

## Supplementary Materials

### S1. Extracted radiomic features

#### Supplementary Table 1 Extracted radiomics features

Feature group	Feature name
<i>Shape (n = 14)</i>	original shape MajorAxisLength
	original shape MeshVolume
	original shape SurfaceArea
	original shape Maximum2DDiameterColumn
	original shape Sphericity
	original shape Elongation
	original shape SurfaceVolumeRatio
	original shape Maximum3DDiameter
	original shape Flatness
	original shape Maximum2DDiameterRow
	original shape MinorAxisLength
	original shape LeastAxisLength
	original shape VoxelVolume
	original shape Maximum2DDiameterSlice
<i>First order (n = 18)</i>	original firstorder InterquartileRange
	original firstorder Median
	original firstorder Uniformity

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original firstorder Range  
original firstorder Entropy  
original firstorder Minimum  
original firstorder Kurtosis  
original firstorder RootMeanSquared  
original firstorder 90Percentile  
original firstorder Energy  
original firstorder Skewness  
original firstorder Mean  
original firstorder Variance  
original firstorder RobustMeanAbsoluteDeviation  
original firstorder MeanAbsoluteDeviation  
original firstorder Maximum  
original firstorder 10Percentile  
original glrlm RunLengthNonUniformity  
original glrlm GrayLevelNonUniformityNormalized  
original glrlm LongRunLowGrayLevelEmphasis  
original glrlm HighGrayLevelRunEmphasis  
original glrlm RunVariance  
original glrlm RunLengthNonUniformityNormalized  
original glrlm ShortRunEmphasis

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*Second order texture (n = 74)*

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original glrlm LongRunEmphasis  
original glrlm LongRunHighGrayLevelEmphasis  
original glrlm GrayLevelNonUniformity  
original glrlm ShortRunHighGrayLevelEmphasis  
original glrlm ShortRunLowGrayLevelEmphasis  
original glrlm RunPercentage  
original glrlm GrayLevelVariance  
original glrlm RunEntropy  
original glrlm LowGrayLevelRunEmphasis  
original ngtdm Coarseness  
original ngtdm Complexity  
original ngtdm Busyness  
original ngtdm Strength  
original ngtdm Contrast  
original glcm JointEntropy  
original glcm ClusterShade  
original glcm ClusterProminence  
original glcm Autocorrelation  
original glcm SumSquares  
original glcm SumEntropy  
original glcm DifferenceVariance

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original glcm Idmn  
original glcm Imc2  
original glcm Imc1  
original glcm DifferenceAverage  
original glcm JointAverage  
original glcm InverseVariance  
original glcm DifferenceEntropy  
original glcm Idm  
original glcm SumAverage  
original glcm Idn  
original glcm Correlation  
original glcm MCC  
original glcm ClusterTendency  
original glcm Contrast  
original glcm Id  
original glcm MaximumProbability  
original glcm JointEnergy  
original gldm SmallDependenceHighGrayLevelEmphasis  
original gldm LargeDependenceLowGrayLevelEmphasis  
original gldm DependenceNonUniformity  
original gldm LargeDependenceHighGrayLevelEmphasis

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original gldm DependenceNonUniformityNormalized  
original gldm LowGrayLevelEmphasis  
original gldm LargeDependenceEmphasis  
original gldm SmallDependenceEmphasis  
original gldm DependenceEntropy  
original gldm DependenceVariance  
original gldm SmallDependenceLowGrayLevelEmphasis  
original gldm GrayLevelNonUniformity  
original gldm HighGrayLevelEmphasis  
original gldm GrayLevelVariance  
original glszm GrayLevelNonUniformityNormalized  
original glszm SmallAreaHighGrayLevelEmphasis  
original glszm GrayLevelVariance  
original glszm LargeAreaEmphasis  
original glszm SizeZoneNonUniformity  
original glszm LargeAreaLowGrayLevelEmphasis  
original glszm HighGrayLevelZoneEmphasis  
original glszm ZonePercentage  
original glszm ZoneVariance  
original glszm GrayLevelNonUniformity  
original glszm LargeAreaHighGrayLevelEmphasis

