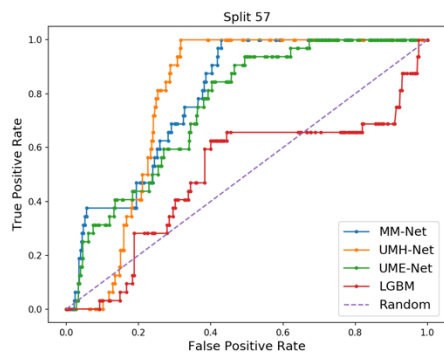
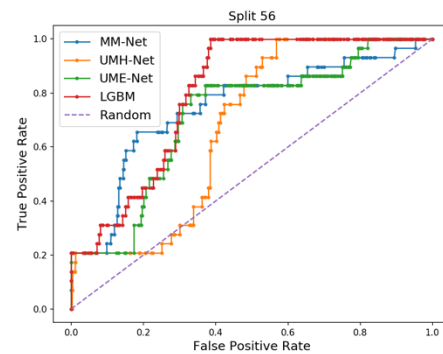
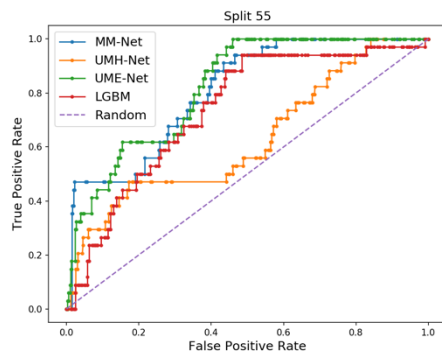
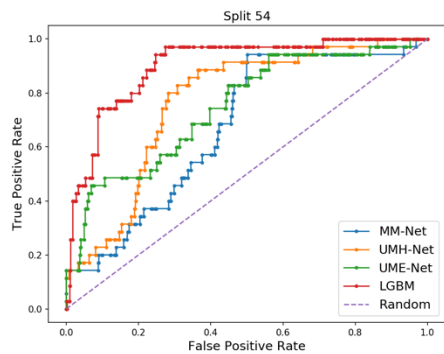


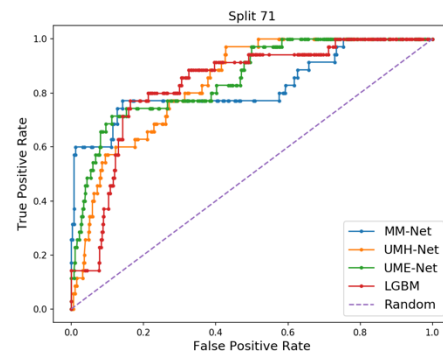
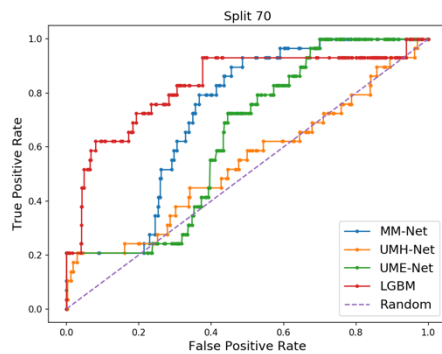
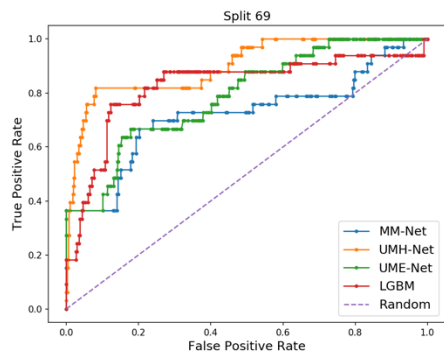
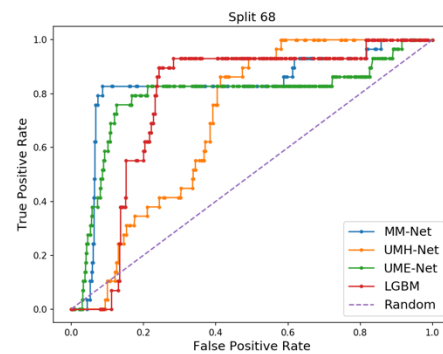
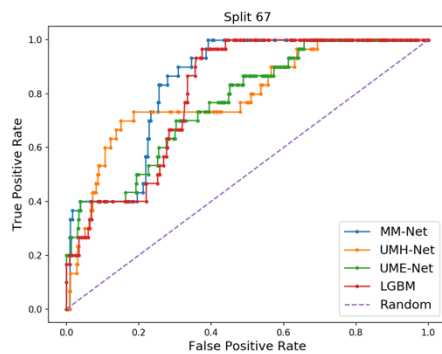
