

Document Title:

Quality Assurance Report

Project Title : 00005-qa

Configuration Information

mode	classification
project dir	/home/heejun/Projects/Quality-Assurance/projects/
num_classes	11

Abbreviation

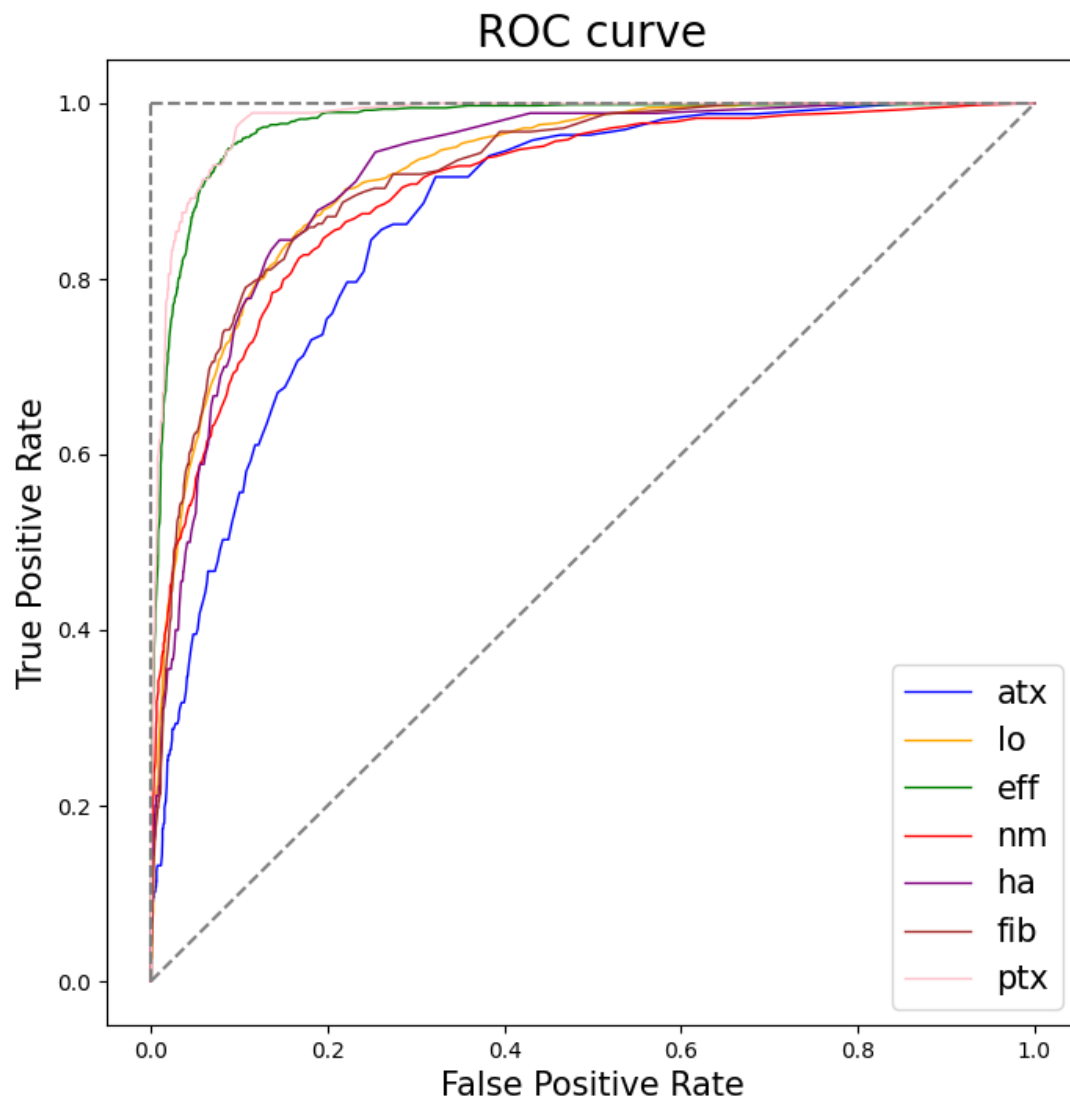
Medical Terms		Performance Metric	
atx	atelectasis	sen	sensitivity
lo	lung opacity	spe	specificity
eff	effusion	acc	accuracy
nm	nodule/mass	ppv	positive prediction value
ha	hilar abnormality	npv	negative prediction value
fib	fibrosis	p-like	positive likelihood ratio
ptx	pneumothorax	n-like	negative likelihood ratio
tb	tuberculosis	roc	receiver operating characteristic
pna	pneumonia	auc	area under roc curve
ede	edema		
nor	normal		