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*Wavelet (n = 460)*

original glszm SizeZoneNonUniformityNormalized

original glszm SmallAreaEmphasis

original glszm ZoneEntropy

original glszm SmallAreaLowGrayLevelEmphasis

original glszm LowGrayLevelZoneEmphasis

wavelet-HLH glrlm RunLengthNonUniformity

wavelet-HLH glrlm GrayLevelNonUniformityNormalized

wavelet-HLH glrlm LongRunLowGrayLevelEmphasis

wavelet-HLH glrlm HighGrayLevelRunEmphasis

wavelet-HLH glrlm RunVariance

wavelet-HLH glrlm RunLengthNonUniformityNormalized

wavelet-HLH glrlm ShortRunEmphasis

wavelet-HLH glrlm LongRunEmphasis

wavelet-HLH glrlm LongRunHighGrayLevelEmphasis

wavelet-HLH glrlm GrayLevelNonUniformity

wavelet-HLH glrlm ShortRunHighGrayLevelEmphasis

wavelet-HLH glrlm ShortRunLowGrayLevelEmphasis

wavelet-HLH glrlm RunPercentage

wavelet-HLH glrlm GrayLevelVariance

wavelet-HLH glrlm RunEntropy

wavelet-HLH glrlm LowGrayLevelRunEmphasis

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wavelet-HLH ngtdm Coarseness  
wavelet-HLH ngtdm Complexity  
wavelet-HLH ngtdm Busyness  
wavelet-HLH ngtdm Strength  
wavelet-HLH ngtdm Contrast  
wavelet-HLH glcm JointEntropy  
wavelet-HLH glcm ClusterShade  
wavelet-HLH glcm ClusterProminence  
wavelet-HLH glcm Autocorrelation  
wavelet-HLH glcm SumSquares  
wavelet-HLH glcm SumEntropy  
wavelet-HLH glcm DifferenceVariance  
wavelet-HLH glcm Idmn  
wavelet-HLH glcm Imc2  
wavelet-HLH glcm Imc1  
wavelet-HLH glcm DifferenceAverage  
wavelet-HLH glcm JointAverage  
wavelet-HLH glcm InverseVariance  
wavelet-HLH glcm DifferenceEntropy  
wavelet-HLH glcm Idm  
wavelet-HLH glcm SumAverage

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wavelet-HLH glcm Idn  
wavelet-HLH glcm Correlation  
wavelet-HLH glcm MCC  
wavelet-HLH glcm ClusterTendency  
wavelet-HLH glcm Contrast  
wavelet-HLH glcm Id  
wavelet-HLH glcm MaximumProbability  
wavelet-HLH glcm JointEnergy  
wavelet-HLH gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-HLH gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-HLH gldm DependenceNonUniformity  
wavelet-HLH gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-HLH gldm DependenceNonUniformityNormalized  
wavelet-HLH gldm LowGrayLevelEmphasis  
wavelet-HLH gldm LargeDependenceEmphasis  
wavelet-HLH gldm SmallDependenceEmphasis  
wavelet-HLH gldm DependenceEntropy  
wavelet-HLH gldm DependenceVariance  
wavelet-HLH gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-HLH gldm GrayLevelNonUniformity  
wavelet-HLH gldm HighGrayLevelEmphasis

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wavelet-HLH gldm GrayLevelVariance  
wavelet-HLH glszm GrayLevelNonUniformityNormalized  
wavelet-HLH glszm SmallAreaHighGrayLevelEmphasis  
wavelet-HLH glszm GrayLevelVariance  
wavelet-HLH glszm LargeAreaEmphasis  
wavelet-HLH glszm SizeZoneNonUniformity  
wavelet-HLH glszm LargeAreaLowGrayLevelEmphasis  
wavelet-HLH glszm HighGrayLevelZoneEmphasis  
wavelet-HLH glszm ZonePercentage  
wavelet-HLH glszm ZoneVariance  
wavelet-HLH glszm GrayLevelNonUniformity  
wavelet-HLH glszm LargeAreaHighGrayLevelEmphasis  
wavelet-HLH glszm SizeZoneNonUniformityNormalized  
wavelet-HLH glszm SmallAreaEmphasis  
wavelet-HLH glszm ZoneEntropy  
wavelet-HLH glszm SmallAreaLowGrayLevelEmphasis  
wavelet-HLH glszm LowGrayLevelZoneEmphasis  
wavelet-HLH firstorder InterquartileRange  
wavelet-HLH firstorder Median  
wavelet-HLH firstorder Uniformity  
wavelet-HLH firstorder Range

