
PRELIMINARY RESULTS FOR BRAZIL COVID-19 DATASET

Salomon Wollenstein-Betech, Christos G. Cassandras, Ioannis Ch. Paschalidis, Amanda Batista, Julia Fleck

1 Basic Analytics

	0
N	92662
N_Hosp	84195
N_Death	31788
Female	39658
Male	52979
Race	26525
Schooling	7058
Acute Respiratory Distress Syndrome	22854
Contracted At Hospital	2374
Contact Birds Pigs	744
Fever	67553
Cough	70434
Throat	19587
Dyspnea	64220
Respiratory Discomfort	53370
SpO2 less 95\%	51025
Diarrhea	12502
Vomiting	7010
Other Symptoms	29366
Postpartum	403
Cardiovascular Disease	28978
Hematologic Disease	852
Down Syndrome	238
Liver Chronic Disease	773
Asthma	2544
Diabetes	21990
Neurological Disease	3457
Another Chronic Pneumopathy	3326
Immunosuppression	2745
Renal Chronic Disease	3717
Obesity	3313
Other Risks	22495
Antiviral Use	29747
Hospitalization	84195
ICU	27840
Ventilator	16963
Xray Torax Result	2409
Result Final	0
Evolution	35639
Public Hospital	30867
Region	0

Table 1: Number of observations with a specific observation

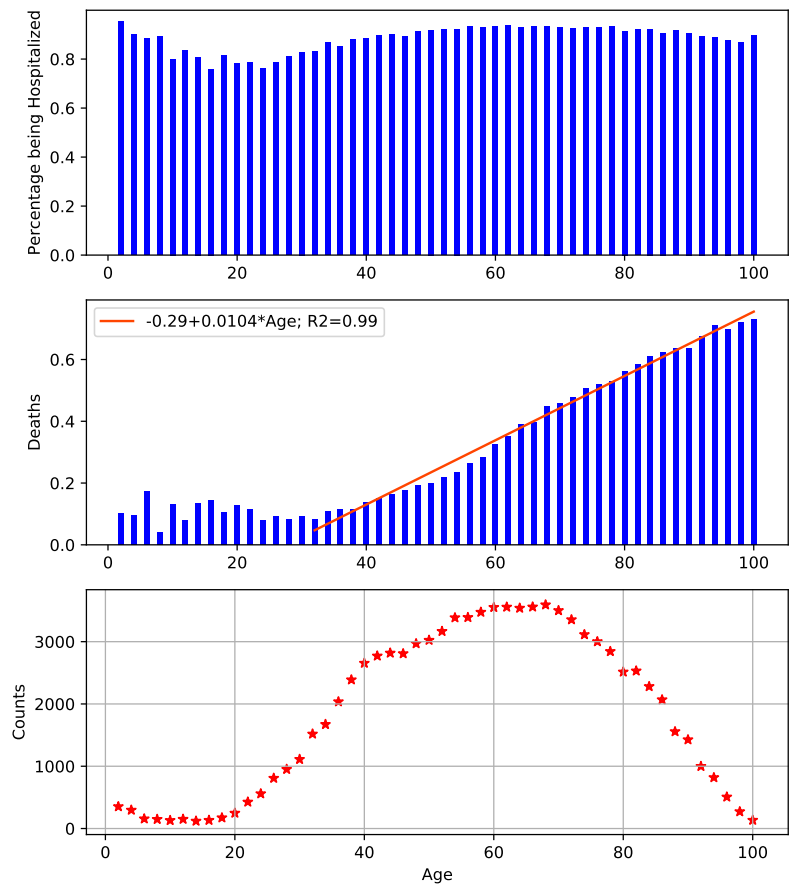


Figure 1: Distribution of hospitalization and deaths by age group

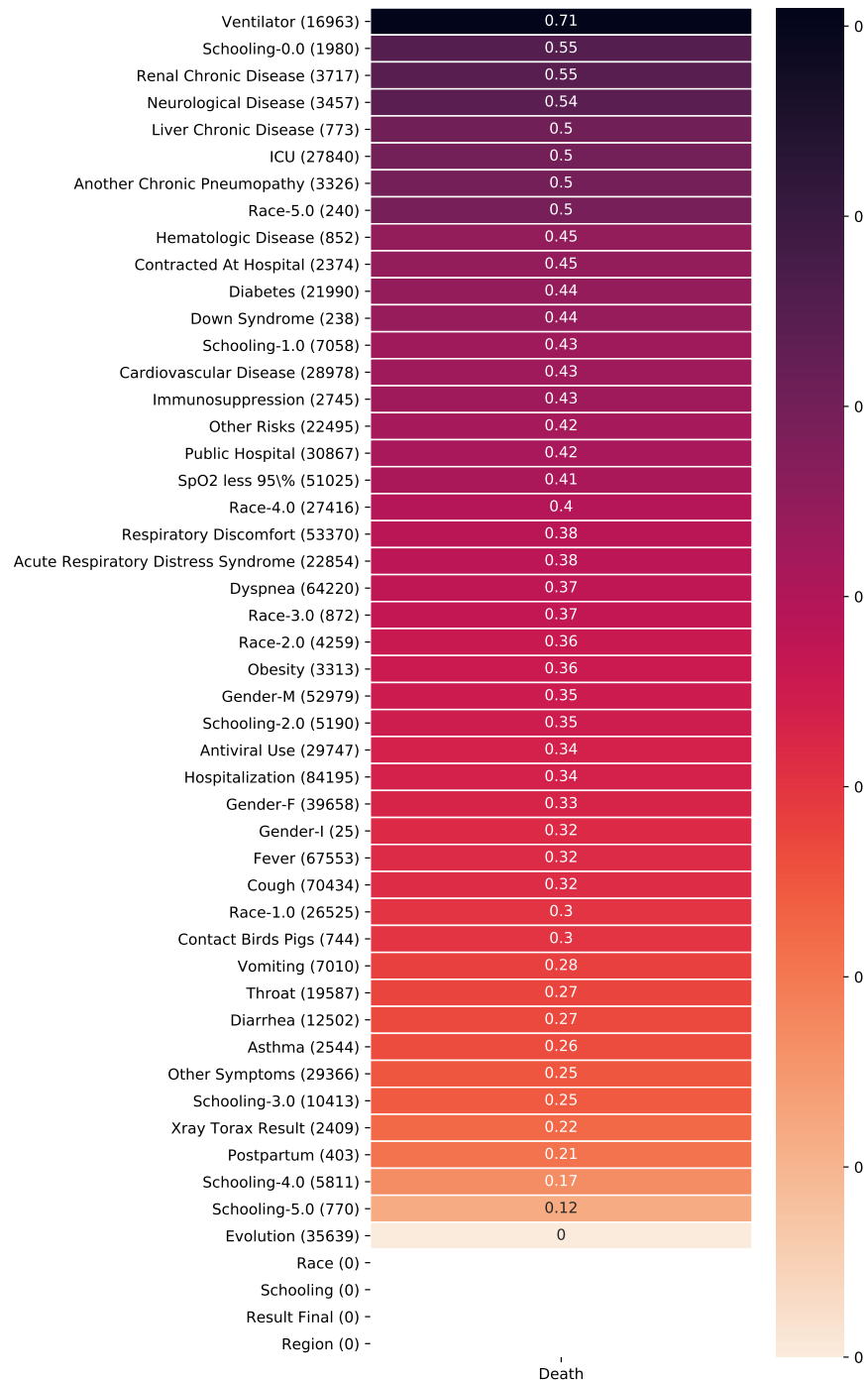


Figure 2: Share of hospitalized and deaths patients given characteristics

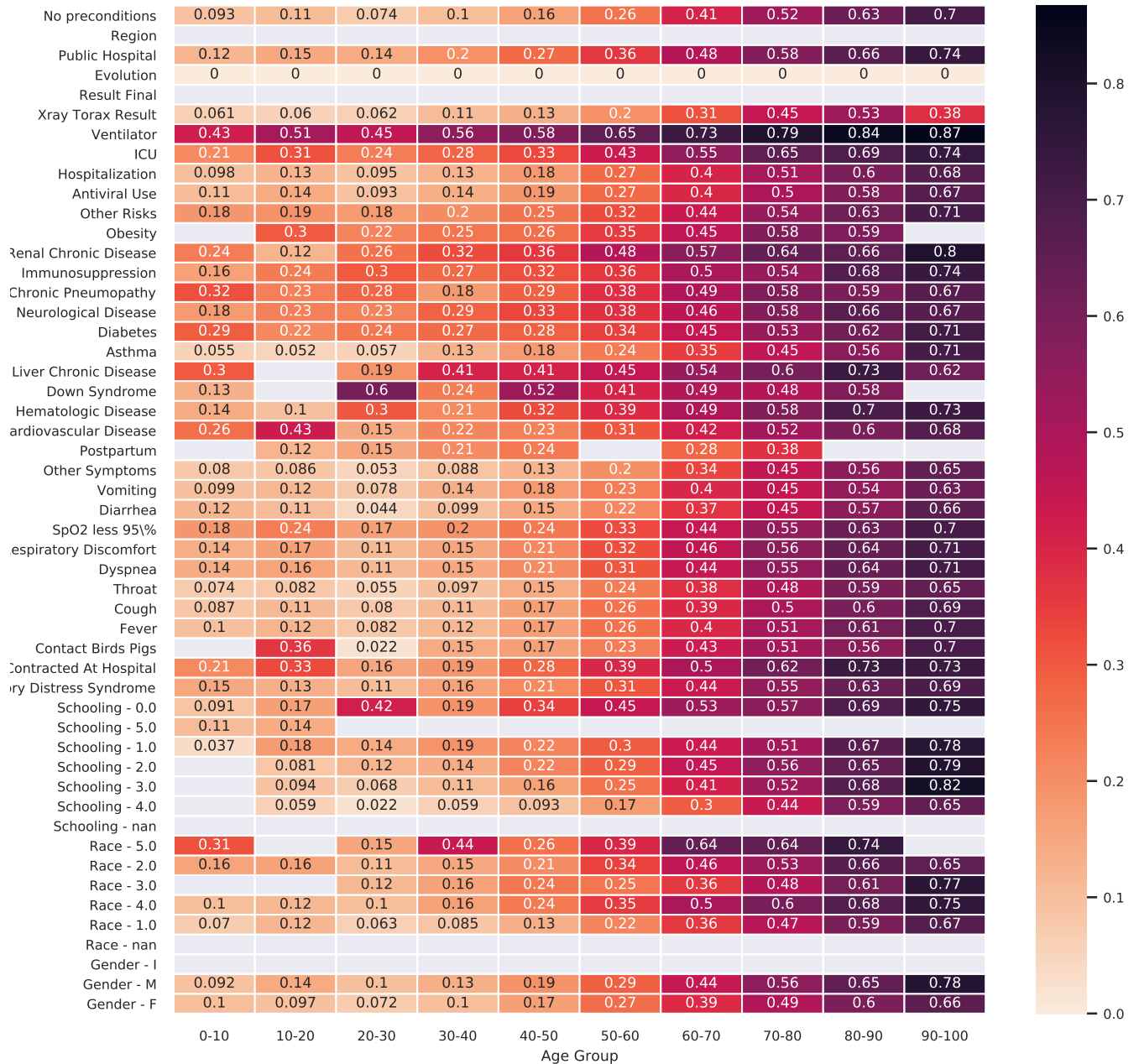
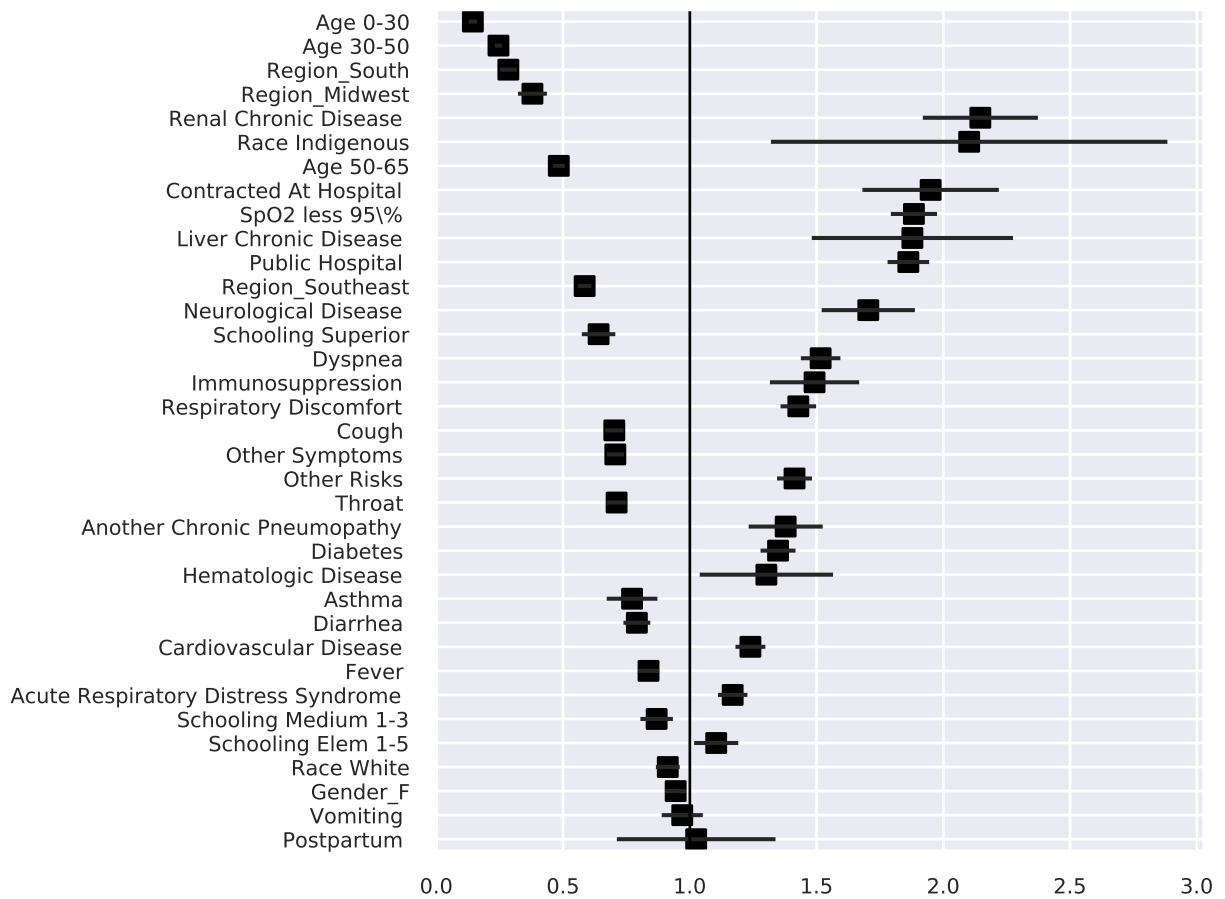


Figure 3: Share of hospitalized and deaths patients given characteristics and age group