Dataset Name : choi

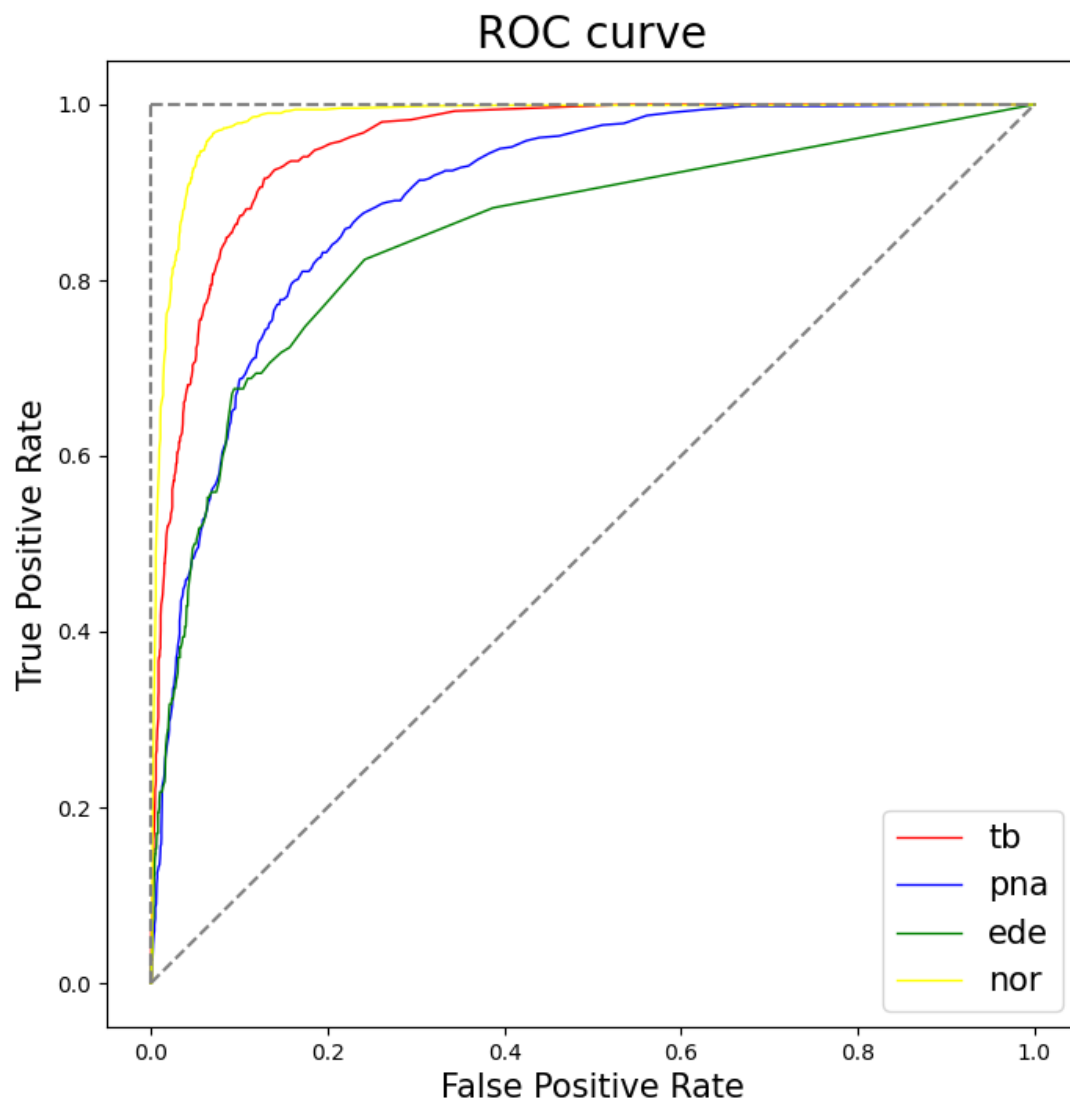
1. Dataset

class	atx	lo	eff	nm	ha	fib	ptx	tb	pna	ede	nor
positive	167	1027	780	533	90	248	185	404	558	170	1228

2-1. ROC Curve : findings



2-2. ROC Curve : disease



3-1. Performance : findings

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
atx	0.095	0.886	0.691	0.7	0.118	0.992	2.867	0.165	0.869
	0.225	0.557	0.9	0.884	0.205	0.978	5.57	0.492	
	0.81	0.072	0.999	0.958	0.857	0.959	72.0	0.929	
lo	0.35	0.903	0.775	0.81	0.602	0.955	4.013	0.125	0.922
	0.565	0.749	0.9	0.859	0.739	0.905	7.49	0.279	
	0.61	0.708	0.923	0.864	0.776	0.894	9.195	0.316	
eff	0.515	0.9	0.945	0.935	0.81	0.973	16.364	0.106	0.977
	0.29	0.956	0.901	0.913	0.717	0.987	9.657	0.049	
	0.57	0.876	0.953	0.937	0.829	0.967	18.638	0.13	
nm	0.18	0.904	0.715	0.742	0.345	0.978	3.172	0.134	0.903
	0.355	0.704	0.901	0.873	0.54	0.948	7.111	0.329	
	0.58	0.49	0.973	0.905	0.752	0.92	18.148	0.524	
ha	0.045	0.911	0.768	0.772	0.088	0.997	3.927	0.116	0.921
	0.1	0.767	0.897	0.894	0.155	0.994	7.447	0.26	
	0.57	0.133	0.999	0.978	0.75	0.979	133.0	0.868	
fib	0.095	0.899	0.759	0.768	0.209	0.991	3.73	0.133	0.919
	0.225	0.77	0.9	0.892	0.354	0.982	7.7	0.256	
	0.51	0.323	0.986	0.942	0.62	0.954	23.071	0.687	
ptx	0.135	0.903	0.945	0.943	0.459	0.995	16.418	0.103	0.982
	0.05	0.978	0.898	0.902	0.333	0.999	9.588	0.024	
	0.57	0.595	0.992	0.973	0.803	0.979	74.375	0.408	