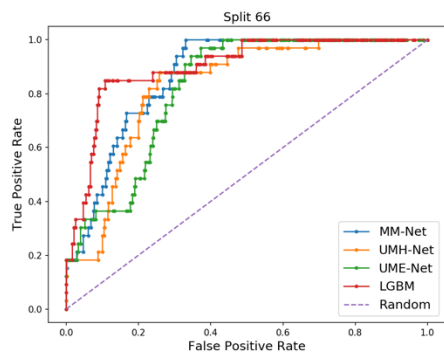
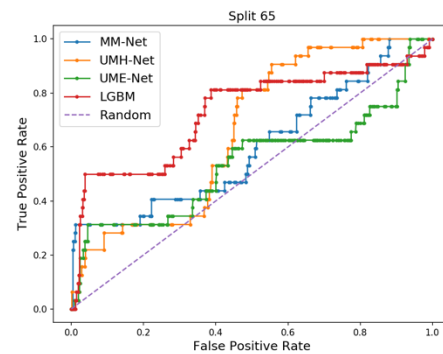
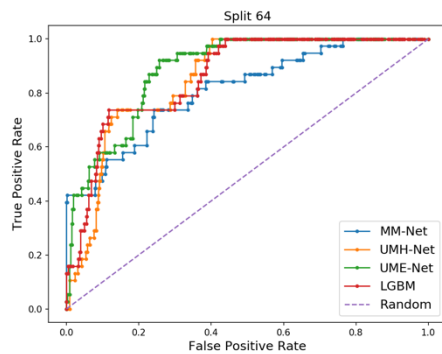
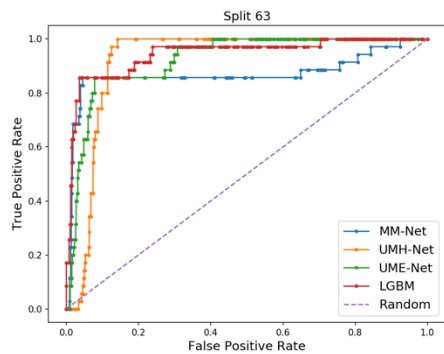


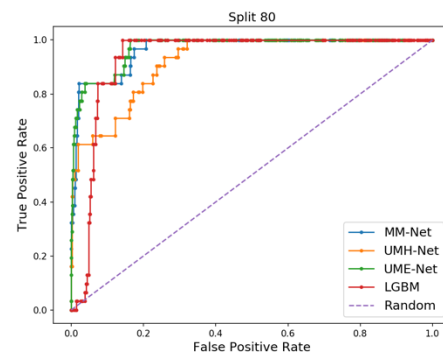
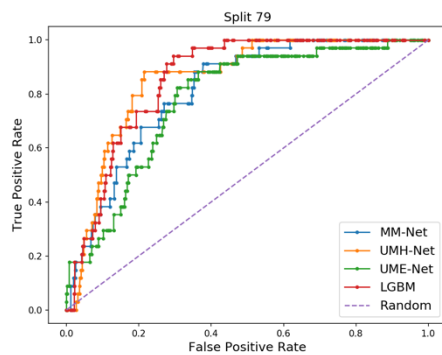
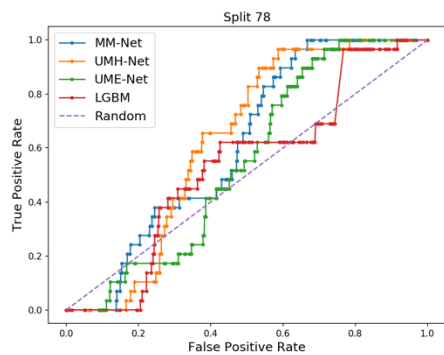
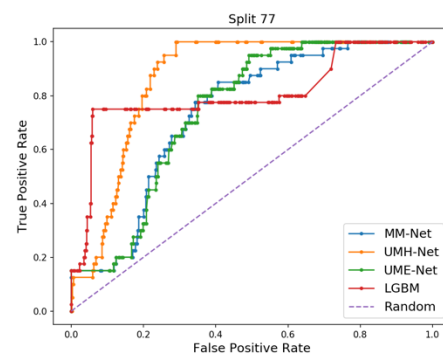