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wavelet-HLH firstorder Entropy  
wavelet-HLH firstorder Minimum  
wavelet-HLH firstorder Kurtosis  
wavelet-HLH firstorder RootMeanSquared  
wavelet-HLH firstorder 90Percentile  
wavelet-HLH firstorder Energy  
wavelet-HLH firstorder Skewness  
wavelet-HLH firstorder Mean  
wavelet-HLH firstorder Variance  
wavelet-HLH firstorder RobustMeanAbsoluteDeviation  
wavelet-HLH firstorder MeanAbsoluteDeviation  
wavelet-HLH firstorder Maximum  
wavelet-HLH firstorder 10Percentile  
wavelet-LHL glrlm RunLengthNonUniformity  
wavelet-LHL glrlm GrayLevelNonUniformityNormalized  
wavelet-LHL glrlm LongRunLowGrayLevelEmphasis  
wavelet-LHL glrlm HighGrayLevelRunEmphasis  
wavelet-LHL glrlm RunVariance  
wavelet-LHL glrlm RunLengthNonUniformityNormalized  
wavelet-LHL glrlm ShortRunEmphasis  
wavelet-LHL glrlm LongRunEmphasis

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wavelet-LHL glrlm LongRunHighGrayLevelEmphasis  
wavelet-LHL glrlm GrayLevelNonUniformity  
wavelet-LHL glrlm ShortRunHighGrayLevelEmphasis  
wavelet-LHL glrlm ShortRunLowGrayLevelEmphasis  
wavelet-LHL glrlm RunPercentage  
wavelet-LHL glrlm GrayLevelVariance  
wavelet-LHL glrlm RunEntropy  
wavelet-LHL glrlm LowGrayLevelRunEmphasis  
wavelet-LHL ngtdm Coarseness  
wavelet-LHL ngtdm Complexity  
wavelet-LHL ngtdm Busyness  
wavelet-LHL ngtdm Strength  
wavelet-LHL ngtdm Contrast  
wavelet-LHL glcm JointEntropy  
wavelet-LHL glcm ClusterShade  
wavelet-LHL glcm ClusterProminence  
wavelet-LHL glcm Autocorrelation  
wavelet-LHL glcm SumSquares  
wavelet-LHL glcm SumEntropy  
wavelet-LHL glcm DifferenceVariance  
wavelet-LHL glcm Idmn

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wavelet-LHL glcm Imc2  
wavelet-LHL glcm Imc1  
wavelet-LHL glcm DifferenceAverage  
wavelet-LHL glcm JointAverage  
wavelet-LHL glcm InverseVariance  
wavelet-LHL glcm DifferenceEntropy  
wavelet-LHL glcm Idm  
wavelet-LHL glcm SumAverage  
wavelet-LHL glcm Idn  
wavelet-LHL glcm Correlation  
wavelet-LHL glcm MCC  
wavelet-LHL glcm ClusterTendency  
wavelet-LHL glcm Contrast  
wavelet-LHL glcm Id  
wavelet-LHL glcm MaximumProbability  
wavelet-LHL glcm JointEnergy  
wavelet-LHL gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-LHL gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-LHL gldm DependenceNonUniformity  
wavelet-LHL gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-LHL gldm DependenceNonUniformityNormalized

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wavelet-LHL gldm LowGrayLevelEmphasis  
wavelet-LHL gldm LargeDependenceEmphasis  
wavelet-LHL gldm SmallDependenceEmphasis  
wavelet-LHL gldm DependenceEntropy  
wavelet-LHL gldm DependenceVariance  
wavelet-LHL gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-LHL gldm GrayLevelNonUniformity  
wavelet-LHL gldm HighGrayLevelEmphasis  
wavelet-LHL gldm GrayLevelVariance  
wavelet-LHL glszm GrayLevelNonUniformityNormalized  
wavelet-LHL glszm SmallAreaHighGrayLevelEmphasis  
wavelet-LHL glszm GrayLevelVariance  
wavelet-LHL glszm LargeAreaEmphasis  
wavelet-LHL glszm SizeZoneNonUniformity  
wavelet-LHL glszm LargeAreaLowGrayLevelEmphasis  
wavelet-LHL glszm HighGrayLevelZoneEmphasis  
wavelet-LHL glszm ZonePercentage  
wavelet-LHL glszm ZoneVariance  
wavelet-LHL glszm GrayLevelNonUniformity  
wavelet-LHL glszm LargeAreaHighGrayLevelEmphasis  
wavelet-LHL glszm SizeZoneNonUniformityNormalized