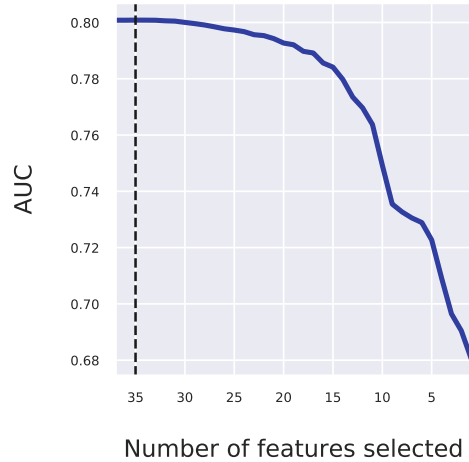
2 Results

2.1 Mortality (previous)

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-1.940	-2.065	-1.815	0.144	0.127	0.163	0.480	0.150	0.000	0.000
0.440	0.117	0.017								
Age 30-50	-1.407	-1.466	-1.349	0.245	0.231	0.260	0.548	0.225	0.000	0.000
0.529	0.209	0.014								
Region.South	-1.258	-1.386	-1.131	0.284	0.250	0.323	0.473	0.230	0.000	0.000
0.583	0.240	0.034								
Region.Midwest	-0.969	-1.134	-0.804	0.379	0.322	0.447	0.464	0.316	0.000	0.000
0.649	0.327	0.057								
Renal Chronic Disease	0.764	0.652	0.875	2.146	1.919	2.400	0.450	0.701	0.000	0.000
1.323	2.040	0.227								
Race Indigenous	0.743	0.278	1.208	2.102	1.320	3.346	0.461	0.673	0.000	0.002
1.247	1.770	0.782								
Age 50-65	-0.728	-0.778	-0.678	0.483	0.459	0.508	0.479	0.420	0.000	0.000
0.693	0.421	0.024								
Contracted At Hospital	0.668	0.519	0.817	1.950	1.681	2.263	0.457	0.647	0.000	0.000
1.249	1.792	0.269								
SpO2 less 95\%	0.633	0.584	0.682	1.884	1.793	1.979	0.343	0.543	0.000	0.000
1.250	1.785	0.091								
Liver Chronic Disease	0.630	0.393	0.868	1.878	1.481	2.382	0.460	0.652	0.000	0.000
1.255	1.786	0.397								
Public Hospital	0.622	0.576	0.667	1.862	1.780	1.948	0.404	0.557	0.000	0.000
1.222	1.677	0.082								
Region.Southeast	-0.537	-0.583	-0.490	0.585	0.558	0.613	0.531	0.413	0.000	0.000
0.745	0.472	0.027								
Neurological Disease	0.533	0.419	0.648	1.704	1.520	1.911	0.452	0.684	0.000	0.000
1.199	1.582	0.184								
Schooling Superior	-0.446	-0.554	-0.338	0.640	0.574	0.713	0.474	0.249	0.000	0.000
0.833	0.604	0.066								
Dyspnea	0.416	0.363	0.469	1.516	1.438	1.598	0.374	0.493	0.000	0.000
1.101	1.282	0.078								
Immunosuppression	0.400	0.275	0.526	1.492	1.316	1.692	0.458	0.564	0.000	0.000
1.152	1.436	0.176								
Respiratory Discomfort	0.356	0.306	0.406	1.428	1.358	1.500	0.390	0.507	0.000	0.000
1.118	1.329	0.070								
Cough	-0.353	-0.408	-0.299	0.702	0.665	0.742	0.575	0.429	0.000	0.000
0.809	0.576	0.037								
Other Symptoms	-0.348	-0.397	-0.299	0.706	0.672	0.741	0.507	0.359	0.000	0.000
0.838	0.629	0.034								
Other Risks	0.346	0.296	0.396	1.413	1.344	1.486	0.434	0.540	0.000	0.000
1.105	1.298	0.069								
Throat	-0.341	-0.399	-0.284	0.711	0.671	0.753	0.483	0.381	0.000	0.000
0.879	0.713	0.040								
Another Chronic Pneumopathy	0.321	0.208	0.434	1.378	1.232	1.543	0.454	0.633	0.000	0.000
1.121	1.331	0.146								
Diabetes	0.298	0.246	0.350	1.348	1.279	1.419	0.421	0.580	0.000	0.000
1.105	1.285	0.069								
Hematologic Disease	0.264	0.038	0.490	1.302	1.039	1.632	0.460	0.589	0.000	0.022
1.097	1.271	0.263								
Asthma	-0.258	-0.397	-0.119	0.772	0.672	0.888	0.464	0.356	0.000	0.000
0.912	0.791	0.100								
Diarrhea	-0.235	-0.304	-0.166	0.791	0.738	0.847	0.475	0.371	0.000	0.000
0.908	0.776	0.053								
Cardiovascular Disease	0.214	0.165	0.263	1.239	1.180	1.301	0.410	0.562	0.000	0.000
1.052	1.141	0.059								
Fever	-0.178	-0.230	-0.127	0.837	0.795	0.881	0.560	0.428	0.000	0.000
0.868	0.695	0.042								
Acute Respiratory Distress Syndrome	0.156	0.106	0.206	1.169	1.111	1.229	0.445	0.509	0.000	0.000
1.027	1.069	0.058								
Schooling Medium 1-3	-0.141	-0.216	-0.065	0.869	0.805	0.937	0.476	0.342	0.000	0.000
0.935	0.844	0.064								
Schooling Elem 1-5	0.099	0.017	0.181	1.104	1.017	1.198	0.453	0.565	0.000	0.018
1.015	1.033	0.087								
Race White	-0.091	-0.144	-0.038	0.913	0.866	0.963	0.488	0.398	0.000	0.001
0.954	0.885	0.047								
Gender.F	-0.058	-0.102	-0.014	0.944	0.903	0.986	0.469	0.451	0.002	0.010
0.933	0.829	0.041								
Vomiting	-0.030	-0.118	0.058	0.970	0.889	1.060	0.467	0.390	0.000	0.504
0.985	0.970	0.081								
Postpartum	0.025	-0.340	0.389	1.025	0.712	1.475	0.462	0.283	0.000	0.895
0.968	0.978	0.313								

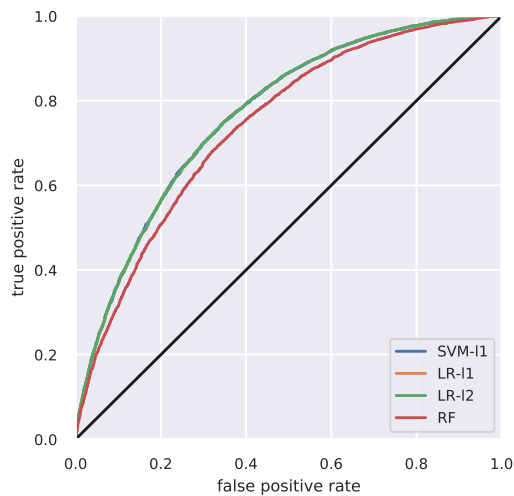


Recursive Feature Elimination:



Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.698	0.699	0.700	0.676	0.705
F1w	0.698	0.699	0.700	0.676	0.705
AUC	0.768	0.768	0.768	0.741	0.774



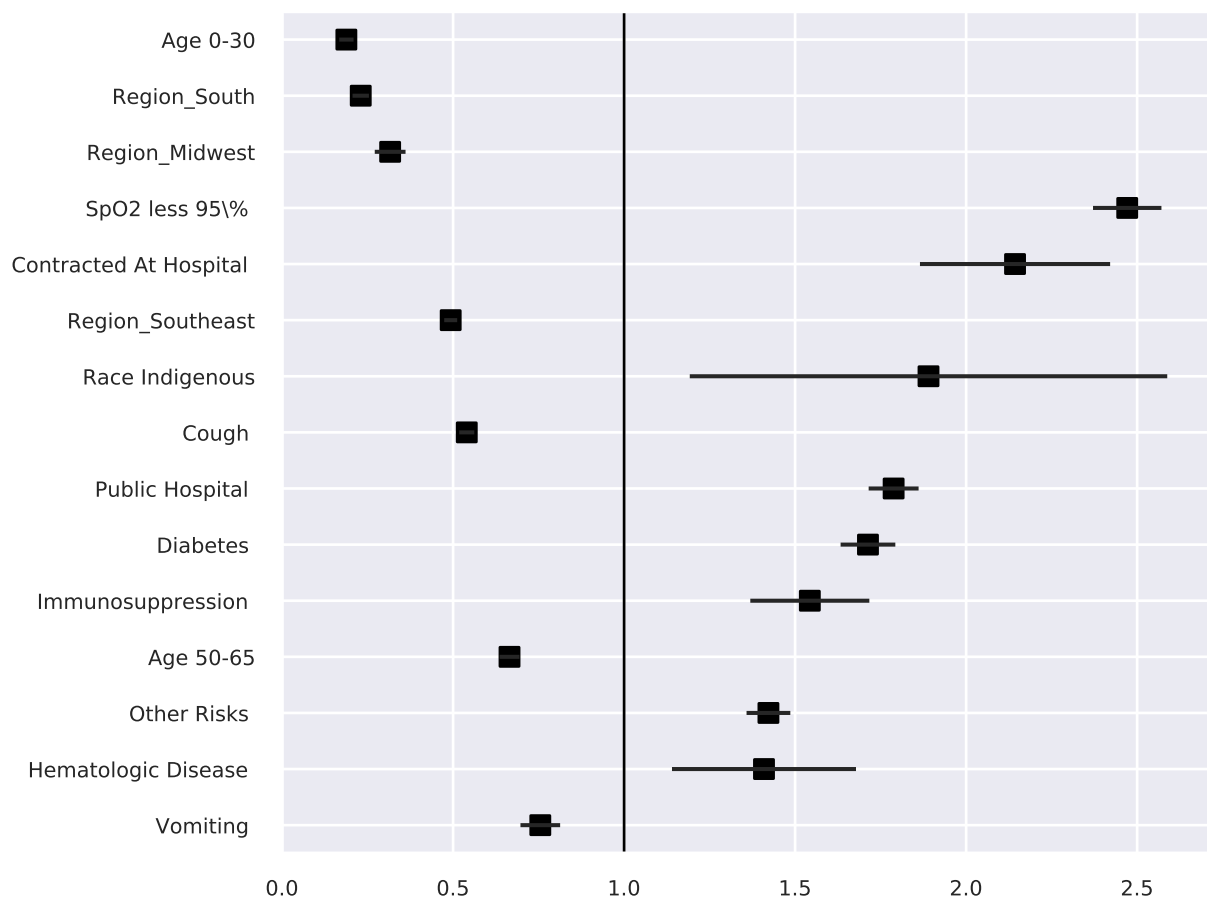
Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.440	0.117
Age 30-50	0.529	0.209
Region_South	0.583	0.240
Region_Midwest	0.649	0.327
Age 50-65	0.693	0.421
Region_Southeast	0.745	0.472
Cough	0.809	0.576
Schooling Superior	0.833	0.604
Other Symptoms	0.838	0.629
Fever	0.868	0.695
Throat	0.879	0.713
Diarrhea	0.908	0.776
Asthma	0.912	0.791
Gender_F	0.933	0.829
Schooling Medium 1-3	0.935	0.844
Race White	0.954	0.885
Vomiting	0.985	0.970
Postpartum	0.968	0.978
Schooling Elem 1-5	1.015	1.033
Acute Respiratory Distress Syndrome	1.027	1.069
Cardiovascular Disease	1.052	1.141
Hematologic Disease	1.097	1.271
Dyspnea	1.101	1.282
Diabetes	1.105	1.285
Other Risks	1.105	1.298
Respiratory Discomfort	1.118	1.329
Another Chronic Pneumopathy	1.121	1.331
Immunosuppression	1.152	1.436
Neurological Disease	1.199	1.582
Public Hospital	1.222	1.677
Race Indigenous	1.247	1.770
SpO2 less 95 %	1.250	1.785
Liver Chronic Disease	1.255	1.786
Contracted At Hospital	1.249	1.792
Renal Chronic Disease	1.323	2.040

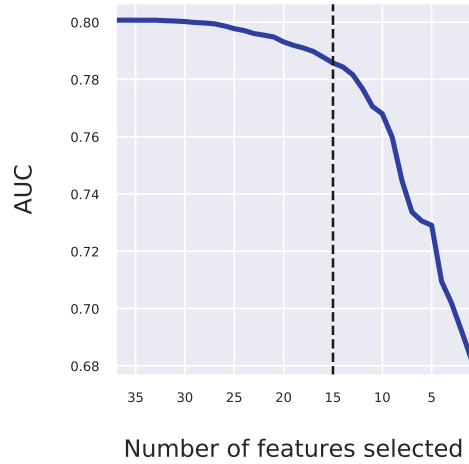


2.2 Mortality (previous) small

SVM-11	Coef LR-11	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30 0.522	-1.671 0.178	-1.789 0.021	-1.553	0.188	0.167	0.212	0.484	0.153	0.000	0.000
Region_South 0.529	-1.468 0.214	-1.582 0.024	-1.353	0.230	0.206	0.258	0.477	0.229	0.000	0.000
Region_Midwest 0.595	-1.152 0.298	-1.304 0.045	-1.000	0.316	0.271	0.368	0.468	0.318	0.000	0.000
SpO2 less 95\%	0.905	0.863	0.946	2.471	2.371	2.576	0.343	0.548	0.000	0.000
1.448	2.359	0.100								
Contracted At Hospital 1.350	0.762 2.073	0.623 0.278	0.901	2.143	1.865	2.462	0.460	0.644	0.000	0.000
Region_Southeast 0.711	-0.708 0.456	-0.747 0.019	-0.668	0.493	0.474	0.513	0.536	0.416	0.000	0.000
Race Indigenous 1.260	0.637 1.739	0.176 0.698	1.097	1.890	1.192	2.996	0.465	0.660	0.001	0.007
Cough 0.733	-0.616 0.484	-0.657 0.022	-0.576	0.540	0.518	0.562	0.578	0.432	0.000	0.000
Public Hospital 1.262	0.581 1.713	0.539 0.073	0.622	1.788	1.715	1.864	0.409	0.559	0.000	0.000
Diabetes 1.252	0.538 1.672	0.491 0.080	0.585	1.713	1.633	1.795	0.424	0.585	0.000	0.000
Immunosuppression 1.192	0.434 1.512	0.314 0.174	0.554	1.543	1.369	1.740	0.462	0.564	0.000	0.000
Age 50-65 0.827	-0.408 0.646	-0.452 0.029	-0.363	0.665	0.636	0.696	0.485	0.418	0.000	0.000
Other Risks 1.147	0.352 1.378	0.306 0.064	0.399	1.422	1.358	1.490	0.438	0.540	0.000	0.000
Hematologic Disease 1.151	0.343 1.379	0.131 0.269	0.555	1.409	1.140	1.743	0.464	0.570	0.000	0.002
Vomiting 0.882	-0.281 0.741	-0.361 0.058	-0.201	0.755	0.697	0.818	0.471	0.394	0.000	0.000



Recursive Feature Elimination:

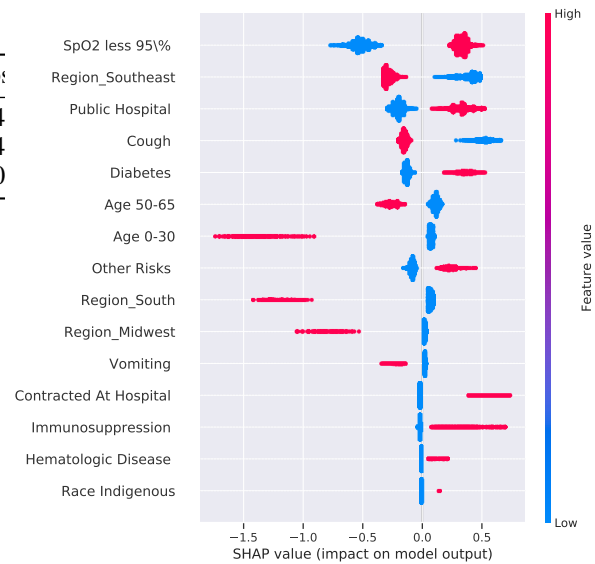
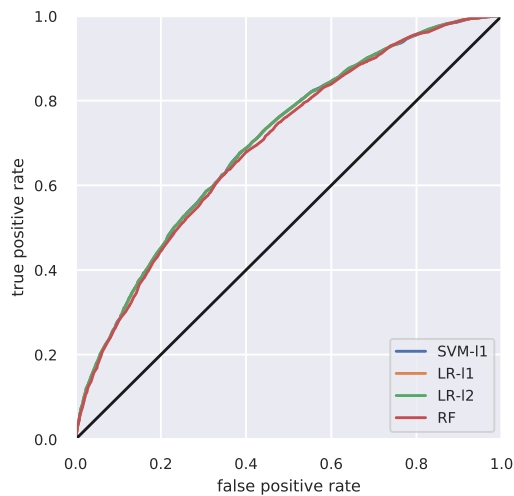


Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.522	0.178
Region_South	0.529	0.214
Region_Midwest	0.595	0.298
Region_Southeast	0.711	0.456
Cough	0.733	0.484
Age 50-65	0.827	0.646
Vomiting	0.882	0.741
Other Risks	1.147	1.378
Hematologic Disease	1.151	1.379
Immunosuppression	1.192	1.512
Diabetes	1.252	1.672
Public Hospital	1.262	1.713
Race Indigenous	1.260	1.739
Contracted At Hospital	1.350	2.073
SpO2 less 95\%	1.448	2.359

Performance:

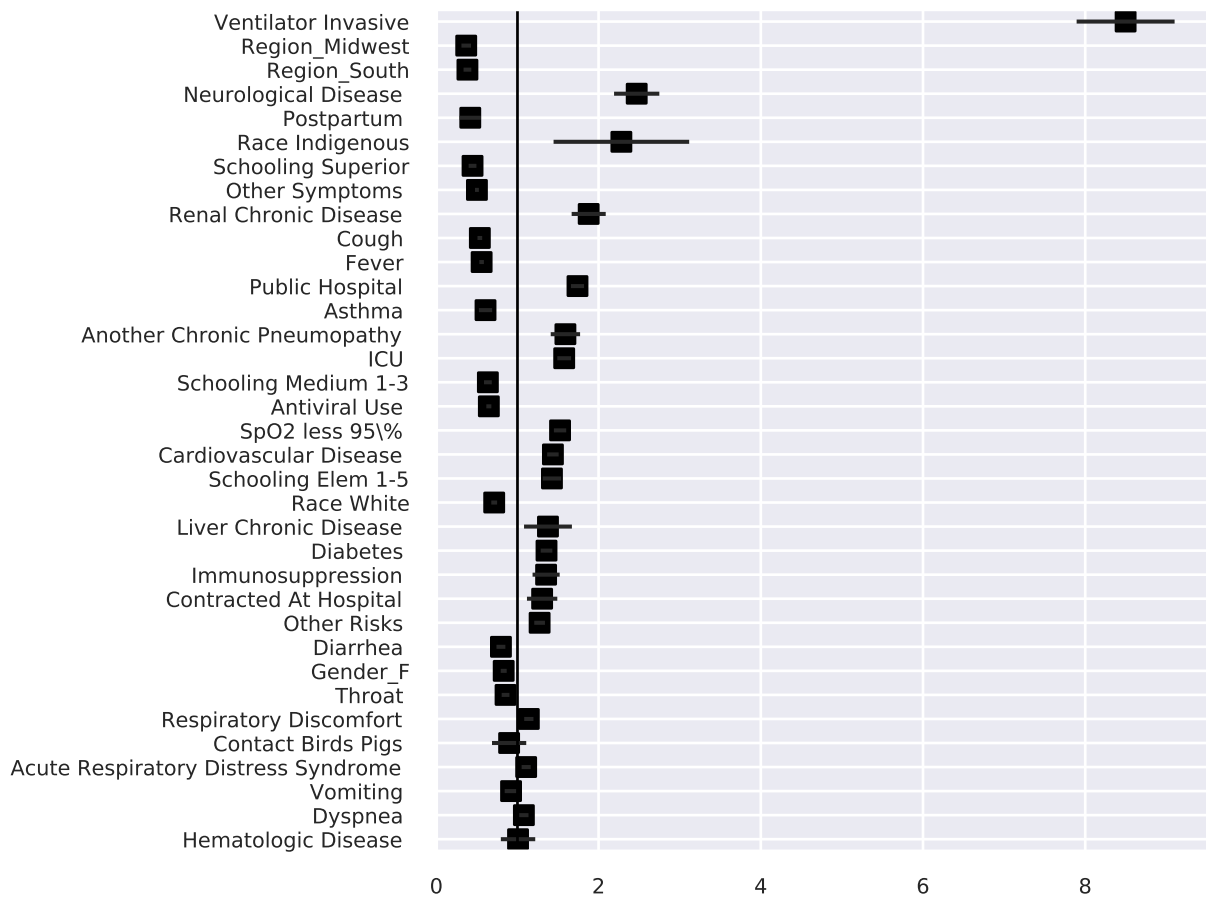
	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.641	0.641	0.641	0.638	0.64
F1w	0.641	0.641	0.641	0.636	0.64
AUC	0.703	0.703	0.703	0.696	0.70



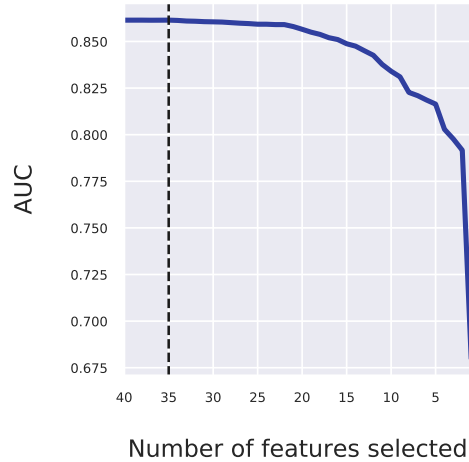
2.3 Mortality (advanced)

Include variables: Antiviral, ICU, Ventilator

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Ventilator Invasive	2.140	2.066	2.214	8.498	7.894	9.148	0.348	0.862	0.000	0.000
2.218	8.258	0.604								
Region.Midwest	-1.000	-1.175	-0.825	0.368	0.309	0.438	0.466	0.327	0.000	0.000
0.708	0.377	0.059								
Region.South	-0.961	-1.094	-0.828	0.383	0.335	0.437	0.475	0.233	0.000	0.000
0.732	0.384	0.048								
Neurological Disease	0.904	0.785	1.024	2.470	2.191	2.783	0.453	0.694	0.000	0.000
1.445	2.513	0.279								
Postpartum	-0.873	-1.243	-0.502	0.418	0.288	0.605	0.464	0.317	0.000	0.000
0.755	0.455	0.130								
Race Indigenous	0.825	0.368	1.281	2.281	1.445	3.600	0.463	0.650	0.001	0.000
1.412	2.221	0.836								
Schooling Superior	-0.806	-0.922	-0.691	0.446	0.398	0.501	0.476	0.252	0.000	0.000
0.778	0.468	0.048								
Other Symptoms	-0.693	-0.743	-0.642	0.500	0.476	0.526	0.510	0.358	0.000	0.000
0.802	0.545	0.024								
Renal Chronic Disease	0.630	0.511	0.749	1.878	1.668	2.115	0.452	0.702	0.000	0.000
1.291	1.915	0.210								
Cough	-0.624	-0.680	-0.569	0.536	0.507	0.566	0.574	0.431	0.000	0.000
0.834	0.619	0.029								
Fever	-0.583	-0.635	-0.530	0.558	0.530	0.588	0.563	0.429	0.000	0.000
0.840	0.636	0.028								
Public Hospital	0.554	0.506	0.601	1.740	1.659	1.824	0.405	0.559	0.000	0.000
1.273	1.875	0.081								
Asthma	-0.502	-0.646	-0.357	0.606	0.524	0.700	0.467	0.351	0.000	0.000
0.840	0.613	0.082								
Another Chronic Pneumopathy	0.465	0.343	0.586	1.591	1.410	1.796	0.456	0.646	0.000	0.000
1.201	1.597	0.181								
ICU	0.455	0.399	0.510	1.576	1.491	1.666	0.360	0.662	0.000	0.000
1.220	1.676	0.085								
Schooling Medium 1-3	-0.454	-0.532	-0.376	0.635	0.587	0.686	0.478	0.343	0.000	0.000
0.860	0.660	0.048								
Antiviral Use	-0.435	-0.484	-0.385	0.647	0.616	0.680	0.475	0.443	0.000	0.000
0.855	0.654	0.031								
SpO2 less 95\%	0.422	0.371	0.473	1.525	1.449	1.604	0.343	0.545	0.000	0.000
1.190	1.584	0.076								
Cardiovascular Disease	0.363	0.312	0.413	1.437	1.366	1.512	0.411	0.567	0.000	0.000
1.163	1.490	0.071								
Schooling Elem 1-5	0.355	0.271	0.438	1.425	1.311	1.550	0.455	0.560	0.000	0.000
1.163	1.459	0.114								
Race White	-0.338	-0.391	-0.285	0.713	0.677	0.752	0.491	0.397	0.000	0.000
0.901	0.753	0.036								
Liver Chronic Disease	0.319	0.078	0.561	1.376	1.081	1.752	0.462	0.627	0.000	0.009
1.148	1.408	0.295								
Diabetes	0.306	0.251	0.361	1.358	1.286	1.434	0.423	0.580	0.000	0.000
1.134	1.383	0.072								
Immunosuppression	0.302	0.170	0.434	1.353	1.186	1.543	0.460	0.573	0.000	0.000
1.133	1.388	0.167								
Contracted At Hospital	0.265	0.110	0.420	1.304	1.117	1.523	0.459	0.641	0.000	0.001
1.128	1.383	0.187								
Other Risks	0.241	0.188	0.294	1.273	1.207	1.341	0.436	0.541	0.000	0.000
1.114	1.332	0.066								
Diarrhea	-0.228	-0.299	-0.157	0.796	0.741	0.854	0.477	0.378	0.000	0.000
0.926	0.807	0.055								
Gender_F	-0.187	-0.232	-0.142	0.830	0.793	0.868	0.471	0.453	0.004	0.000
0.965	0.908	0.037								
Throat	-0.159	-0.217	-0.100	0.853	0.805	0.905	0.483	0.385	0.000	0.000
0.940	0.851	0.048								
Respiratory Discomfort	0.131	0.080	0.183	1.140	1.083	1.200	0.391	0.510	0.000	0.000
1.071	1.190	0.057								
Contact Birds Pigs	-0.108	-0.377	0.161	0.897	0.686	1.175	0.464	0.389	0.043	0.431
0.973	0.932	0.211								
Acute Respiratory Distress Syndrome	0.102	0.049	0.154	1.107	1.051	1.166	0.447	0.509	0.000	0.000
1.055	1.148	0.056								
Vomiting	-0.082	-0.172	0.008	0.921	0.842	1.008	0.469	0.397	0.000	0.073
0.973	0.935	0.079								
Dyspnea	0.076	0.022	0.130	1.079	1.022	1.139	0.372	0.496	0.000	0.006
1.070	1.197	0.057								
Hematologic Disease	0.007	-0.229	0.243	1.007	0.795	1.275	0.462	0.574	0.000	0.956
1.011	1.017	0.212								

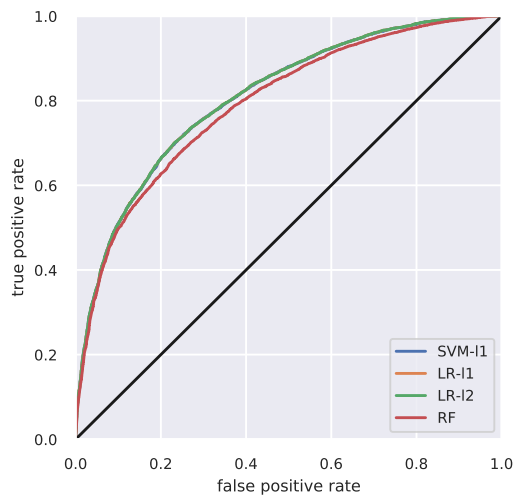


Recursive Feature Elimination:



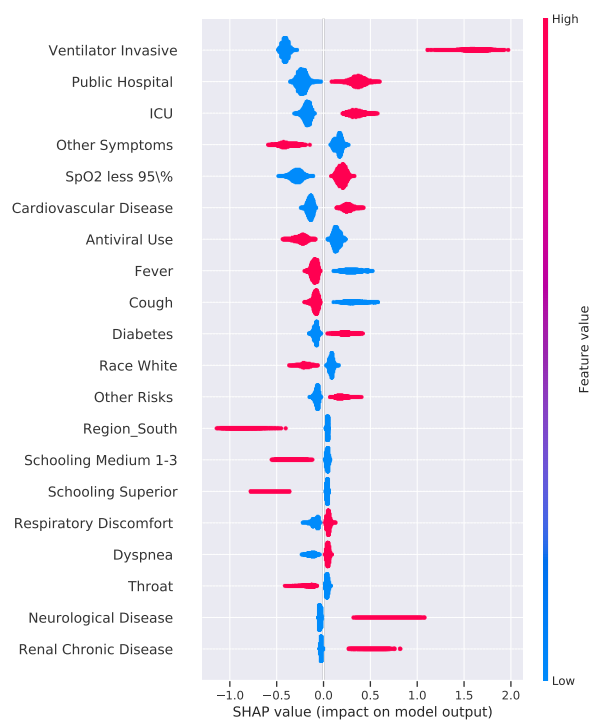
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.735	0.735	0.735	0.716	0.738
F1w	0.734	0.734	0.734	0.707	0.737
AUC	0.809	0.809	0.809	0.793	0.813



Coefficients:

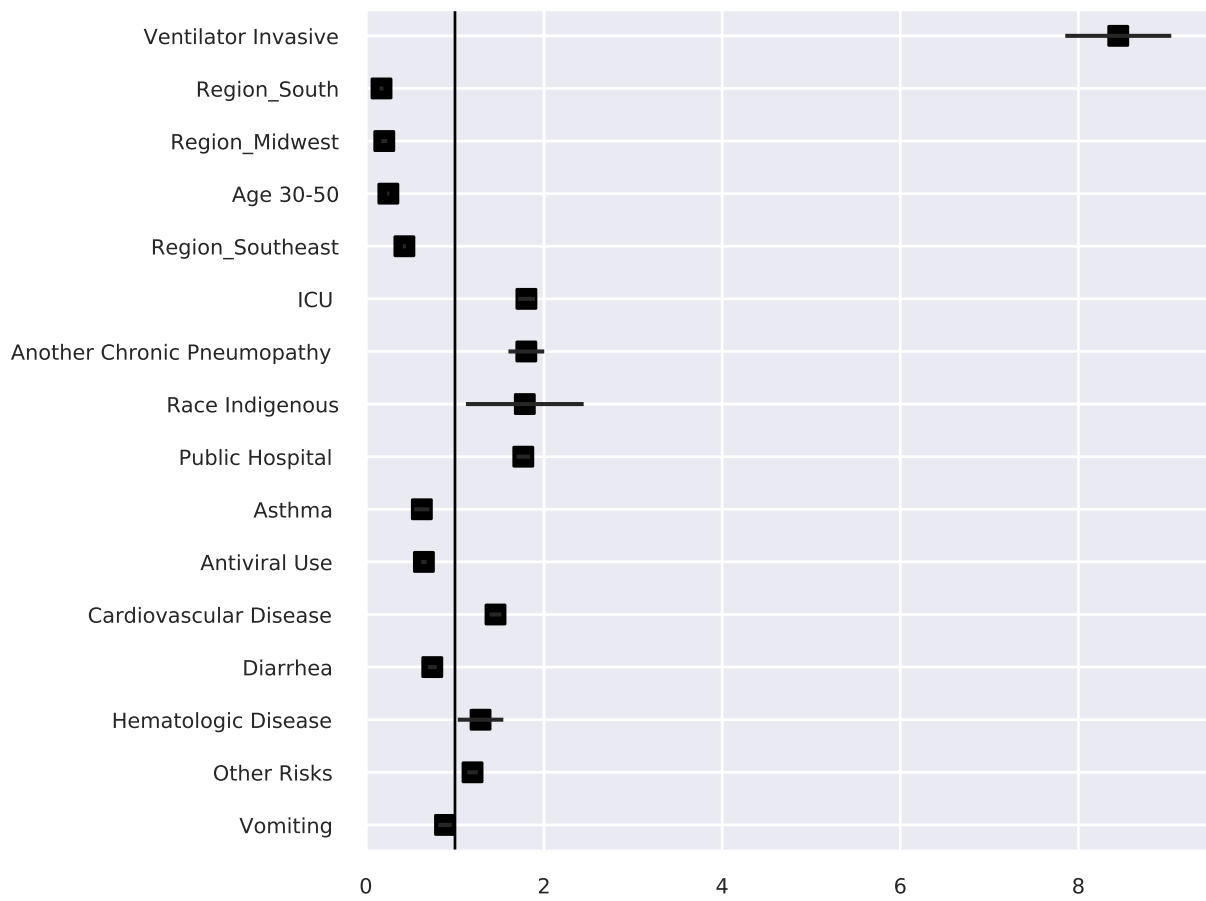
	SVM-l1	LR-l1
Region_Midwest	0.708	0.377
Region_South	0.732	0.384
Postpartum	0.755	0.455
Schooling_Superior	0.778	0.468
Other_Symptoms	0.802	0.545
Asthma	0.840	0.613
Cough	0.834	0.619
Fever	0.840	0.636
Antiviral_Use	0.855	0.654
Schooling_Medium_1-3	0.860	0.660
Race_White	0.901	0.753
Diarrhea	0.926	0.807
Throat	0.940	0.851
Gender_F	0.965	0.908
Contact_Birds_Pigs	0.973	0.932
Vomiting	0.973	0.935
Hematologic_Disease	1.011	1.017
Acute_Respiratory_Distress_Syndrome	1.055	1.148
Respiratory_Discomfort	1.071	1.190
Dyspnea	1.070	1.197
Other_Risks	1.114	1.332
Diabetes	1.134	1.383
Contracted_At_Hospital	1.128	1.383
Immunosuppression	1.133	1.388
Liver_Chronic_Disease	1.148	1.408
Schooling_Elem_1-5	1.163	1.459
Cardiovascular_Disease	1.163	1.490
SpO2_less_95%	1.190	1.584
Another_Chronic_Pneumopathy	1.201	1.597
ICU	1.220	1.676
Public_Hospital	1.273	1.875
Renal_Chronic_Disease	1.291	1.915
Race_Indigenous	1.412	2.221
Neurological_Disease	1.445	2.513
Ventilator_Invasive	2.218	8.258



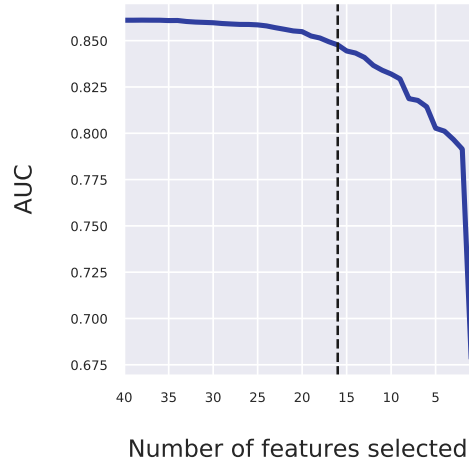
2.4 Mortality (advanced) small

Include variables: Antiviral, ICU, Ventilator

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Ventilator Invasive	2.134	2.061	2.207	8.447	7.852	9.087	0.350	0.859	0.0	0.000
2.210	8.440	0.595								
Region_South	-1.745	-1.876	-1.615	0.175	0.153	0.199	0.475	0.228	0.0	0.000
0.556	0.194	0.022								
Region_Midwest	-1.581	-1.756	-1.405	0.206	0.173	0.245	0.467	0.324	0.0	0.000
0.579	0.225	0.033								
Age 30-50	-1.376	-1.432	-1.321	0.252	0.239	0.267	0.550	0.226	0.0	0.000
0.629	0.269	0.013								
Region_Southeast	-0.840	-0.882	-0.798	0.432	0.414	0.450	0.534	0.416	0.0	0.000
0.751	0.478	0.018								
ICU	0.589	0.534	0.644	1.802	1.706	1.904	0.361	0.663	0.0	0.000
1.269	1.872	0.096								
Another Chronic Pneumopathy	0.588	0.470	0.707	1.801	1.600	2.027	0.456	0.651	0.0	0.000
1.270	1.824	0.201								
Race Indigenous	0.579	0.116	1.043	1.784	1.123	2.836	0.463	0.692	0.0	0.014
1.311	1.817	0.661								
Public Hospital	0.569	0.525	0.613	1.767	1.691	1.846	0.405	0.562	0.0	0.000
1.281	1.904	0.076								
Asthma	-0.465	-0.610	-0.321	0.628	0.543	0.725	0.467	0.354	0.0	0.000
0.853	0.646	0.085								
Antiviral Use	-0.429	-0.477	-0.382	0.651	0.621	0.683	0.475	0.446	0.0	0.000
0.862	0.676	0.030								
Cardiovascular Disease	0.375	0.328	0.422	1.455	1.388	1.524	0.411	0.570	0.0	0.000
1.178	1.535	0.067								
Diarrhea	-0.294	-0.364	-0.225	0.745	0.695	0.799	0.477	0.379	0.0	0.000
0.910	0.774	0.050								
Hematologic Disease	0.252	0.031	0.474	1.287	1.031	1.607	0.463	0.567	0.0	0.026
1.101	1.294	0.256								
Other Risks	0.180	0.129	0.231	1.197	1.138	1.259	0.437	0.542	0.0	0.000
1.089	1.255	0.059								
Vomiting	-0.119	-0.209	-0.029	0.888	0.812	0.971	0.470	0.391	0.0	0.009
0.965	0.910	0.076								



Recursive Feature Elimination:

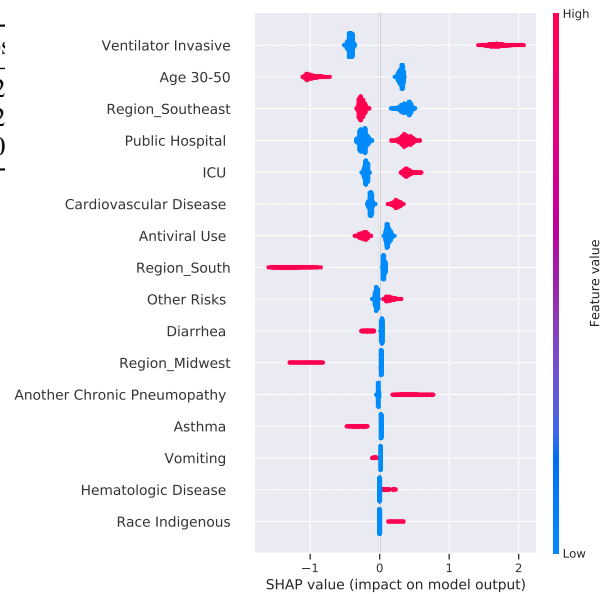
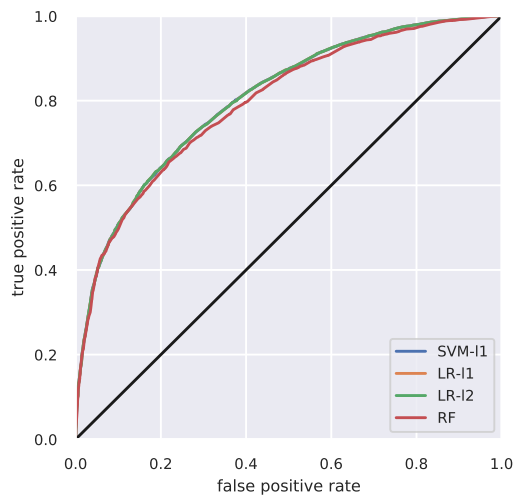


Coefficients:

	SVM-l1	LR-l1
Region_South	0.556	0.194
Region_Midwest	0.579	0.225
Age 30-50	0.629	0.269
Region_Southeast	0.751	0.478
Asthma	0.853	0.646
Antiviral Use	0.862	0.676
Diarrhea	0.910	0.774
Vomiting	0.965	0.910
Other Risks	1.089	1.255
Hematologic Disease	1.101	1.294
Cardiovascular Disease	1.178	1.535
Race Indigenous	1.311	1.817
Another Chronic Pneumopathy	1.270	1.824
ICU	1.269	1.872
Public Hospital	1.281	1.904
Ventilator Invasive	2.210	8.440

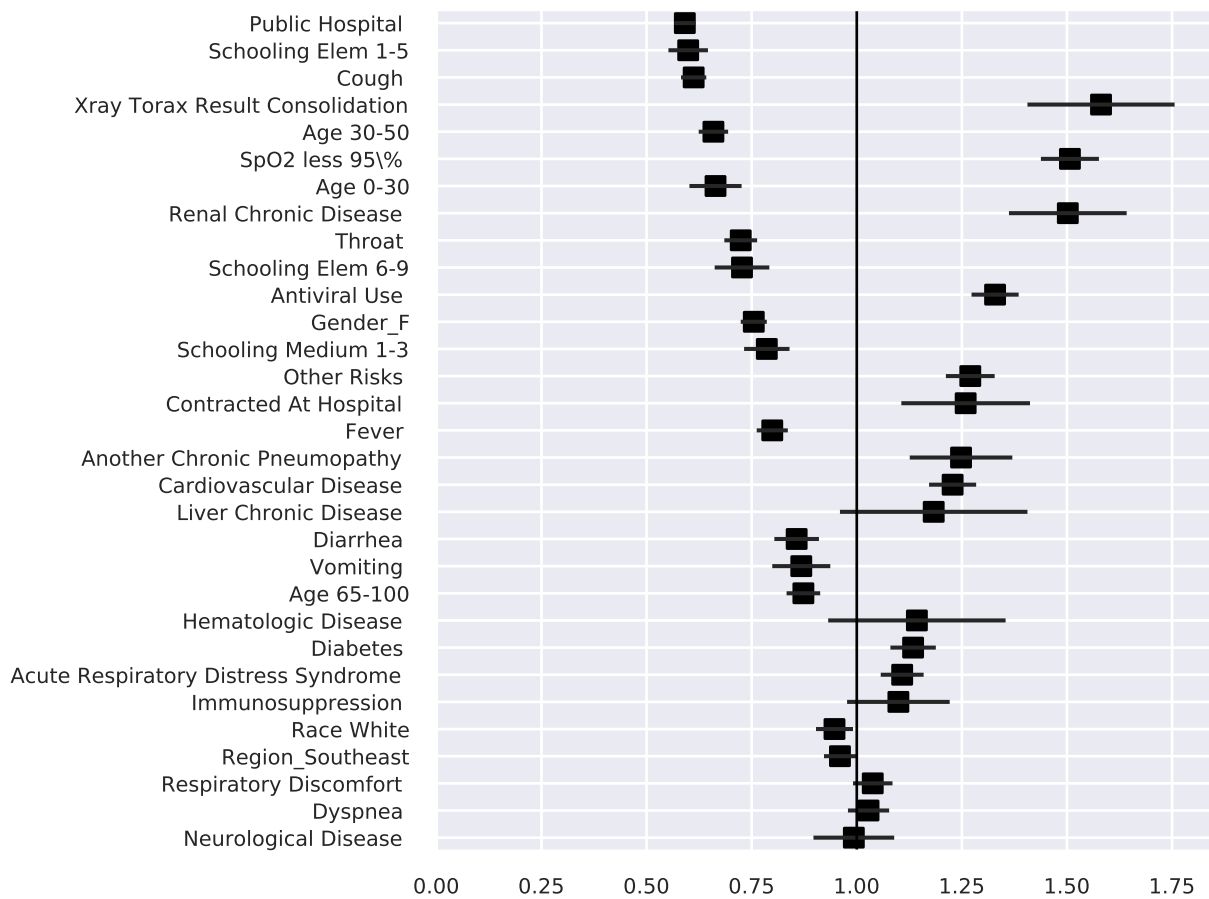
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.726	0.725	0.725	0.719	0.72
F1w	0.725	0.724	0.724	0.710	0.72
AUC	0.805	0.805	0.805	0.796	0.80