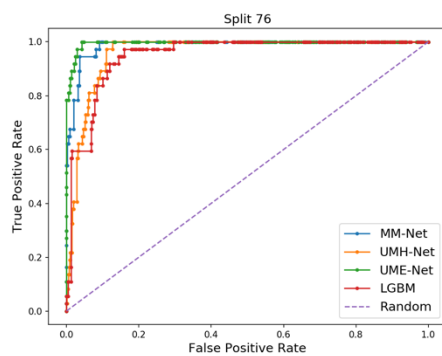
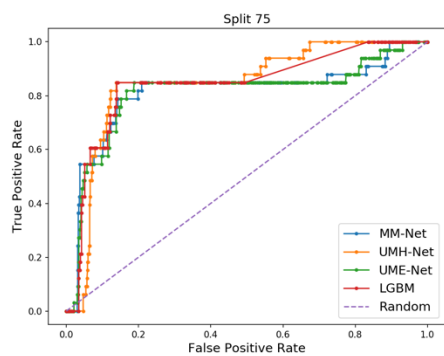
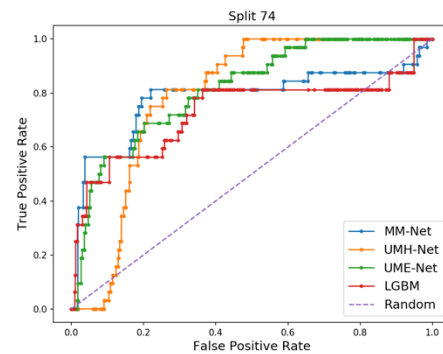
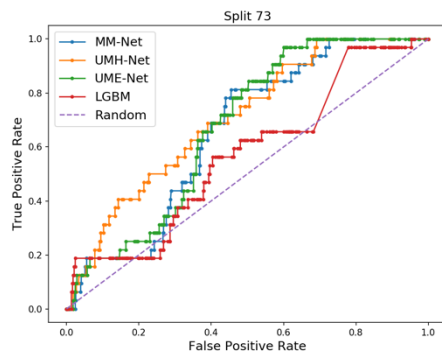
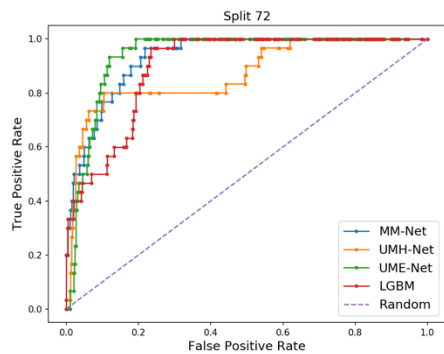


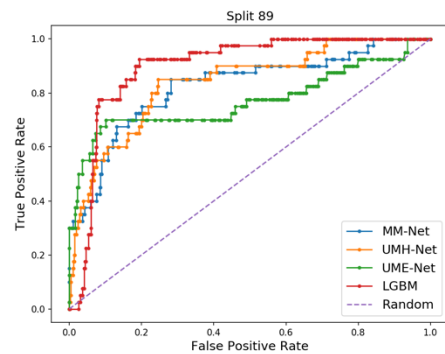
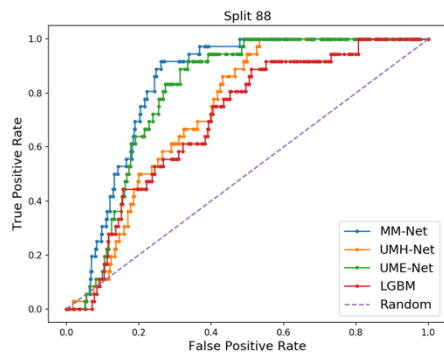
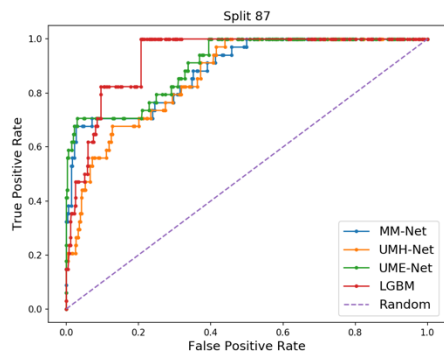
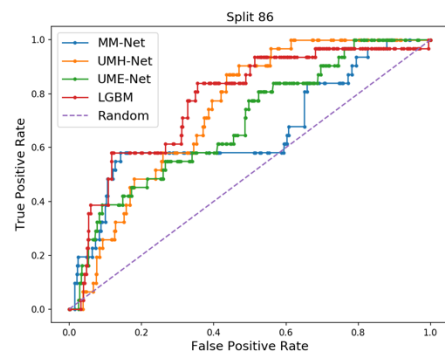