3-2. Performance : disease

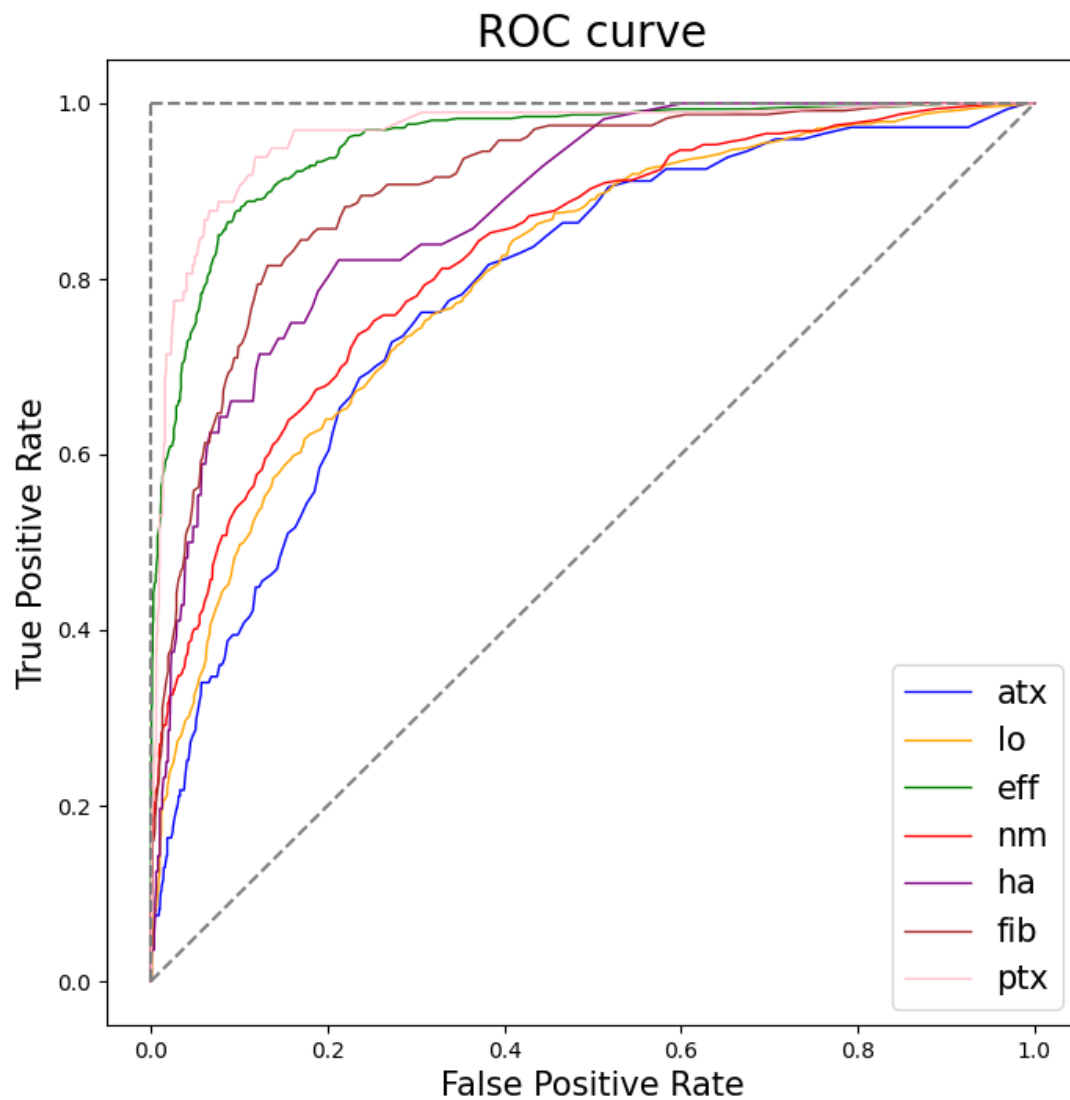
class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
tb	0.125	0.796	0.768	0.769	0.138	0.988	3.431	0.266	0.954
	0.165	0.707	0.834	0.828	0.165	0.984	4.259	0.351	
	0.615	0.114	0.994	0.955	0.463	0.96	19.0	0.891	
pna	0.14	0.99	0.463	0.607	0.41	0.992	1.844	0.022	0.896
	0.42	0.861	0.826	0.836	0.651	0.94	4.948	0.168	
	0.65	0.665	0.936	0.862	0.797	0.881	10.391	0.358	
ede	0.005	1.0	0.0	0.208	0.208	nan	1.0	nan	0.851
	0.065	0.995	0.69	0.753	0.457	0.998	3.21	0.007	
	0.525	0.896	0.946	0.936	0.814	0.972	16.593	0.11	
nor	0.61	0.458	0.976	0.903	0.762	0.916	19.083	0.555	0.983
	0.15	0.927	0.661	0.699	0.311	0.982	2.735	0.11	
	0.41	0.632	0.93	0.888	0.601	0.939	9.029	0.396	