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wavelet-LHL glszm SmallAreaEmphasis  
wavelet-LHL glszm ZoneEntropy  
wavelet-LHL glszm SmallAreaLowGrayLevelEmphasis  
wavelet-LHL glszm LowGrayLevelZoneEmphasis  
wavelet-LHL firstorder InterquartileRange  
wavelet-LHL firstorder Median  
wavelet-LHL firstorder Uniformity  
wavelet-LHL firstorder Range  
wavelet-LHL firstorder Entropy  
wavelet-LHL firstorder Minimum  
wavelet-LHL firstorder Kurtosis  
wavelet-LHL firstorder RootMeanSquared  
wavelet-LHL firstorder 90Percentile  
wavelet-LHL firstorder Energy  
wavelet-LHL firstorder Skewness  
wavelet-LHL firstorder Mean  
wavelet-LHL firstorder Variance  
wavelet-LHL firstorder RobustMeanAbsoluteDeviation  
wavelet-LHL firstorder MeanAbsoluteDeviation  
wavelet-LHL firstorder Maximum  
wavelet-LHL firstorder 10Percentile

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wavelet-LHH glrlm RunLengthNonUniformity  
wavelet-LHH glrlm GrayLevelNonUniformityNormalized  
wavelet-LHH glrlm LongRunLowGrayLevelEmphasis  
wavelet-LHH glrlm HighGrayLevelRunEmphasis  
wavelet-LHH glrlm RunVariance  
wavelet-LHH glrlm RunLengthNonUniformityNormalized  
wavelet-LHH glrlm ShortRunEmphasis  
wavelet-LHH glrlm LongRunEmphasis  
wavelet-LHH glrlm LongRunHighGrayLevelEmphasis  
wavelet-LHH glrlm GrayLevelNonUniformity  
wavelet-LHH glrlm ShortRunHighGrayLevelEmphasis  
wavelet-LHH glrlm ShortRunLowGrayLevelEmphasis  
wavelet-LHH glrlm RunPercentage  
wavelet-LHH glrlm GrayLevelVariance  
wavelet-LHH glrlm RunEntropy  
wavelet-LHH glrlm LowGrayLevelRunEmphasis  
wavelet-LHH ngtdm Coarseness  
wavelet-LHH ngtdm Complexity  
wavelet-LHH ngtdm Busyness  
wavelet-LHH ngtdm Strength  
wavelet-LHH ngtdm Contrast

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wavelet-LHH glcm JointEntropy  
wavelet-LHH glcm ClusterShade  
wavelet-LHH glcm ClusterProminence  
wavelet-LHH glcm Autocorrelation  
wavelet-LHH glcm SumSquares  
wavelet-LHH glcm SumEntropy  
wavelet-LHH glcm DifferenceVariance  
wavelet-LHH glcm Idmn  
wavelet-LHH glcm Imc2  
wavelet-LHH glcm Imc1  
wavelet-LHH glcm DifferenceAverage  
wavelet-LHH glcm JointAverage  
wavelet-LHH glcm InverseVariance  
wavelet-LHH glcm DifferenceEntropy  
wavelet-LHH glcm Idm  
wavelet-LHH glcm SumAverage  
wavelet-LHH glcm Idn  
wavelet-LHH glcm Correlation  
wavelet-LHH glcm MCC  
wavelet-LHH glcm ClusterTendency  
wavelet-LHH glcm Contrast

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wavelet-LHH glcm Id  
wavelet-LHH glcm MaximumProbability  
wavelet-LHH glcm JointEnergy  
wavelet-LHH gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-LHH gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-LHH gldm DependenceNonUniformity  
wavelet-LHH gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-LHH gldm DependenceNonUniformityNormalized  
wavelet-LHH gldm LowGrayLevelEmphasis  
wavelet-LHH gldm LargeDependenceEmphasis  
wavelet-LHH gldm SmallDependenceEmphasis  
wavelet-LHH gldm DependenceEntropy  
wavelet-LHH gldm DependenceVariance  
wavelet-LHH gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-LHH gldm GrayLevelNonUniformity  
wavelet-LHH gldm HighGrayLevelEmphasis  
wavelet-LHH gldm GrayLevelVariance  
wavelet-LHH glszm GrayLevelNonUniformityNormalized  
wavelet-LHH glszm SmallAreaHighGrayLevelEmphasis  
wavelet-LHH glszm GrayLevelVariance  
wavelet-LHH glszm LargeAreaEmphasis