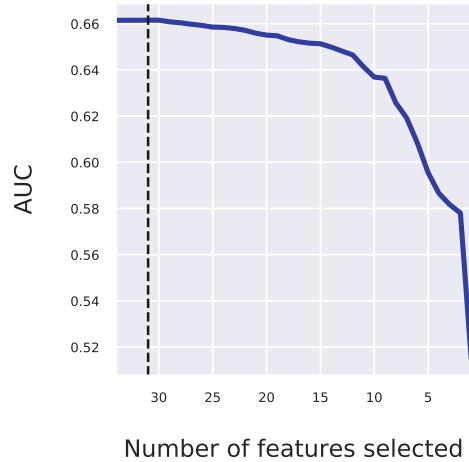


2.5 ICU

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Public Hospital	-0.526	-0.569	-0.482	0.591	0.566	0.617	0.369	0.295	0.000	0.000
0.838	0.655	0.025								
Schooling Elem 1-5	-0.512	-0.594	-0.429	0.599	0.552	0.651	0.347	0.279	0.000	0.000
0.826	0.628	0.047								
Cough	-0.491	-0.541	-0.442	0.612	0.582	0.643	0.395	0.326	0.000	0.000
0.875	0.733	0.030								
Xray Torax Result Consolidation	0.458	0.341	0.575	1.581	1.406	1.777	0.338	0.473	0.000	0.000
1.254	1.655	0.175								
Age 30-50	-0.417	-0.471	-0.363	0.659	0.624	0.696	0.366	0.275	0.000	0.000
0.938	0.848	0.035								
SpO2 less 95\%	0.410	0.363	0.457	1.507	1.438	1.580	0.264	0.395	0.000	0.000
1.210	1.585	0.069								
Age 0-30	-0.409	-0.507	-0.310	0.664	0.602	0.733	0.347	0.253	0.000	0.000
0.959	0.883	0.062								
Renal Chronic Disease	0.407	0.309	0.505	1.502	1.362	1.657	0.334	0.494	0.000	0.000
1.223	1.549	0.140								
Throat	-0.323	-0.378	-0.268	0.724	0.685	0.765	0.359	0.276	0.000	0.000
0.878	0.717	0.039								
Schooling Elem 6-9	-0.318	-0.412	-0.224	0.727	0.662	0.799	0.344	0.303	0.001	0.000
0.899	0.774	0.065								
Antiviral Use	0.285	0.241	0.328	1.329	1.273	1.388	0.314	0.389	0.000	0.000
1.138	1.359	0.056								
Gender_F	-0.282	-0.323	-0.240	0.755	0.724	0.786	0.352	0.327	0.000	0.000
0.931	0.842	0.031								
Schooling Medium 1-3	-0.241	-0.311	-0.170	0.786	0.732	0.844	0.347	0.296	0.000	0.000
0.929	0.835	0.054								
Other Risks	0.239	0.193	0.286	1.270	1.212	1.331	0.316	0.414	0.000	0.000
1.151	1.382	0.058								
Contracted At Hospital	0.230	0.100	0.360	1.259	1.106	1.433	0.339	0.449	0.000	0.001
1.151	1.366	0.153								
Fever	-0.224	-0.271	-0.177	0.799	0.762	0.838	0.368	0.333	0.000	0.000
0.984	0.965	0.037								
Another Chronic Pneumopathy	0.221	0.119	0.324	1.248	1.126	1.383	0.337	0.455	0.000	0.000
1.111	1.252	0.122								
Cardiovascular Disease	0.206	0.159	0.252	1.228	1.172	1.287	0.305	0.414	0.000	0.000
1.120	1.296	0.056								
Liver Chronic Disease	0.168	-0.041	0.376	1.183	0.960	1.456	0.341	0.427	0.005	0.115
1.096	1.229	0.223								
Diarrhea	-0.154	-0.218	-0.089	0.857	0.804	0.915	0.347	0.304	0.000	0.000
0.953	0.887	0.053								
Vomiting	-0.141	-0.225	-0.057	0.868	0.799	0.944	0.345	0.297	0.000	0.001
0.953	0.887	0.069								
Age 65-100	-0.136	-0.183	-0.089	0.873	0.833	0.915	0.305	0.393	0.000	0.000
1.046	1.107	0.040								
Hematologic Disease	0.133	-0.070	0.337	1.143	0.932	1.401	0.341	0.409	0.036	0.198
1.064	1.149	0.211								
Diabetes	0.126	0.077	0.175	1.134	1.080	1.191	0.318	0.410	0.000	0.000
1.082	1.198	0.054								
Acute Respiratory Distress Syndrome	0.103	0.056	0.150	1.108	1.057	1.161	0.330	0.375	0.000	0.000
1.079	1.197	0.051								
Immunosuppression	0.094	-0.023	0.212	1.099	0.977	1.236	0.339	0.411	0.000	0.115
1.062	1.142	0.122								
Race White	-0.055	-0.102	-0.008	0.947	0.903	0.992	0.336	0.353	0.012	0.022
0.998	0.995	0.044								
Region_Southeast	-0.040	-0.081	0.000	0.960	0.922	1.000	0.315	0.360	0.000	0.052
1.064	1.161	0.038								
Respiratory Discomfort	0.038	-0.009	0.084	1.038	0.991	1.088	0.309	0.363	0.000	0.114
1.046	1.107	0.047								
Dyspnea	0.028	-0.022	0.077	1.028	0.979	1.080	0.292	0.360	0.000	0.272
1.079	1.204	0.049								
Neurological Disease	-0.007	-0.109	0.096	0.993	0.897	1.100	0.338	0.416	0.000	0.898
0.997	0.990	0.096								

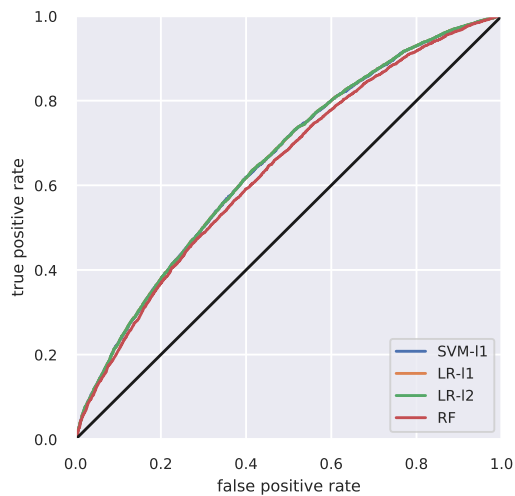


Recursive Feature Elimination:



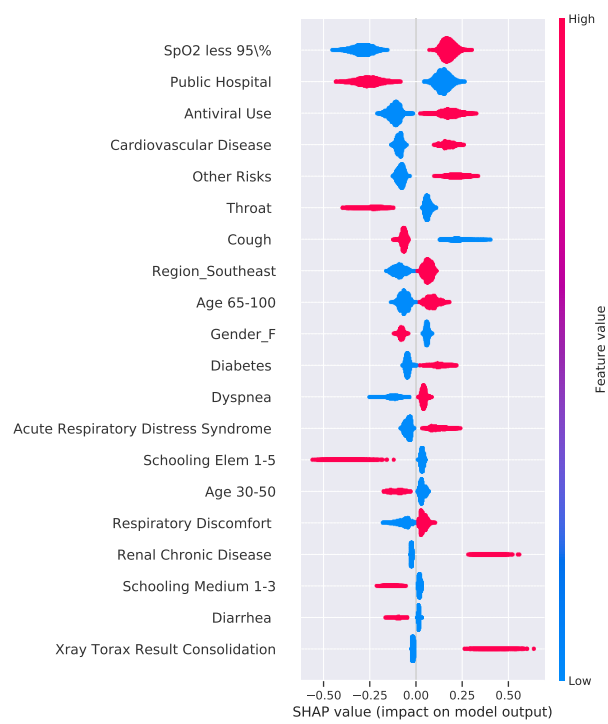
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.657	0.656	0.656	0.639	0.658
F1w	0.607	0.606	0.606	0.499	0.607
AUC	0.653	0.654	0.654	0.639	0.661



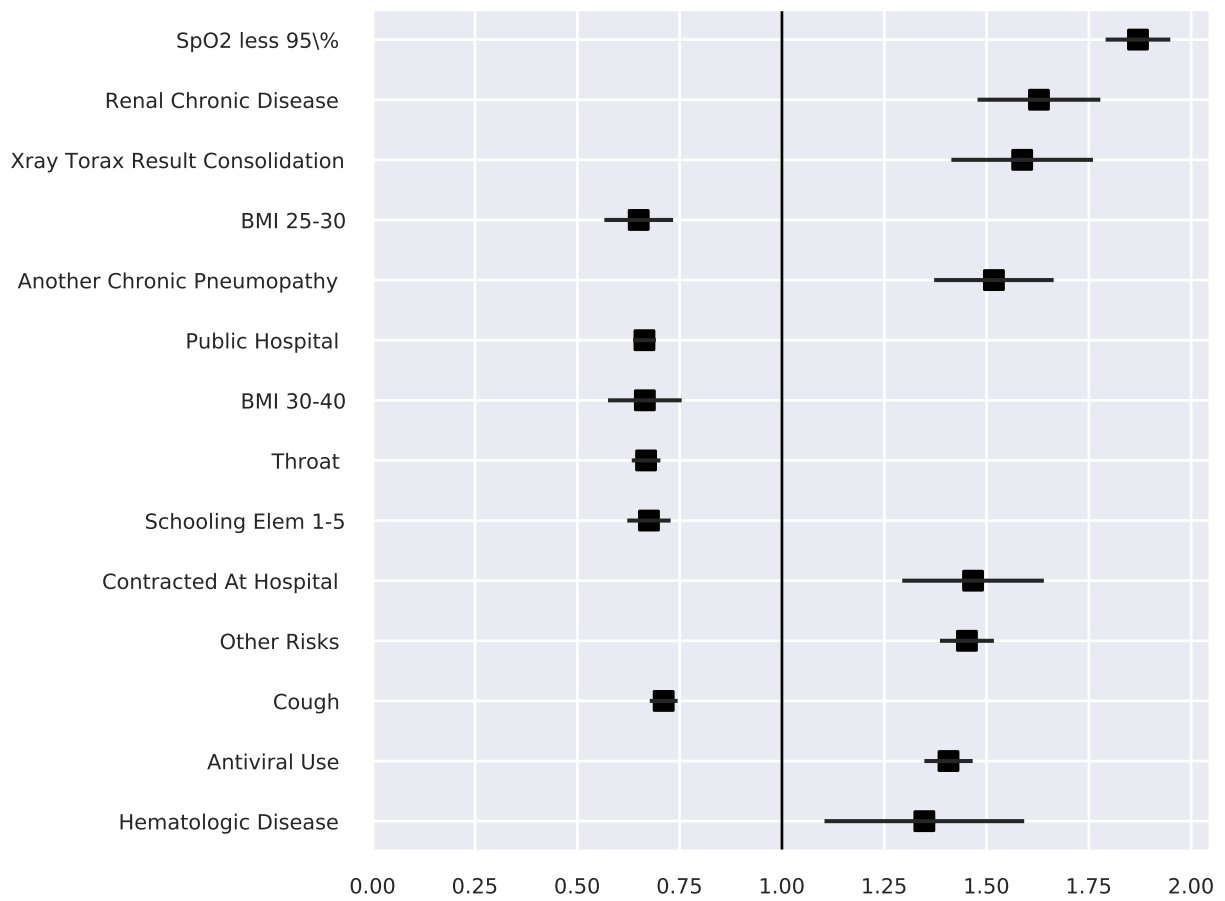
Coefficients:

	SVM-l1	LR-l1
Schooling Elem 1-5	0.826	0.628
Public Hospital	0.838	0.655
Throat	0.878	0.717
Cough	0.875	0.733
Schooling Elem 6-9	0.899	0.774
Schooling Medium 1-3	0.929	0.835
Gender_F	0.931	0.842
Age 30-50	0.938	0.848
Age 0-30	0.959	0.883
Diarrhea	0.953	0.887
Vomiting	0.953	0.887
Fever	0.984	0.965
Neurological Disease	0.997	0.990
Race White	0.998	0.995
Respiratory Discomfort	1.046	1.107
Age 65-100	1.046	1.107
Immunosuppression	1.062	1.142
Hematologic Disease	1.064	1.149
Region_Southeast	1.064	1.161
Acute Respiratory Distress Syndrome	1.079	1.197
Diabetes	1.082	1.198
Dyspnea	1.079	1.204
Liver Chronic Disease	1.096	1.229
Another Chronic Pneumopathy	1.111	1.252
Cardiovascular Disease	1.120	1.296
Antiviral Use	1.138	1.359
Contracted At Hospital	1.151	1.366
Other Risks	1.151	1.382
Renal Chronic Disease	1.223	1.549
SpO2 less 95\%	1.210	1.585
Xray Torax Result Consolidation	1.254	1.655

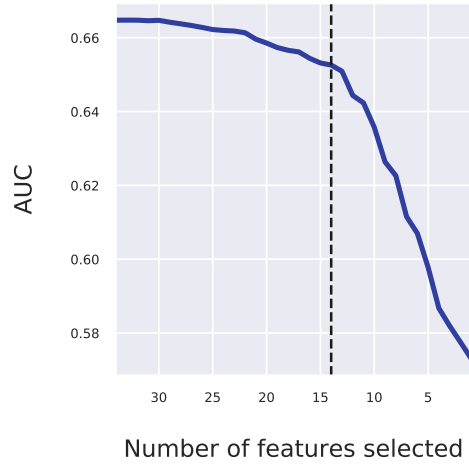


2.6 ICU small

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
SpO2 less 95\%	0.626	0.583	0.669	1.870	1.791	1.953	0.261	0.397	0.0	0.000
1.303	1.879	0.079								
Renal Chronic Disease	0.487	0.391	0.584	1.628	1.478	1.794	0.335	0.475	0.0	0.000
1.249	1.628	0.150								
Xray Torax Result Consolidation	0.462	0.346	0.578	1.587	1.414	1.782	0.337	0.467	0.0	0.000
1.234	1.585	0.173								
BMI 25-30	-0.431	-0.570	-0.293	0.650	0.566	0.746	0.478	0.337	0.0	0.000
0.830	0.664	0.084								
Another Chronic Pneumopathy	0.417	0.316	0.518	1.518	1.372	1.679	0.336	0.471	0.0	0.000
1.210	1.515	0.146								
Public Hospital	-0.409	-0.452	-0.365	0.664	0.636	0.694	0.369	0.296	0.0	0.000
0.843	0.666	0.028								
BMI 30-40	-0.408	-0.553	-0.263	0.665	0.575	0.769	0.508	0.339	0.0	0.000
0.884	0.778	0.090								
Throat	-0.403	-0.457	-0.349	0.668	0.633	0.705	0.360	0.269	0.0	0.000
0.851	0.669	0.035								
Schooling Elem 1-5	-0.393	-0.474	-0.312	0.675	0.622	0.732	0.347	0.277	0.0	0.000
0.853	0.676	0.053								
Contracted At Hospital	0.383	0.258	0.509	1.467	1.294	1.663	0.338	0.463	0.0	0.000
1.191	1.467	0.173								
Other Risks	0.373	0.327	0.419	1.452	1.386	1.520	0.314	0.419	0.0	0.000
1.180	1.455	0.066								
Cough	-0.341	-0.390	-0.292	0.711	0.677	0.746	0.400	0.324	0.0	0.000
0.865	0.717	0.034								
Antiviral Use	0.341	0.298	0.384	1.407	1.348	1.468	0.313	0.391	0.0	0.000
1.158	1.409	0.059								
Hematologic Disease	0.298	0.099	0.498	1.348	1.104	1.645	0.340	0.447	0.0	0.003
1.143	1.335	0.244								