Dataset Name : snu

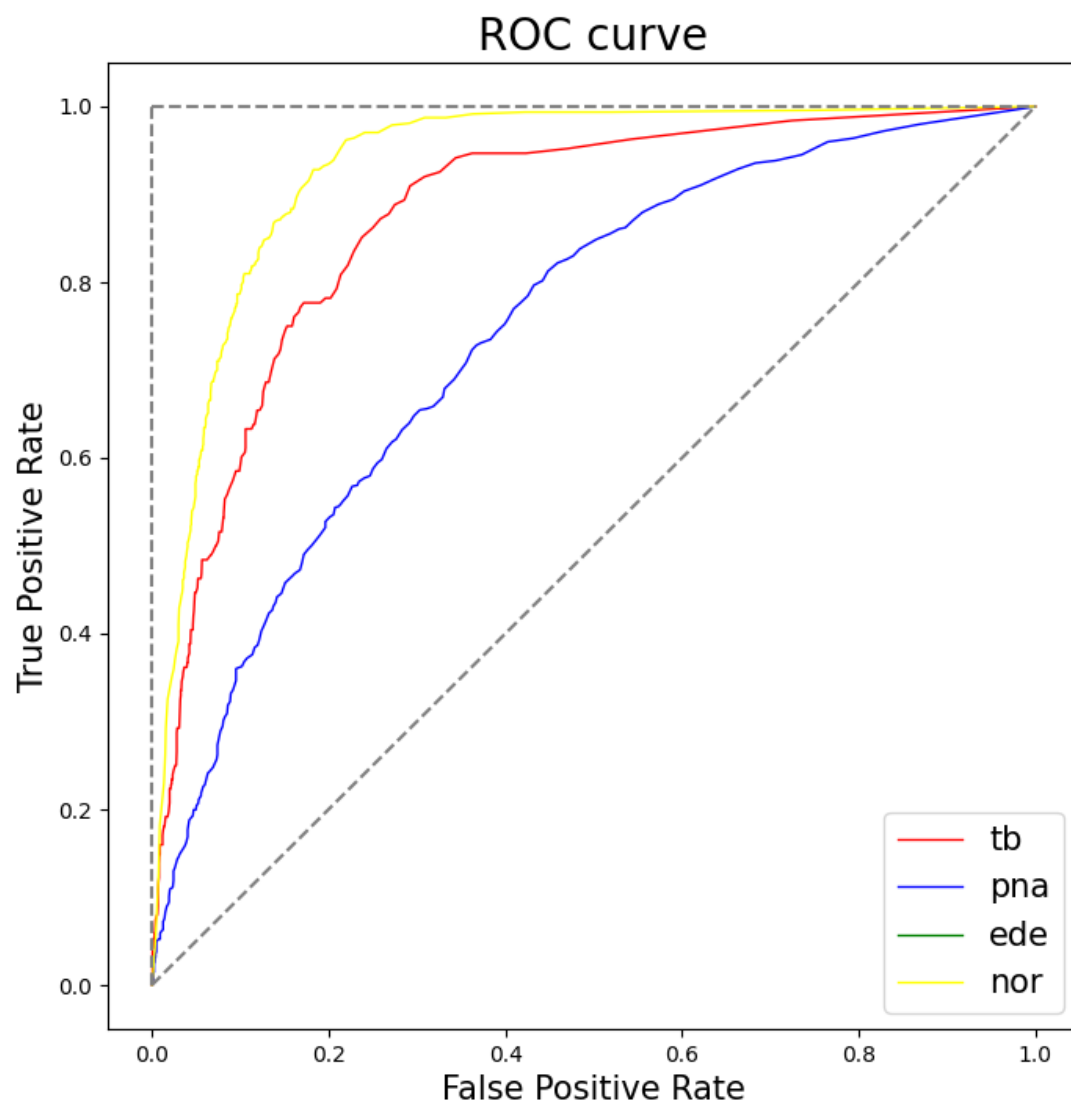
1. Dataset

class	atx	lo	eff	nm	ha	fib	ptx	tb	pna	ede	nor
positive	147	909	466	319	56	238	98	188	747	0	473