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wavelet-LHH glszm SizeZoneNonUniformity  
wavelet-LHH glszm LargeAreaLowGrayLevelEmphasis  
wavelet-LHH glszm HighGrayLevelZoneEmphasis  
wavelet-LHH glszm ZonePercentage  
wavelet-LHH glszm ZoneVariance  
wavelet-LHH glszm GrayLevelNonUniformity  
wavelet-LHH glszm LargeAreaHighGrayLevelEmphasis  
wavelet-LHH glszm SizeZoneNonUniformityNormalized  
wavelet-LHH glszm SmallAreaEmphasis  
wavelet-LHH glszm ZoneEntropy  
wavelet-LHH glszm SmallAreaLowGrayLevelEmphasis  
wavelet-LHH glszm LowGrayLevelZoneEmphasis  
wavelet-LHH firstorder InterquartileRange  
wavelet-LHH firstorder Median  
wavelet-LHH firstorder Uniformity  
wavelet-LHH firstorder Range  
wavelet-LHH firstorder Entropy  
wavelet-LHH firstorder Minimum  
wavelet-LHH firstorder Kurtosis  
wavelet-LHH firstorder RootMeanSquared  
wavelet-LHH firstorder 90Percentile

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wavelet-LHH firstorder Energy  
wavelet-LHH firstorder Skewness  
wavelet-LHH firstorder Mean  
wavelet-LHH firstorder Variance  
wavelet-LHH firstorder RobustMeanAbsoluteDeviation  
wavelet-LHH firstorder MeanAbsoluteDeviation  
wavelet-LHH firstorder Maximum  
wavelet-LHH firstorder 10Percentile  
wavelet-HLL glrlm RunLengthNonUniformity  
wavelet-HLL glrlm GrayLevelNonUniformityNormalized  
wavelet-HLL glrlm LongRunLowGrayLevelEmphasis  
wavelet-HLL glrlm HighGrayLevelRunEmphasis  
wavelet-HLL glrlm RunVariance  
wavelet-HLL glrlm RunLengthNonUniformityNormalized  
wavelet-HLL glrlm ShortRunEmphasis  
wavelet-HLL glrlm LongRunEmphasis  
wavelet-HLL glrlm LongRunHighGrayLevelEmphasis  
wavelet-HLL glrlm GrayLevelNonUniformity  
wavelet-HLL glrlm ShortRunHighGrayLevelEmphasis  
wavelet-HLL glrlm ShortRunLowGrayLevelEmphasis  
wavelet-HLL glrlm RunPercentage

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wavelet-HLL glrlm GrayLevelVariance  
wavelet-HLL glrlm RunEntropy  
wavelet-HLL glrlm LowGrayLevelRunEmphasis  
wavelet-HLL ngtdm Coarseness  
wavelet-HLL ngtdm Complexity  
wavelet-HLL ngtdm Busyness  
wavelet-HLL ngtdm Strength  
wavelet-HLL ngtdm Contrast  
wavelet-HLL glcm JointEntropy  
wavelet-HLL glcm ClusterShade  
wavelet-HLL glcm ClusterProminence  
wavelet-HLL glcm Autocorrelation  
wavelet-HLL glcm SumSquares  
wavelet-HLL glcm SumEntropy  
wavelet-HLL glcm DifferenceVariance  
wavelet-HLL glcm Idmn  
wavelet-HLL glcm Imc2  
wavelet-HLL glcm Imc1  
wavelet-HLL glcm DifferenceAverage  
wavelet-HLL glcm JointAverage  
wavelet-HLL glcm InverseVariance

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wavelet-HLL glcm DifferenceEntropy  
wavelet-HLL glcm Idm  
wavelet-HLL glcm SumAverage  
wavelet-HLL glcm Idn  
wavelet-HLL glcm Correlation  
wavelet-HLL glcm MCC  
wavelet-HLL glcm ClusterTendency  
wavelet-HLL glcm Contrast  
wavelet-HLL glcm Id  
wavelet-HLL glcm MaximumProbability  
wavelet-HLL glcm JointEnergy  
wavelet-HLL gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-HLL gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-HLL gldm DependenceNonUniformity  
wavelet-HLL gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-HLL gldm DependenceNonUniformityNormalized  
wavelet-HLL gldm LowGrayLevelEmphasis  
wavelet-HLL gldm LargeDependenceEmphasis  
wavelet-HLL gldm SmallDependenceEmphasis  
wavelet-HLL gldm DependenceEntropy  
wavelet-HLL gldm DependenceVariance