Recursive Feature Elimination:

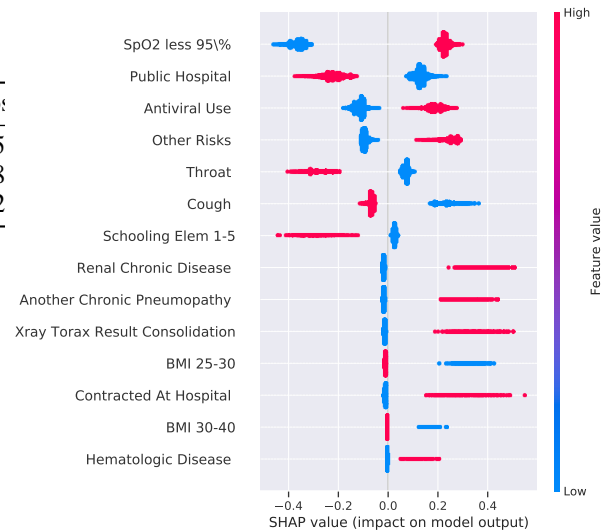
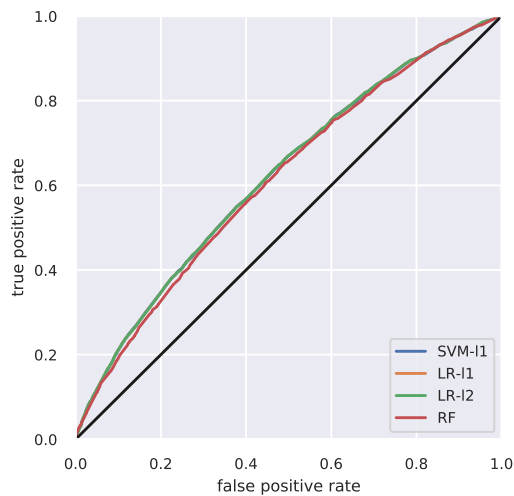


Coefficients:

	SVM-l1	LR-l1
BMI 25-30	0.830	0.664
Public Hospital	0.843	0.666
Throat	0.851	0.669
Schooling Elem 1-5	0.853	0.676
Cough	0.865	0.717
BMI 30-40	0.884	0.778
Hematologic Disease	1.143	1.335
Antiviral Use	1.158	1.409
Other Risks	1.180	1.455
Contracted At Hospital	1.191	1.467
Another Chronic Pneumopathy	1.210	1.515
Xray Torax Result Consolidation	1.234	1.585
Renal Chronic Disease	1.249	1.628
SpO2 less 95\%	1.303	1.879

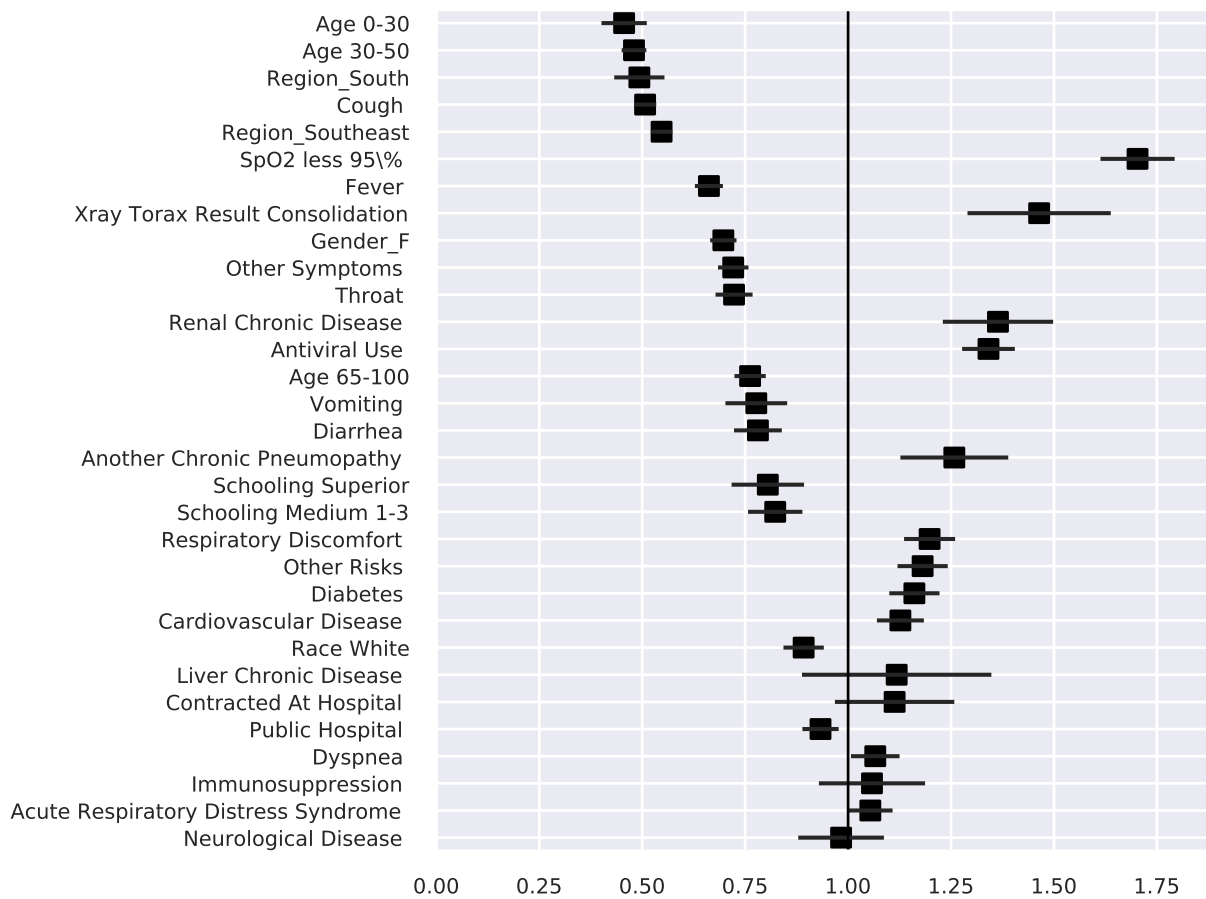
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.650	0.650	0.650	0.641	0.65
F1w	0.591	0.590	0.591	0.506	0.58
AUC	0.622	0.622	0.622	0.612	0.62

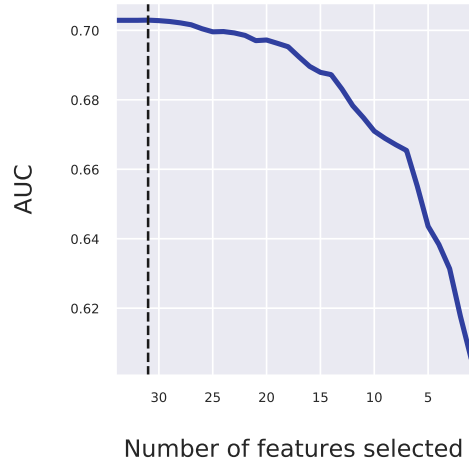


2.7 Ventilator

SVM-II	Coef LR-II	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-0.786	-0.913	-0.659	0.456	0.401	0.517	0.232	0.132	0.000	0.000
0.926	0.725	0.055								
Age 30-50	-0.733	-0.799	-0.667	0.480	0.450	0.513	0.256	0.144	0.000	0.000
0.912	0.708	0.030								
Region_South	-0.706	-0.839	-0.574	0.493	0.432	0.563	0.229	0.168	0.000	0.000
0.877	0.656	0.061								
Cough	-0.679	-0.734	-0.625	0.507	0.480	0.535	0.275	0.212	0.000	0.000
0.868	0.666	0.027								
Region_Southeast	-0.604	-0.651	-0.556	0.547	0.521	0.574	0.250	0.209	0.000	0.000
0.909	0.753	0.026								
SpO2 less 95\%	0.533	0.478	0.587	1.703	1.613	1.798	0.136	0.288	0.000	0.000
1.223	1.938	0.090								
Fever	-0.413	-0.465	-0.360	0.662	0.628	0.698	0.255	0.216	0.000	0.000
0.954	0.880	0.034								
Xray Torax Result Consolidation	0.381	0.254	0.508	1.464	1.290	1.662	0.223	0.313	0.000	0.000
1.164	1.516	0.174								
Gender_F	-0.361	-0.408	-0.313	0.697	0.665	0.731	0.237	0.212	0.000	0.000
0.943	0.833	0.032								
Other Symptoms	-0.327	-0.380	-0.274	0.721	0.684	0.760	0.240	0.194	0.000	0.000
0.962	0.885	0.037								
Throat	-0.325	-0.389	-0.261	0.723	0.678	0.770	0.238	0.182	0.000	0.000
0.898	0.708	0.045								
Renal Chronic Disease	0.311	0.207	0.415	1.364	1.230	1.514	0.220	0.350	0.000	0.000
1.157	1.445	0.134								
Antiviral Use	0.293	0.244	0.342	1.341	1.277	1.408	0.202	0.268	0.000	0.000
1.110	1.374	0.064								
Age 65-100	-0.272	-0.324	-0.220	0.762	0.724	0.802	0.184	0.284	0.000	0.000
1.047	1.132	0.038								
Vomiting	-0.252	-0.354	-0.150	0.777	0.702	0.861	0.230	0.172	0.000	0.000
0.935	0.807	0.075								
Diarrhea	-0.247	-0.324	-0.171	0.781	0.723	0.843	0.233	0.182	0.000	0.000
0.938	0.815	0.058								
Another Chronic Pneumopathy	0.229	0.120	0.339	1.258	1.127	1.404	0.222	0.332	0.000	0.000
1.096	1.248	0.131								
Schooling Superior	-0.217	-0.333	-0.102	0.805	0.717	0.903	0.229	0.171	0.000	0.000
0.987	0.940	0.088								
Schooling Medium 1-3	-0.195	-0.279	-0.111	0.823	0.757	0.895	0.231	0.183	0.000	0.000
0.973	0.913	0.066								
Respiratory Discomfort	0.181	0.127	0.234	1.198	1.136	1.264	0.163	0.267	0.000	0.000
1.113	1.375	0.062								
Other Risks	0.166	0.114	0.218	1.181	1.120	1.244	0.206	0.283	0.000	0.000
1.107	1.341	0.061								
Diabetes	0.149	0.095	0.203	1.161	1.100	1.225	0.202	0.297	0.000	0.000
1.090	1.272	0.061								
Cardiovascular Disease	0.120	0.068	0.172	1.127	1.070	1.187	0.197	0.283	0.000	0.000
1.069	1.220	0.057								
Race White	-0.114	-0.171	-0.057	0.892	0.843	0.945	0.234	0.207	0.000	0.000
0.976	0.924	0.049								
Liver Chronic Disease	0.111	-0.119	0.341	1.118	0.888	1.407	0.225	0.301	0.024	0.344
1.068	1.180	0.230								
Contracted At Hospital	0.107	-0.032	0.247	1.113	0.968	1.280	0.224	0.305	0.000	0.132
1.100	1.290	0.145								
Public Hospital	-0.070	-0.117	-0.022	0.933	0.889	0.978	0.206	0.259	0.000	0.004
1.042	1.139	0.044								
Dyspnea	0.064	0.007	0.121	1.066	1.007	1.128	0.145	0.256	0.000	0.027
1.123	1.485	0.059								
Immunosuppression	0.056	-0.073	0.186	1.058	0.929	1.204	0.225	0.268	0.012	0.395
1.037	1.128	0.129								
Acute Respiratory Distress Syndrome	0.053	0.000	0.105	1.054	1.000	1.111	0.213	0.265	0.000	0.049
1.064	1.200	0.054								
Neurological Disease	-0.017	-0.129	0.095	0.983	0.879	1.100	0.224	0.278	0.000	0.770
0.985	0.971	0.104								

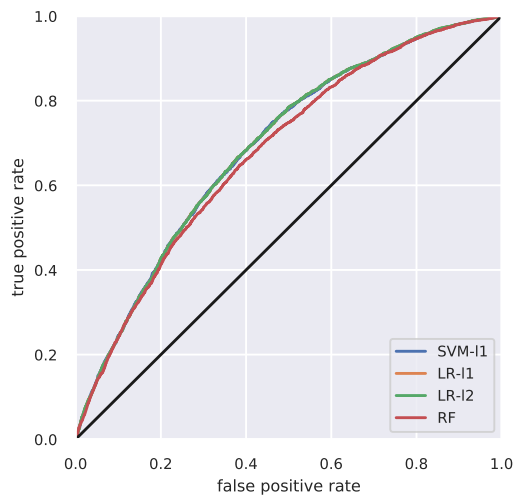


Recursive Feature Elimination:



Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.758	0.759	0.759	0.757	0.758
F1w	0.683	0.682	0.682	0.653	0.676
AUC	0.690	0.691	0.691	0.679	0.697



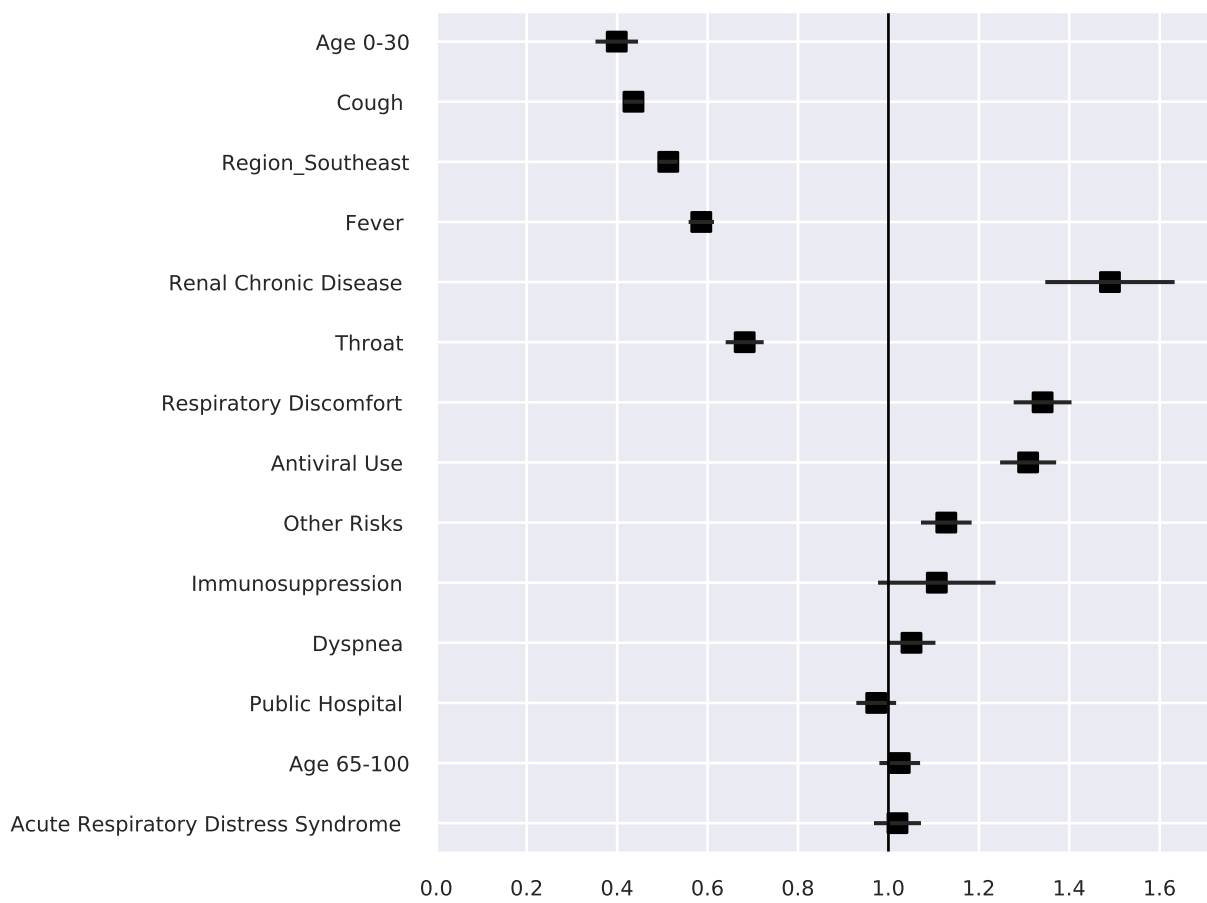
Coefficients:

	SVM-l1	LR-l1
Region_South	0.877	0.656
Cough	0.868	0.666
Age 30-50	0.912	0.708
Throat	0.898	0.708
Age 0-30	0.926	0.725
Region_Southeast	0.909	0.753
Vomiting	0.935	0.807
Diarrhea	0.938	0.815
Gender_F	0.943	0.833
Fever	0.954	0.880
Other Symptoms	0.962	0.885
Schooling Medium 1-3	0.973	0.913
Race White	0.976	0.924
Schooling Superior	0.987	0.940
Neurological Disease	0.985	0.971
Immunosuppression	1.037	1.128
Age 65-100	1.047	1.132
Public Hospital	1.042	1.139
Liver Chronic Disease	1.068	1.180
Acute Respiratory Distress Syndrome	1.064	1.200
Cardiovascular Disease	1.069	1.220
Another Chronic Pneumopathy	1.096	1.248
Diabetes	1.090	1.272
Contracted At Hospital	1.100	1.290
Other Risks	1.107	1.341
Antiviral Use	1.110	1.374
Respiratory Discomfort	1.113	1.375
Renal Chronic Disease	1.157	1.445
Dyspnea	1.123	1.485
Xray Torax Result Consolidation	1.164	1.516
SpO2 less 95\%	1.223	1.938

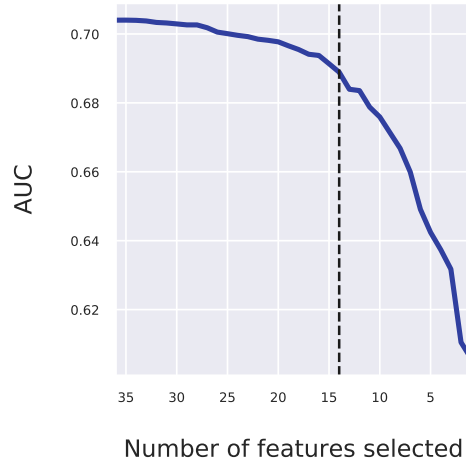


2.8 Ventilator small

SVM-I1	Coef LR-I1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
Age 0-30	-0.920	-1.045	-0.795	0.399	0.352	0.452	0.229	0.126	0.0	0.000
0.891	0.641	0.047								
Cough	-0.830	-0.881	-0.779	0.436	0.414	0.459	0.278	0.207	0.0	0.000
0.858	0.643	0.022								
Region.Southeast	-0.668	-0.710	-0.626	0.513	0.492	0.535	0.247	0.206	0.0	0.000
0.937	0.819	0.021								
Fever	-0.535	-0.584	-0.486	0.586	0.558	0.615	0.252	0.213	0.0	0.000
0.962	0.895	0.028								
Renal Chronic Disease	0.399	0.298	0.500	1.490	1.347	1.649	0.217	0.349	0.0	0.000
1.222	1.680	0.143								
Throat	-0.383	-0.446	-0.320	0.682	0.640	0.726	0.235	0.177	0.0	0.000
0.888	0.683	0.042								
Respiratory Discomfort	0.294	0.244	0.343	1.341	1.277	1.409	0.159	0.264	0.0	0.000
1.191	1.727	0.064								
Antiviral Use	0.269	0.221	0.317	1.309	1.247	1.373	0.199	0.265	0.0	0.000
1.125	1.426	0.062								
Other Risks	0.121	0.070	0.171	1.128	1.072	1.187	0.203	0.281	0.0	0.000
1.123	1.394	0.056								
Immunosuppression	0.101	-0.023	0.226	1.107	0.977	1.254	0.221	0.288	0.0	0.111
1.088	1.265	0.130								
Dyspnea	0.050	-0.002	0.103	1.051	0.998	1.108	0.145	0.251	0.0	0.061
1.169	1.698	0.053								
Public Hospital	-0.027	-0.073	0.019	0.973	0.929	1.020	0.203	0.257	0.0	0.255
1.071	1.231	0.044								
Age 65-100	0.024	-0.020	0.069	1.025	0.980	1.071	0.182	0.280	0.0	0.286
1.143	1.487	0.045								
Acute Respiratory Distress Syndrome	0.020	-0.032	0.071	1.020	0.968	1.074	0.210	0.260	0.0	0.458
1.072	1.227	0.052								



Recursive Feature Elimination:

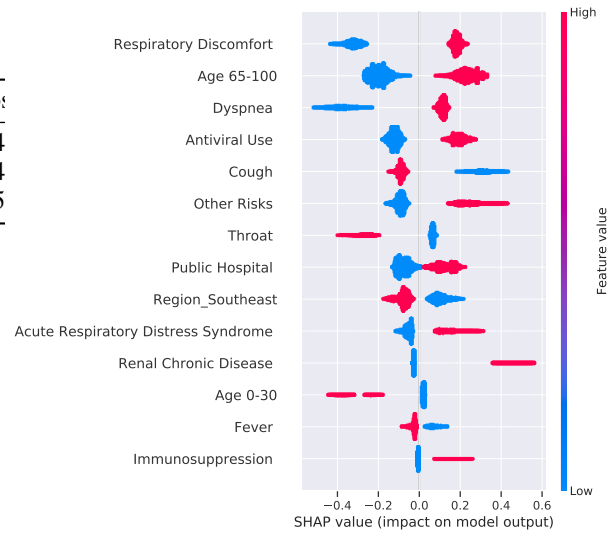
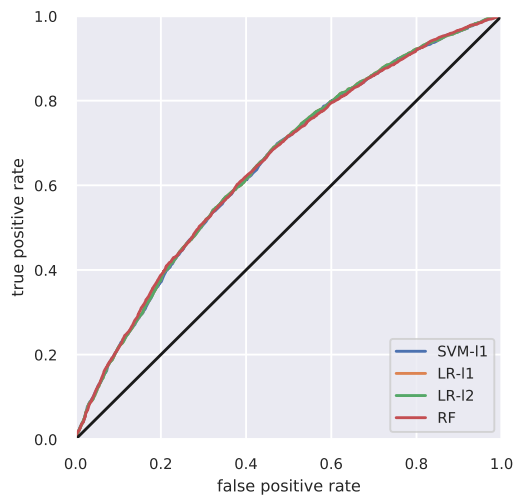


Coefficients:

	SVM-l1	LR-l1
Age 0-30	0.891	0.641
Cough	0.858	0.643
Throat	0.888	0.683
Region_Southeast	0.937	0.819
Fever	0.962	0.895
Acute Respiratory Distress Syndrome	1.072	1.227
Public Hospital	1.071	1.231
Immunosuppression	1.088	1.265
Other Risks	1.123	1.394
Antiviral Use	1.125	1.426
Age 65-100	1.143	1.487
Renal Chronic Disease	1.222	1.680
Dyspnea	1.169	1.698
Respiratory Discomfort	1.191	1.727

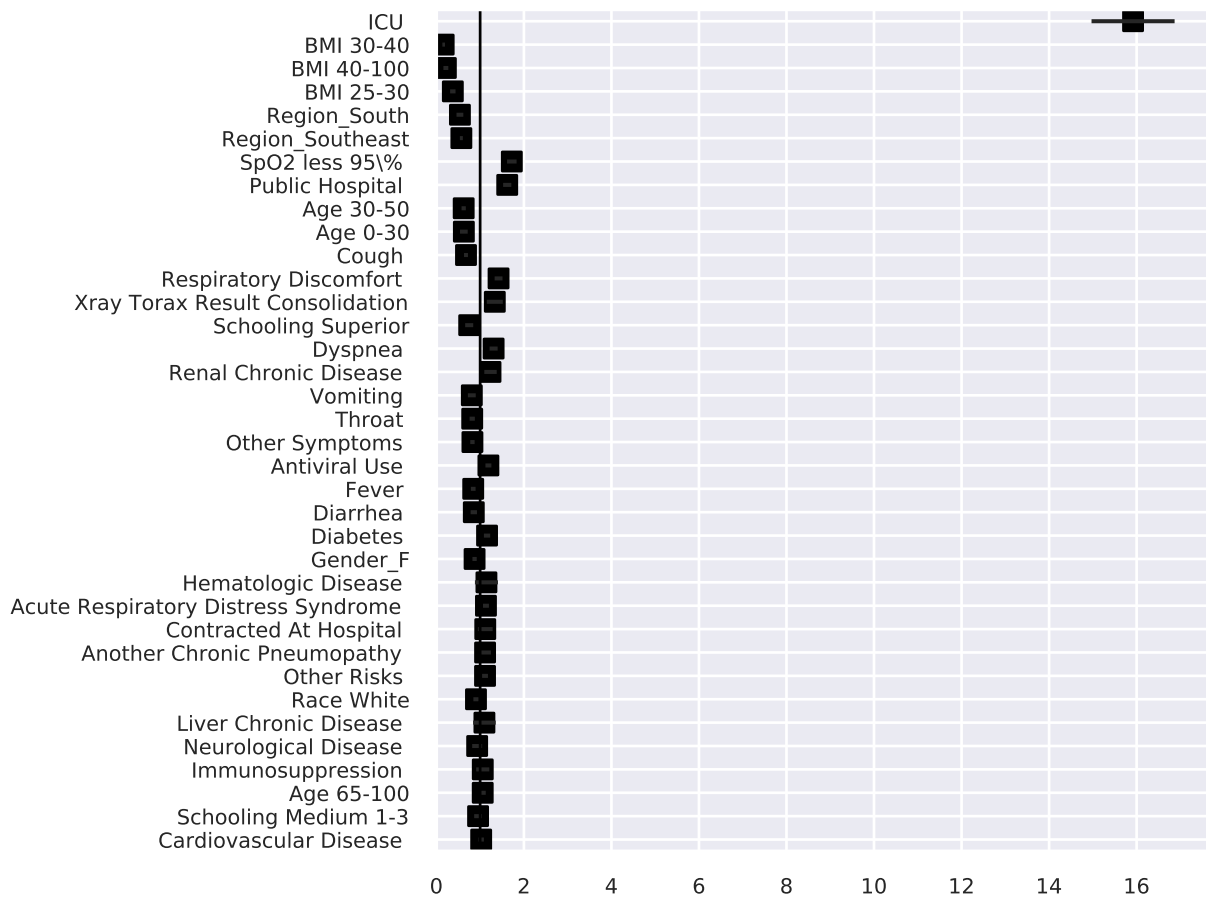
Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.746	0.747	0.746	0.748	0.74
F1w	0.656	0.655	0.655	0.640	0.64
AUC	0.649	0.651	0.651	0.650	0.65