2-1. ROC Curve : findings



2-2. ROC Curve : disease



3-1. Performance : findings

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
atx	0.1	0.905	0.482	0.514	0.126	0.984	1.747	0.197	0.786
	0.3	0.395	0.902	0.863	0.248	0.948	4.031	0.671	
	0.7	0.041	0.999	0.927	0.857	0.927	41.0	0.96	
lo	0.245	0.901	0.481	0.678	0.606	0.846	1.736	0.206	0.804
	0.665	0.497	0.9	0.71	0.814	0.669	4.97	0.559	
	0.555	0.617	0.826	0.728	0.759	0.709	3.546	0.464	
eff	0.335	0.899	0.864	0.873	0.678	0.964	6.61	0.117	0.954
	0.405	0.878	0.899	0.894	0.734	0.959	8.693	0.136	
	0.465	0.85	0.924	0.906	0.78	0.951	11.184	0.162	
nm	0.14	0.903	0.502	0.568	0.264	0.963	1.813	0.193	0.829
	0.38	0.545	0.897	0.839	0.512	0.909	5.291	0.507	
	0.66	0.282	0.988	0.872	0.826	0.875	23.5	0.727	
ha	0.04	0.893	0.597	0.606	0.062	0.995	2.216	0.179	0.88
	0.17	0.661	0.901	0.895	0.167	0.989	6.677	0.376	
	0.73	0.036	1.0	0.972	1.0	0.972	inf	0.964	
fib	0.2	0.899	0.741	0.76	0.327	0.981	3.471	0.136	0.907
	0.365	0.723	0.901	0.879	0.506	0.959	7.303	0.307	
	0.52	0.458	0.969	0.906	0.673	0.927	14.774	0.559	
ptx	0.115	0.898	0.903	0.903	0.331	0.994	9.258	0.113	0.964
	0.11	0.908	0.898	0.899	0.322	0.995	8.902	0.102	
	0.45	0.714	0.983	0.969	0.686	0.985	42.0	0.291	

3-2. Performance : disease

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
tb	0.055	0.959	0.262	0.315	0.097	0.987	1.299	0.156	0.876
	0.28	0.449	0.881	0.849	0.237	0.951	3.773	0.625	
	0.785	0.027	1.0	0.926	1.0	0.926	inf	0.973	
pna	0.06	0.979	0.159	0.544	0.508	0.896	1.164	0.132	0.746
	0.475	0.707	0.733	0.721	0.701	0.738	2.648	0.4	
	0.395	0.774	0.648	0.707	0.661	0.764	2.199	0.349	
ede	0.0	1.0	0.0	0.241	0.241	nan	1.0	nan	0.0
	0.0	1.0	0.0	0.241	0.241	nan	1.0	nan	
	0.735	0.579	0.986	0.888	0.928	0.881	41.357	0.427	
nor	0.12	0.918	0.44	0.519	0.245	0.965	1.639	0.186	0.933
	0.335	0.614	0.858	0.818	0.461	0.918	4.324	0.45	
	0.345	0.602	0.866	0.822	0.469	0.917	4.493	0.46	