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wavelet-HLL gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-HLL gldm GrayLevelNonUniformity  
wavelet-HLL gldm HighGrayLevelEmphasis  
wavelet-HLL gldm GrayLevelVariance  
wavelet-HLL glszm GrayLevelNonUniformityNormalized  
wavelet-HLL glszm SmallAreaHighGrayLevelEmphasis  
wavelet-HLL glszm GrayLevelVariance  
wavelet-HLL glszm LargeAreaEmphasis  
wavelet-HLL glszm SizeZoneNonUniformity  
wavelet-HLL glszm LargeAreaLowGrayLevelEmphasis  
wavelet-HLL glszm HighGrayLevelZoneEmphasis  
wavelet-HLL glszm ZonePercentage  
wavelet-HLL glszm ZoneVariance  
wavelet-HLL glszm GrayLevelNonUniformity  
wavelet-HLL glszm LargeAreaHighGrayLevelEmphasis  
wavelet-HLL glszm SizeZoneNonUniformityNormalized  
wavelet-HLL glszm SmallAreaEmphasis  
wavelet-HLL glszm ZoneEntropy  
wavelet-HLL glszm SmallAreaLowGrayLevelEmphasis  
wavelet-HLL glszm LowGrayLevelZoneEmphasis  
wavelet-HLL firstorder InterquartileRange

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wavelet-HLL firstorder Median  
wavelet-HLL firstorder Uniformity  
wavelet-HLL firstorder Range  
wavelet-HLL firstorder Entropy  
wavelet-HLL firstorder Minimum  
wavelet-HLL firstorder Kurtosis  
wavelet-HLL firstorder RootMeanSquared  
wavelet-HLL firstorder 90Percentile  
wavelet-HLL firstorder Energy  
wavelet-HLL firstorder Skewness  
wavelet-HLL firstorder Mean  
wavelet-HLL firstorder Variance  
wavelet-HLL firstorder RobustMeanAbsoluteDeviation  
wavelet-HLL firstorder MeanAbsoluteDeviation  
wavelet-HLL firstorder Maximum  
wavelet-HLL firstorder 10Percentile  
wavelet-HHH glrlm RunLengthNonUniformity  
wavelet-HHH glrlm GrayLevelNonUniformityNormalized  
wavelet-HHH glrlm LongRunLowGrayLevelEmphasis  
wavelet-HHH glrlm HighGrayLevelRunEmphasis  
wavelet-HHH glrlm RunVariance

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wavelet-HHH glrlm RunLengthNonUniformityNormalized  
wavelet-HHH glrlm ShortRunEmphasis  
wavelet-HHH glrlm LongRunEmphasis  
wavelet-HHH glrlm LongRunHighGrayLevelEmphasis  
wavelet-HHH glrlm GrayLevelNonUniformity  
wavelet-HHH glrlm ShortRunHighGrayLevelEmphasis  
wavelet-HHH glrlm ShortRunLowGrayLevelEmphasis  
wavelet-HHH glrlm RunPercentage  
wavelet-HHH glrlm GrayLevelVariance  
wavelet-HHH glrlm RunEntropy  
wavelet-HHH glrlm LowGrayLevelRunEmphasis  
wavelet-HHH ngtdm Coarseness  
wavelet-HHH ngtdm Complexity  
wavelet-HHH ngtdm Busyness  
wavelet-HHH ngtdm Strength  
wavelet-HHH ngtdm Contrast  
wavelet-HHH glcm JointEntropy  
wavelet-HHH glcm ClusterShade  
wavelet-HHH glcm ClusterProminence  
wavelet-HHH glcm Autocorrelation  
wavelet-HHH glcm SumSquares

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wavelet-HHH glcm SumEntropy  
wavelet-HHH glcm DifferenceVariance  
wavelet-HHH glcm Idmn  
wavelet-HHH glcm Imc2  
wavelet-HHH glcm Imc1  
wavelet-HHH glcm DifferenceAverage  
wavelet-HHH glcm JointAverage  
wavelet-HHH glcm InverseVariance  
wavelet-HHH glcm DifferenceEntropy  
wavelet-HHH glcm Idm  
wavelet-HHH glcm SumAverage  
wavelet-HHH glcm Idn  
wavelet-HHH glcm Correlation  
wavelet-HHH glcm MCC  
wavelet-HHH glcm ClusterTendency  
wavelet-HHH glcm Contrast  
wavelet-HHH glcm Id  
wavelet-HHH glcm MaximumProbability  
wavelet-HHH glcm JointEnergy  
wavelet-HHH gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-HHH gldm LargeDependenceLowGrayLevelEmphasis