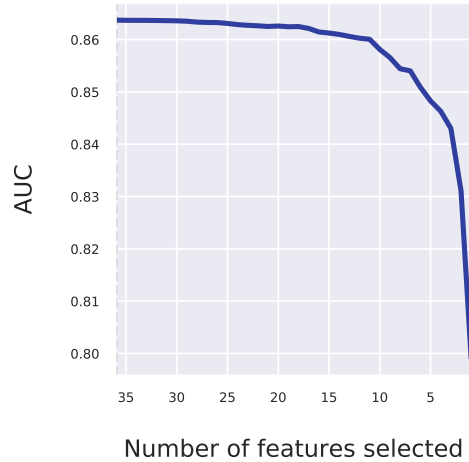


2.9 Ventilator with ICU

SVM-l1	Coef LR-l1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.768	2.706	2.829	15.919	14.970	16.928	0.066	0.528	0.000	0.000
2.519	16.564	0.949								
BMI 30-40	-1.788	-1.991	-1.586	0.167	0.137	0.205	0.316	0.223	0.001	0.000
1.053	1.138	0.030								
BMI 40-100	-1.528	-1.823	-1.233	0.217	0.161	0.291	0.223	0.356	0.000	0.000
1.050	1.142	0.056								
BMI 25-30	-0.979	-1.158	-0.801	0.376	0.314	0.449	0.347	0.220	0.000	0.000
0.854	0.622	0.062								
Region_South	-0.621	-0.776	-0.465	0.538	0.460	0.628	0.226	0.178	0.000	0.000
0.859	0.580	0.078								
Region_Southeast	-0.560	-0.622	-0.498	0.571	0.537	0.608	0.248	0.207	0.000	0.000
0.861	0.611	0.034								
SpO2 less 95\%	0.545	0.479	0.611	1.724	1.615	1.842	0.132	0.287	0.000	0.000
1.182	1.789	0.109								
Public Hospital	0.482	0.422	0.541	1.619	1.525	1.718	0.205	0.256	0.000	0.000
1.165	1.688	0.094								
Age 30-50	-0.472	-0.554	-0.389	0.624	0.575	0.677	0.253	0.144	0.000	0.000
0.893	0.685	0.049								
Age 0-30	-0.465	-0.617	-0.312	0.628	0.540	0.732	0.230	0.125	0.000	0.000
0.908	0.703	0.088								
Cough	-0.390	-0.458	-0.321	0.677	0.632	0.725	0.274	0.210	0.000	0.000
0.900	0.724	0.045								
Respiratory Discomfort	0.351	0.286	0.416	1.421	1.331	1.516	0.159	0.265	0.000	0.000
1.127	1.455	0.090								
Xray Torax Result Consolidation	0.289	0.142	0.437	1.335	1.152	1.548	0.221	0.325	0.000	0.000
1.102	1.338	0.183								
Schooling Superior	-0.288	-0.419	-0.156	0.750	0.658	0.855	0.227	0.169	0.000	0.000
0.909	0.776	0.092								
Dyspnea	0.268	0.196	0.341	1.308	1.216	1.406	0.146	0.252	0.000	0.000
1.107	1.407	0.092								
Renal Chronic Disease	0.213	0.091	0.335	1.237	1.095	1.398	0.218	0.354	0.000	0.001
1.082	1.255	0.142								
Vomiting	-0.211	-0.328	-0.093	0.810	0.720	0.911	0.228	0.177	0.000	0.000
0.944	0.823	0.090								
Throat	-0.200	-0.275	-0.124	0.819	0.759	0.883	0.236	0.179	0.000	0.000
0.945	0.827	0.060								
Other Symptoms	-0.193	-0.257	-0.130	0.824	0.774	0.878	0.235	0.198	0.000	0.000
0.954	0.866	0.050								
Antiviral Use	0.173	0.115	0.231	1.189	1.121	1.260	0.200	0.267	0.000	0.000
1.062	1.193	0.068								
Fever	-0.172	-0.239	-0.105	0.842	0.788	0.900	0.252	0.214	0.000	0.000
0.963	0.896	0.054								
Diarrhea	-0.156	-0.246	-0.067	0.855	0.782	0.936	0.230	0.184	0.000	0.001
0.958	0.863	0.073								
Diabetes	0.147	0.083	0.211	1.158	1.086	1.235	0.201	0.293	0.000	0.000
1.056	1.195	0.072								
Gender_F	-0.136	-0.193	-0.079	0.873	0.824	0.924	0.232	0.212	0.000	0.000
0.973	0.912	0.049								
Hematologic Disease	0.135	-0.127	0.396	1.144	0.881	1.486	0.223	0.299	0.014	0.313
1.049	1.112	0.263								
Acute Respiratory Distress Syndrome	0.125	0.063	0.188	1.133	1.065	1.207	0.209	0.266	0.000	0.000
1.042	1.159	0.068								
Contracted At Hospital	0.110	-0.053	0.274	1.117	0.948	1.315	0.222	0.316	0.000	0.186
1.054	1.146	0.169								
Another Chronic Pneumopathy	0.107	-0.021	0.236	1.113	0.979	1.266	0.220	0.327	0.000	0.101
1.039	1.105	0.134								
Other Risks	0.106	0.044	0.168	1.112	1.045	1.183	0.204	0.281	0.000	0.001
1.044	1.145	0.067								
Race White	-0.100	-0.167	-0.033	0.905	0.846	0.968	0.232	0.206	0.000	0.004
0.976	0.912	0.059								
Liver Chronic Disease	0.093	-0.174	0.361	1.098	0.840	1.434	0.223	0.299	0.019	0.495
1.033	1.110	0.258								
Neurological Disease	-0.070	-0.201	0.061	0.932	0.818	1.063	0.222	0.272	0.000	0.294
0.969	0.928	0.114								
Immunosuppression	0.059	-0.095	0.212	1.060	0.910	1.236	0.222	0.273	0.003	0.453
1.020	1.061	0.150								
Age 65-100	0.057	-0.011	0.125	1.059	0.990	1.133	0.182	0.282	0.000	0.098
1.030	1.132	0.069								
Schooling Medium 1-3	-0.048	-0.146	0.050	0.953	0.864	1.051	0.228	0.189	0.000	0.334
1.002	0.981	0.089								
Cardiovascular Disease	0.024	-0.039	0.086	1.024	0.962	1.090	0.196	0.280	0.000	0.457
1.019	1.053	0.062								

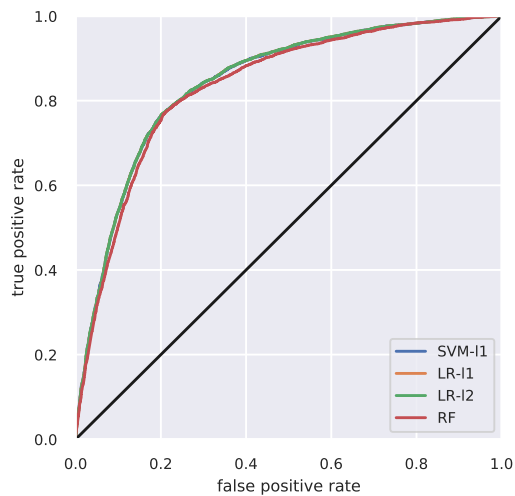


Recursive Feature Elimination:



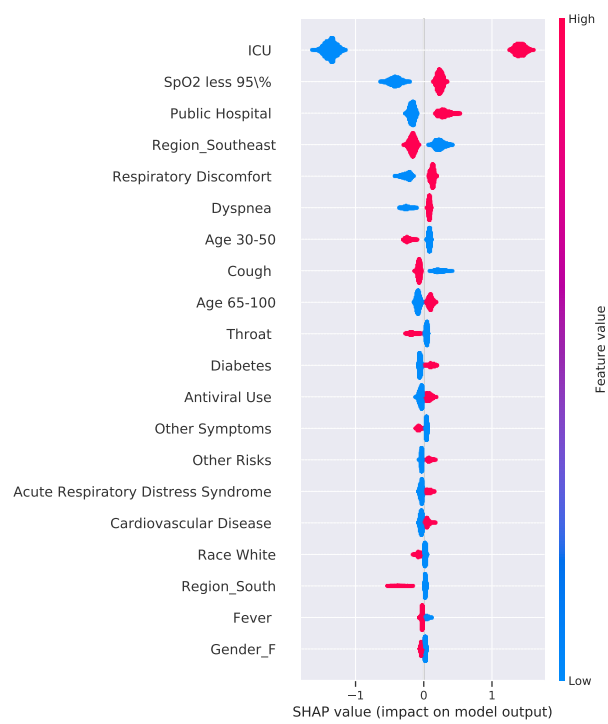
Performance:

	SVM-I1	LR-I1	LR-I2	RF	XGBoost
Accuracy	0.811	0.811	0.811	0.755	0.816
F1w	0.807	0.807	0.807	0.651	0.812
AUC	0.843	0.844	0.844	0.834	0.846



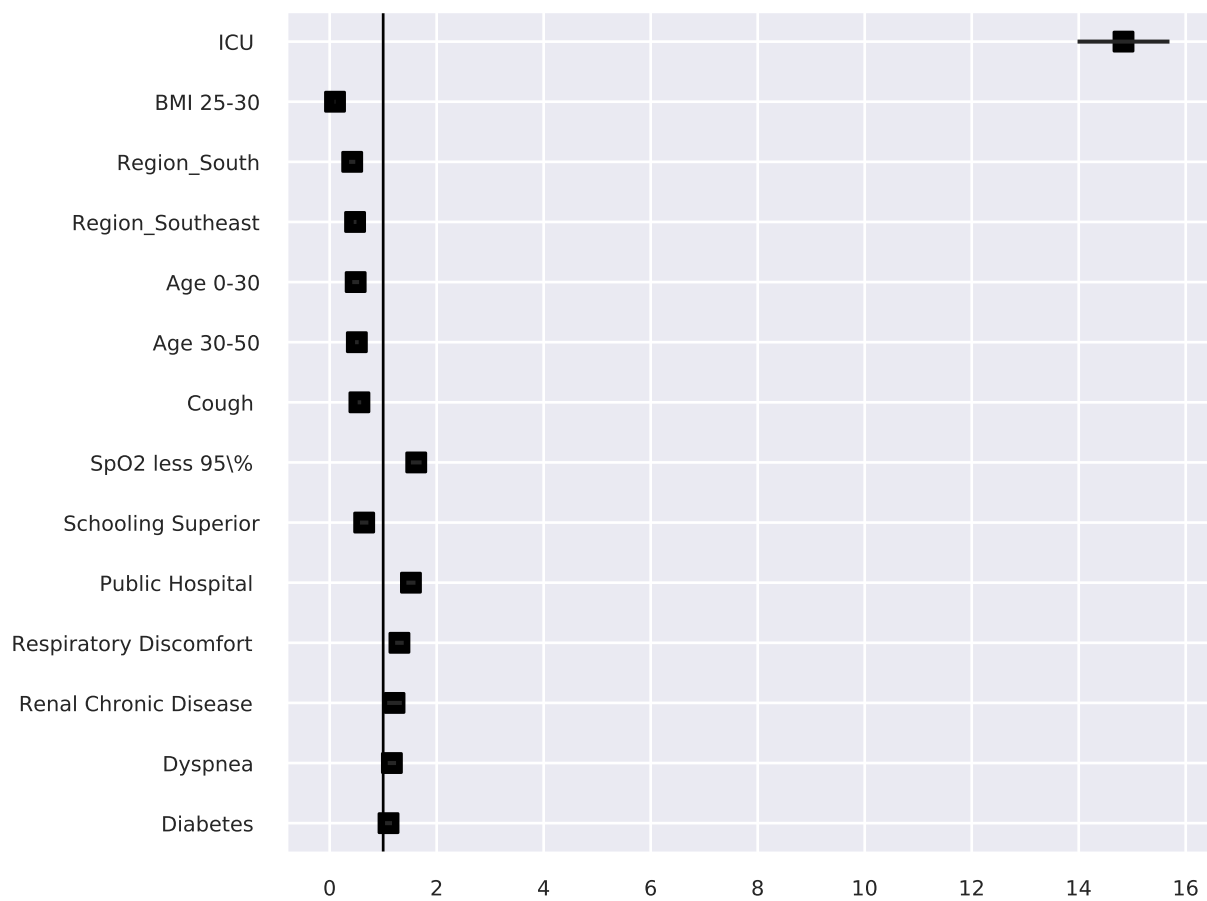
Coefficients:

	SVM-I1	LR-I1
Region_South	0.859	0.580
Region_Southeast	0.861	0.611
BMI 25-30	0.854	0.622
Age 30-50	0.893	0.685
Age 0-30	0.908	0.703
Cough	0.900	0.724
Schooling Superior	0.909	0.776
Vomiting	0.944	0.823
Throat	0.945	0.827
Diarrhea	0.958	0.863
Other Symptoms	0.954	0.866
Fever	0.963	0.896
Gender_F	0.973	0.912
Race White	0.976	0.912
Neurological Disease	0.969	0.928
Schooling Medium 1-3	1.002	0.981
Cardiovascular Disease	1.019	1.053
Immunosuppression	1.020	1.061
Another Chronic Pneumopathy	1.039	1.105
Liver Chronic Disease	1.033	1.110
Hematologic Disease	1.049	1.112
Age 65-100	1.030	1.132
BMI 30-40	1.053	1.138
BMI 40-100	1.050	1.142
Other Risks	1.044	1.145
Contracted At Hospital	1.054	1.146
Acute Respiratory Distress Syndrome	1.042	1.159
Antiviral Use	1.062	1.193
Diabetes	1.056	1.195
Renal Chronic Disease	1.082	1.255
Xray Torax Result Consolidation	1.102	1.338
Dyspnea	1.107	1.407
Respiratory Discomfort	1.127	1.455
Public Hospital	1.165	1.688
SpO2 less 95\%	1.182	1.789
ICU	2.519	16.564

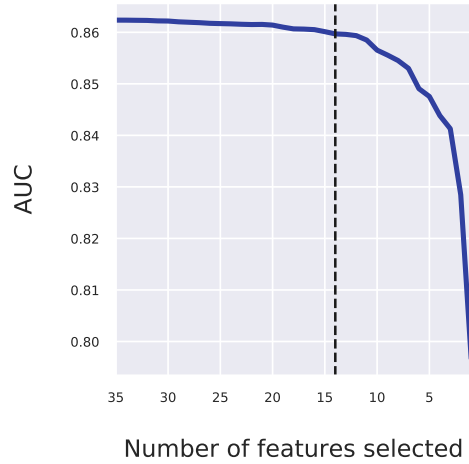


2.10 Ventilator with ICU small

SVM-l1	Coef LR-l1	2.5 err	97.5	Odds Ratio	2.5	97.5	Avg-0	Avg-1	KS-pv	pvalue
ICU	2.697	2.637	2.757	14.837	13.978	15.749	0.068	0.527	0.0	0.000
2.537	16.856	0.859								
BMI 25-30	-2.304	-2.387	-2.222	0.100	0.092	0.108	0.335	0.221	0.0	0.000
0.883	0.687	0.008								
Region_South	-0.865	-1.012	-0.718	0.421	0.363	0.488	0.226	0.175	0.0	0.000
0.840	0.524	0.058								
Region_Southeast	-0.744	-0.800	-0.687	0.475	0.449	0.503	0.250	0.206	0.0	0.000
0.854	0.585	0.026								
Age 0-30	-0.721	-0.864	-0.578	0.486	0.422	0.561	0.230	0.129	0.0	0.000
0.870	0.600	0.064								
Age 30-50	-0.677	-0.747	-0.607	0.508	0.474	0.545	0.253	0.143	0.0	0.000
0.865	0.601	0.034								
Cough	-0.587	-0.649	-0.525	0.556	0.523	0.591	0.272	0.210	0.0	0.000
0.891	0.694	0.033								
SpO2 less 95\%	0.481	0.417	0.545	1.618	1.518	1.725	0.133	0.286	0.0	0.000
1.181	1.809	0.100								
Schooling Superior	-0.439	-0.570	-0.308	0.645	0.566	0.735	0.227	0.167	0.0	0.000
0.885	0.712	0.079								
Public Hospital	0.418	0.360	0.476	1.519	1.434	1.609	0.203	0.258	0.0	0.000
1.173	1.735	0.085								
Respiratory Discomfort	0.266	0.202	0.329	1.304	1.224	1.389	0.159	0.265	0.0	0.000
1.120	1.428	0.080								
Renal Chronic Disease	0.192	0.072	0.311	1.212	1.075	1.365	0.218	0.349	0.0	0.002
1.090	1.275	0.137								
Dyspnea	0.151	0.082	0.220	1.163	1.085	1.247	0.144	0.253	0.0	0.000
1.117	1.450	0.078								
Diabetes	0.096	0.035	0.156	1.100	1.035	1.169	0.200	0.295	0.0	0.002
1.067	1.242	0.065								



Recursive Feature Elimination:



Coefficients:

	SVM-l1	LR-l1
Region_South	0.840	0.524
Region_Southeast	0.854	0.585
Age 0-30	0.870	0.600
Age 30-50	0.865	0.601
BMI 25-30	0.883	0.687
Cough	0.891	0.694
Schooling Superior	0.885	0.712
Diabetes	1.067	1.242
Renal Chronic Disease	1.090	1.275
Respiratory Discomfort	1.120	1.428
Dyspnea	1.117	1.450
Public Hospital	1.173	1.735
SpO2 less 95\%	1.181	1.809
ICU	2.537	16.856

Performance:

	SVM-l1	LR-l1	LR-l2	RF	XGBoost
Accuracy	0.810	0.809	0.809	0.776	0.80
F1w	0.808	0.806	0.806	0.713	0.80
AUC	0.844	0.844	0.844	0.840	0.84