Dataset Name : fit

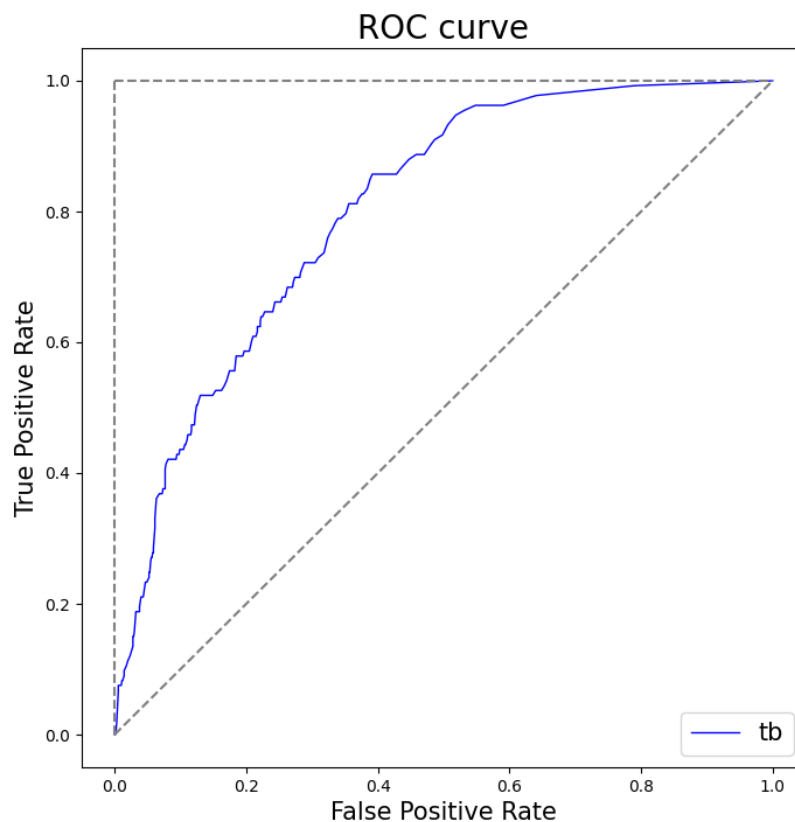
1. Dataset

class	tb	total
positive	133	1032

2. Performance

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
tb	0.055	0.902	0.519	0.569	0.217	0.973	1.875	0.189	0.802
	0.605	0.436	0.901	0.841	0.395	0.915	4.404	0.626	
	0.935	0.075	0.994	0.876	0.667	0.879	12.5	0.931	

