

Supplementary Table 1	
feature	importance
original_glrIm_RunEntropy	7.212082862854000
original_gldm_LowGrayLevelEmphasis	5.664928436279300
original_firstorder_Variance	5.314285755157470
original_glszm_GrayLevelNonUniformityNormalized	4.953242778778080
original_glrIm_LongRunLowGrayLevelEmphasis	4.221566200256350
original_glcM_Correlation	4.151278495788570
original_gldm_HighGrayLevelEmphasis	3.176839828491210
original_glrIm_LongRunEmphasis	2.832275390625
original_glcM_ClusterProminence	2.7666854858398400
original_glcM_Idm	2.385364532470700
original_gldm_GrayLevelNonUniformity	2.3195788860321000
original_glrIm_GrayLevelNonUniformityNormalized	2.295863628387450
original_gldm_SmallDependenceHighGrayLevelEmphasis	2.191584825515750
original_glcM_ClusterTendency	2.164292335510250
original_glszm_SizeZoneNonUniformityNormalized	2.1110618114471400
original_ngtdm_Coarseness	1.8967771530151400
original_firstorder_Skewness	1.872590184211730
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.7993305921554600
original_firstorder_TotalEnergy	1.7840499877929700
original_glrIm_RunLengthNonUniformityNormalized	1.6864646673202500
original_glcM_InverseVariance	1.5831613540649400
original_glcM_MaximumProbability	1.5649811029434200
original_glrIm_RunVariance	1.531525731086730
original_glrIm_RunPercentage	1.5124452114105200
original_glszm_SmallAreaHighGrayLevelEmphasis	1.4791704416275000
original_glcM_MCC	1.4789199829101600
original_ngtdm_Busyness	1.3430017232894900
original_glcM_ClusterShade	1.3399261236190800
original_glszm_LargeAreaHighGrayLevelEmphasis	1.2473629713058500
original_glcM_Idmn	1.1700255870819100
original_firstorder_90Percentile	1.169667363166810
original_firstorder_Entropy	1.1694939136505100
original_gldm_DependenceVariance	1.0958861112594600
original_glszm_GrayLevelNonUniformity	1.0633677244186400
original_firstorder_Maximum	1.044960856437680
original_gldm_DependenceNonUniformityNormalized	1.0165939331054700
original_gldm_DependenceNonUniformity	0.985041618347168
original_firstorder_Kurtosis	0.9520596861839290
original_glszm_LargeAreaLowGrayLevelEmphasis	0.9169794321060180
original_glcM_DifferenceVariance	0.8669925928115850
original_glszm_SmallAreaLowGrayLevelEmphasis	0.8633252382278440
original_glszm_LowGrayLevelZoneEmphasis	0.8364067077636720

original_ngtdm_Strength	0.8292545676231380
original_glszm_ZoneVariance	0.8047980070114140
original_gldm_Idn	0.7955253720283510
original_gldm_Imc2	0.7457484006881710
original_glszm_ZoneEntropy	0.6893457770347600
original_gldm_LongRunHighGrayLevelEmphasis	0.6529407501220700
original_gldm_Imc1	0.6327415704727170
original_gldm_JointAverage	0.6134799718856810
original_glszm_ZonePercentage	0.6109386682510380
original_gldm_SmallDependenceEmphasis	0.5908707976341250
original_firstorder_10Percentile	0.5751609802246090
original_ngtdm_Contrast	0.5681294798851010
original_firstorder_Uniformity	0.4807477593421940
original_firstorder_RobustMeanAbsoluteDeviation	0.47393670678138700
original_gldm_JointEntropy	0.42951545119285600
original_gldm_Contrast	0.42230093479156500
original_gldm_DependenceEntropy	0.3770627975463870
original_gldm_SumEntropy	0.3679247200489040
original_firstorder_RootMeanSquared	0.36567699909210200
original_gldm_JointEnergy	0.35192009806633000
original_firstorder_Minimum	0.35017284750938400
original_gldm_LargeDependenceEmphasis	0.32812559604644800
original_glszm_SmallAreaEmphasis	0.3248097598552700
original_firstorder_Energy	0.30774399638176000
original_gldm_LowGrayLevelRunEmphasis	0.3045894503593450
original_gldm_ShortRunHighGrayLevelEmphasis	0.30429935455322300
original_glszm_HighGrayLevelZoneEmphasis	0.30254480242729200
original_gldm_GrayLevelVariance	0.27521592378616300
original_glszm_LargeAreaEmphasis	0.25623515248298600
original_firstorder_Median	0.25129643082618700
original_glszm_GrayLevelVariance	0.2497127652168270
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.2427780032157900
original_firstorder_Mean	0.21356892585754400
original_gldm_ShortRunLowGrayLevelEmphasis	0.20439913868904100
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.20092891156673400
original_glszm_SizeZoneNonUniformity	0.1834125518798830
original_firstorder_InterquartileRange	0.1688953936100010
original_gldm_DifferenceEntropy	0.1569608896970750
original_gldm_HighGrayLevelRunEmphasis	0.14945298433303800
original_firstorder_MeanAbsoluteDeviation	0.14745616912841800
original_gldm_GrayLevelNonUniformity	0.13433648645877800
original_gldm_ShortRunEmphasis	0.12773919105529800
original_gldm_DifferenceAverage	0.1087200939655300

Supplementary Table 2

Top 14 Features only

Model	Precision	Recall	F1-Score	Accuracy	Best Parameters
XGBoost	0.89	0.89	0.89	0.89	{'classifier__colsample_bylevel': 0.8, 'classifier__gamma': 0.1, 'classifier__learning_rate': 0.1, 'classifier__max_depth': 8, 'classifier__min_child_weight': 1, 'classifier__n_estimators': 100, 'classifier__subsample': 0.5}
SVC	0.82	0.82	0.82	0.82	{'classifier__C': 10, 'classifier__kernel': 'rbf'}
Logistic Regression	0.80	0.73	0.72	0.73	{'classifier__C': 10, 'classifier__penalty': 'l2', 'classifier__solver': 'liblinear'}
KNN	0.80	0.82	0.81	0.80	{'classifier__n_neighbors': 5}