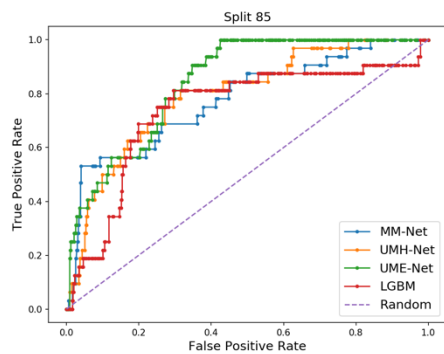
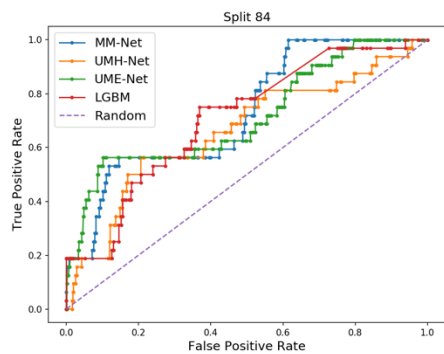
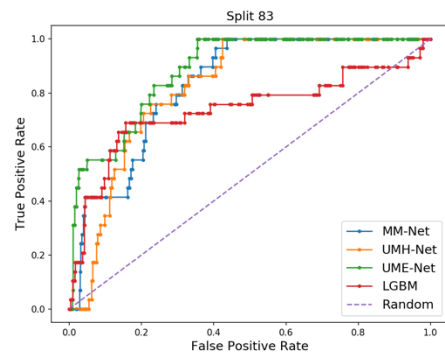
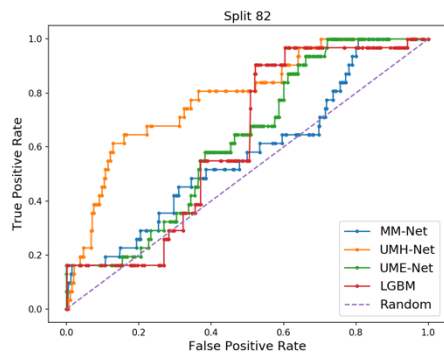
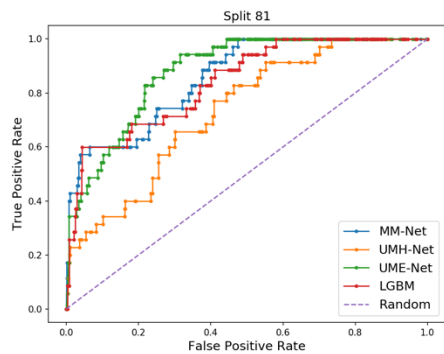


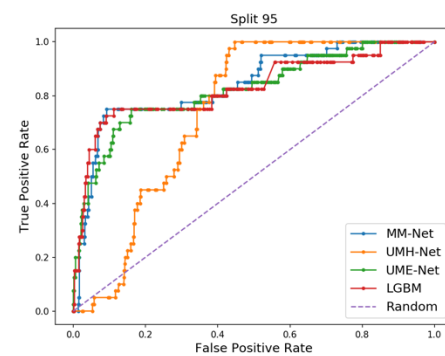
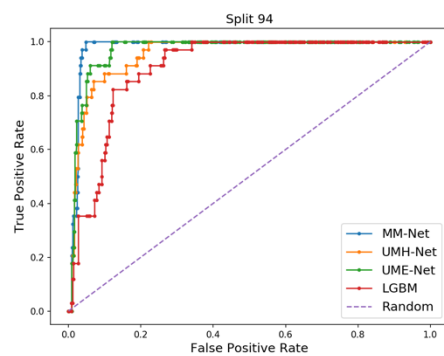
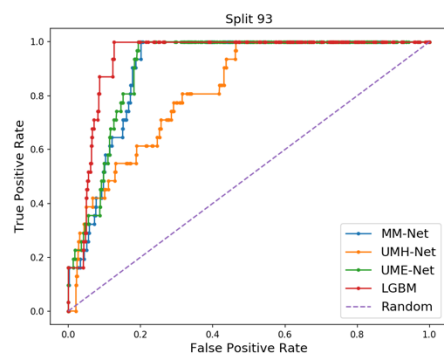