3. ROC Curve



Dataset Name : plco

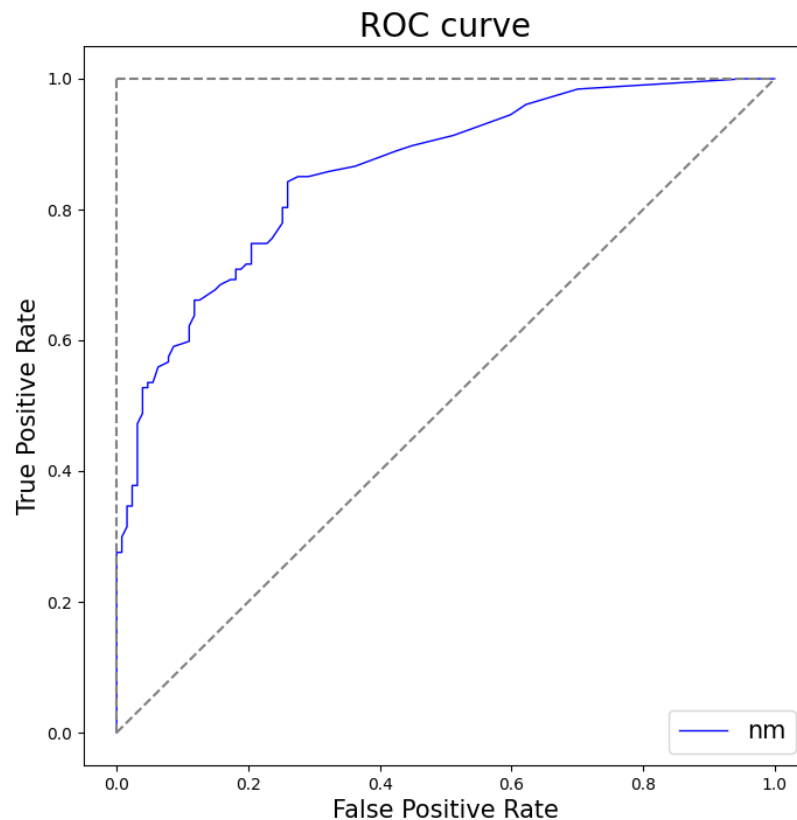
1. Dataset

class	nm	total
positive	127	254

2. Performance

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
nm	0.06	0.898	0.551	0.724	0.667	0.843	2.0	0.185	0.859
	0.22	0.622	0.89	0.756	0.849	0.702	5.655	0.425	
	0.09	0.843	0.74	0.791	0.764	0.825	3.242	0.212	

3. ROC Curve



Dataset Name : rsna

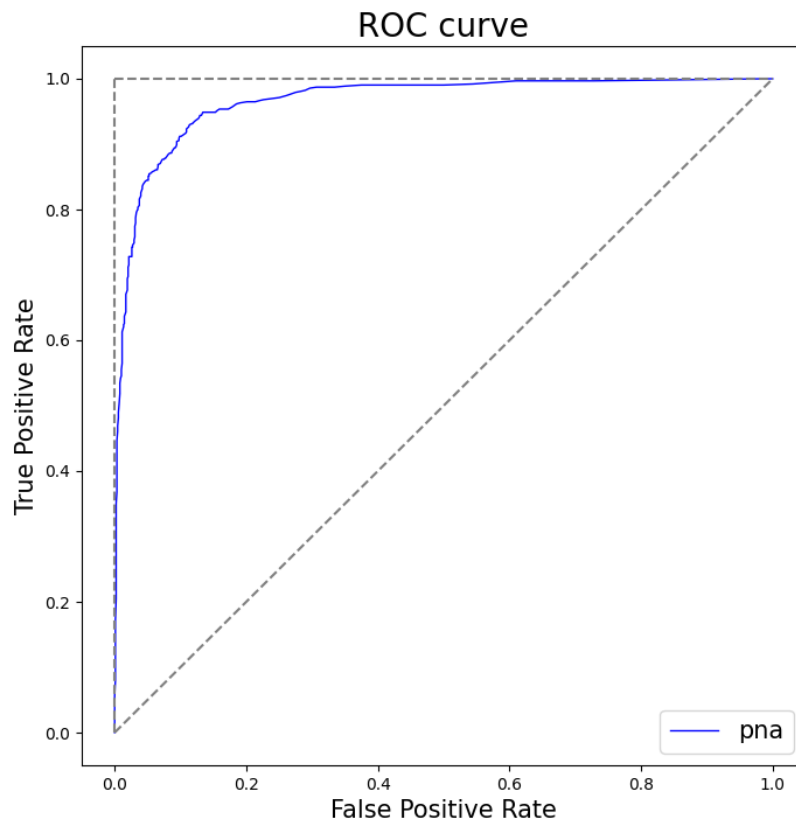
1. Dataset

class	pna	total
positive	625	1505

2. Performance

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
pna	0.315	0.899	0.906	0.903	0.871	0.927	9.564	0.111	0.966
	0.295	0.912	0.901	0.906	0.868	0.935	9.212	0.098	
	0.465	0.854	0.948	0.909	0.921	0.902	16.423	0.154	

3. ROC Curve



Dataset Name : stpeter

1. Dataset

class	tb	total
positive	167	337

2. Performance

class	cut-off	sen	spe	acc	ppv	npv	p-like	n-like	auc
tb	0.005	0.862	0.476	0.668	0.618	0.779	1.645	0.29	0.815
	0.045	0.617	0.9	0.76	0.858	0.705	6.17	0.426	
	0.01	0.731	0.794	0.763	0.777	0.75	3.549	0.339	

3. ROC Curve