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wavelet-HHH gldm DependenceNonUniformity  
wavelet-HHH gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-HHH gldm DependenceNonUniformityNormalized  
wavelet-HHH gldm LowGrayLevelEmphasis  
wavelet-HHH gldm LargeDependenceEmphasis  
wavelet-HHH gldm SmallDependenceEmphasis  
wavelet-HHH gldm DependenceEntropy  
wavelet-HHH gldm DependenceVariance  
wavelet-HHH gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-HHH gldm GrayLevelNonUniformity  
wavelet-HHH gldm HighGrayLevelEmphasis  
wavelet-HHH gldm GrayLevelVariance  
wavelet-HHH glszm GrayLevelNonUniformityNormalized  
wavelet-HHH glszm SmallAreaHighGrayLevelEmphasis  
wavelet-HHH glszm GrayLevelVariance  
wavelet-HHH glszm LargeAreaEmphasis  
wavelet-HHH glszm SizeZoneNonUniformity  
wavelet-HHH glszm LargeAreaLowGrayLevelEmphasis  
wavelet-HHH glszm HighGrayLevelZoneEmphasis  
wavelet-HHH glszm ZonePercentage  
wavelet-HHH glszm ZoneVariance

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wavelet-HHH glszm GrayLevelNonUniformity  
wavelet-HHH glszm LargeAreaHighGrayLevelEmphasis  
wavelet-HHH glszm SizeZoneNonUniformityNormalized  
wavelet-HHH glszm SmallAreaEmphasis  
wavelet-HHH glszm ZoneEntropy  
wavelet-HHH glszm SmallAreaLowGrayLevelEmphasis  
wavelet-HHH glszm LowGrayLevelZoneEmphasis  
wavelet-HHH firstorder InterquartileRange  
wavelet-HHH firstorder Median  
wavelet-HHH firstorder Uniformity  
wavelet-HHH firstorder Range  
wavelet-HHH firstorder Entropy  
wavelet-HHH firstorder Minimum  
wavelet-HHH firstorder Kurtosis  
wavelet-HHH firstorder RootMeanSquared  
wavelet-HHH firstorder 90Percentile  
wavelet-HHH firstorder Energy  
wavelet-HHH firstorder Skewness  
wavelet-HHH firstorder Mean  
wavelet-HHH firstorder Variance  
wavelet-HHH firstorder RobustMeanAbsoluteDeviation

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wavelet-HHH firstorder MeanAbsoluteDeviation  
wavelet-HHH firstorder Maximum  
wavelet-HHH firstorder 10Percentile  
wavelet-HHL glrlm RunLengthNonUniformity  
wavelet-HHL glrlm GrayLevelNonUniformityNormalized  
wavelet-HHL glrlm LongRunLowGrayLevelEmphasis  
wavelet-HHL glrlm HighGrayLevelRunEmphasis  
wavelet-HHL glrlm RunVariance  
wavelet-HHL glrlm RunLengthNonUniformityNormalized  
wavelet-HHL glrlm ShortRunEmphasis  
wavelet-HHL glrlm LongRunEmphasis  
wavelet-HHL glrlm LongRunHighGrayLevelEmphasis  
wavelet-HHL glrlm GrayLevelNonUniformity  
wavelet-HHL glrlm ShortRunHighGrayLevelEmphasis  
wavelet-HHL glrlm ShortRunLowGrayLevelEmphasis  
wavelet-HHL glrlm RunPercentage  
wavelet-HHL glrlm GrayLevelVariance  
wavelet-HHL glrlm RunEntropy  
wavelet-HHL glrlm LowGrayLevelRunEmphasis  
wavelet-HHL ngtdm Coarseness  
wavelet-HHL ngtdm Complexity

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wavelet-HHL ngtdm Busyness  
wavelet-HHL ngtdm Strength  
wavelet-HHL ngtdm Contrast  
wavelet-HHL glcm JointEntropy  
wavelet-HHL glcm ClusterShade  
wavelet-HHL glcm ClusterProminence  
wavelet-HHL glcm Autocorrelation  
wavelet-HHL glcm SumSquares  
wavelet-HHL glcm SumEntropy  
wavelet-HHL glcm DifferenceVariance  
wavelet-HHL glcm Idmn  
wavelet-HHL glcm Imc2  
wavelet-HHL glcm Imc1  
wavelet-HHL glcm DifferenceAverage  
wavelet-HHL glcm JointAverage  
wavelet-HHL glcm InverseVariance  
wavelet-HHL glcm DifferenceEntropy  
wavelet-HHL glcm Idm  
wavelet-HHL glcm SumAverage  
wavelet-HHL glcm Idn  
wavelet-HHL glcm Correlation