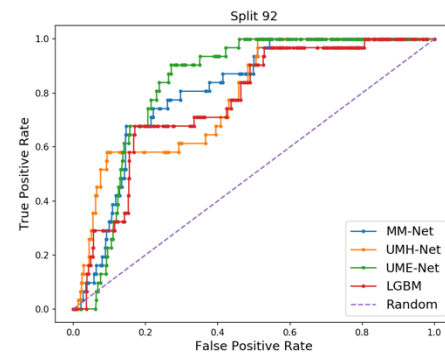
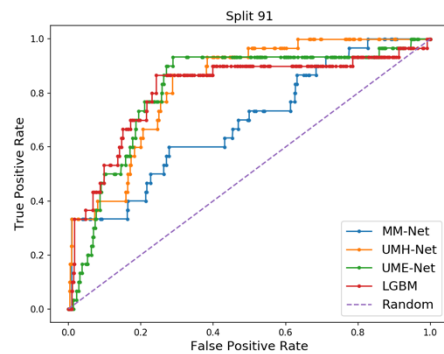
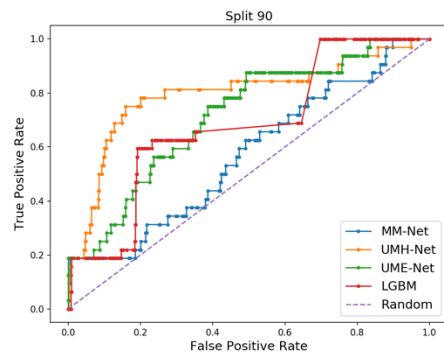


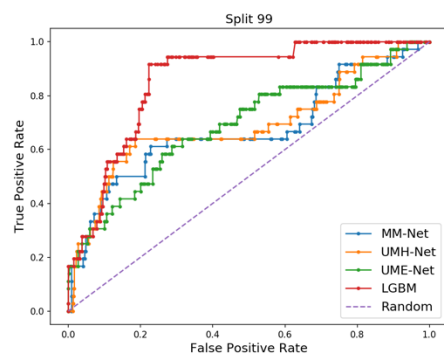
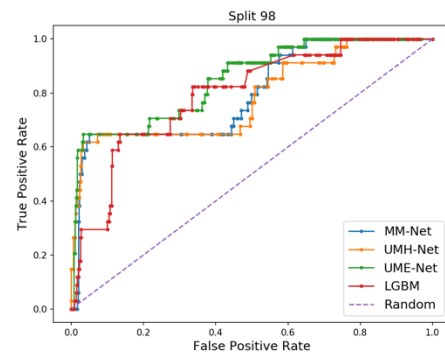
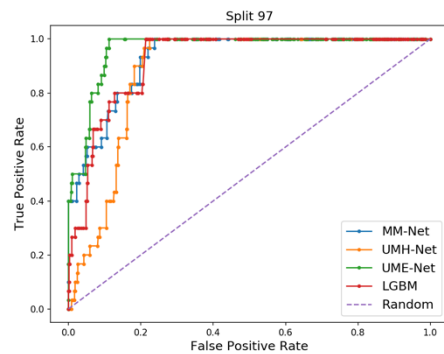
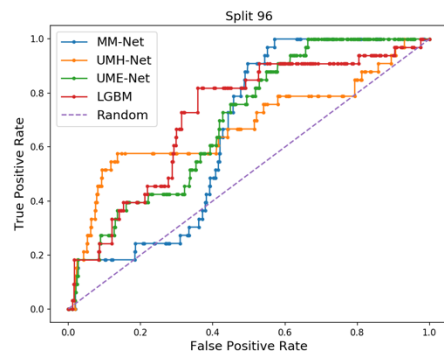












Below are the AUPRC plots for the 100 data splits