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wavelet-HHL glcm MCC  
wavelet-HHL glcm ClusterTendency  
wavelet-HHL glcm Contrast  
wavelet-HHL glcm Id  
wavelet-HHL glcm MaximumProbability  
wavelet-HHL glcm JointEnergy  
wavelet-HHL gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-HHL gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-HHL gldm DependenceNonUniformity  
wavelet-HHL gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-HHL gldm DependenceNonUniformityNormalized  
wavelet-HHL gldm LowGrayLevelEmphasis  
wavelet-HHL gldm LargeDependenceEmphasis  
wavelet-HHL gldm SmallDependenceEmphasis  
wavelet-HHL gldm DependenceEntropy  
wavelet-HHL gldm DependenceVariance  
wavelet-HHL gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-HHL gldm GrayLevelNonUniformity  
wavelet-HHL gldm HighGrayLevelEmphasis  
wavelet-HHL gldm GrayLevelVariance  
wavelet-HHL glszm GrayLevelNonUniformityNormalized

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wavelet-HHL glszm SmallAreaHighGrayLevelEmphasis  
wavelet-HHL glszm GrayLevelVariance  
wavelet-HHL glszm LargeAreaEmphasis  
wavelet-HHL glszm SizeZoneNonUniformity  
wavelet-HHL glszm LargeAreaLowGrayLevelEmphasis  
wavelet-HHL glszm HighGrayLevelZoneEmphasis  
wavelet-HHL glszm ZonePercentage  
wavelet-HHL glszm ZoneVariance  
wavelet-HHL glszm GrayLevelNonUniformity  
wavelet-HHL glszm LargeAreaHighGrayLevelEmphasis  
wavelet-HHL glszm SizeZoneNonUniformityNormalized  
wavelet-HHL glszm SmallAreaEmphasis  
wavelet-HHL glszm ZoneEntropy  
wavelet-HHL glszm SmallAreaLowGrayLevelEmphasis  
wavelet-HHL glszm LowGrayLevelZoneEmphasis  
wavelet-HHL firstorder InterquartileRange  
wavelet-HHL firstorder Median  
wavelet-HHL firstorder Uniformity  
wavelet-HHL firstorder Range  
wavelet-HHL firstorder Entropy  
wavelet-HHL firstorder Minimum

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wavelet-HHL firstorder Kurtosis  
wavelet-HHL firstorder RootMeanSquared  
wavelet-HHL firstorder 90Percentile  
wavelet-HHL firstorder Energy  
wavelet-HHL firstorder Skewness  
wavelet-HHL firstorder Mean  
wavelet-HHL firstorder Variance  
wavelet-HHL firstorder RobustMeanAbsoluteDeviation  
wavelet-HHL firstorder MeanAbsoluteDeviation  
wavelet-HHL firstorder Maximum  
wavelet-HHL firstorder 10Percentile  
wavelet-LLH glrlm RunLengthNonUniformity  
wavelet-LLH glrlm GrayLevelNonUniformityNormalized  
wavelet-LLH glrlm LongRunLowGrayLevelEmphasis  
wavelet-LLH glrlm HighGrayLevelRunEmphasis  
wavelet-LLH glrlm RunVariance  
wavelet-LLH glrlm RunLengthNonUniformityNormalized  
wavelet-LLH glrlm ShortRunEmphasis  
wavelet-LLH glrlm LongRunEmphasis  
wavelet-LLH glrlm LongRunHighGrayLevelEmphasis  
wavelet-LLH glrlm GrayLevelNonUniformity

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wavelet-LLH glrlm ShortRunHighGrayLevelEmphasis  
wavelet-LLH glrlm ShortRunLowGrayLevelEmphasis  
wavelet-LLH glrlm RunPercentage  
wavelet-LLH glrlm GrayLevelVariance  
wavelet-LLH glrlm RunEntropy  
wavelet-LLH glrlm LowGrayLevelRunEmphasis  
wavelet-LLH ngtdm Coarseness  
wavelet-LLH ngtdm Complexity  
wavelet-LLH ngtdm Busyness  
wavelet-LLH ngtdm Strength  
wavelet-LLH ngtdm Contrast  
wavelet-LLH glcm JointEntropy  
wavelet-LLH glcm ClusterShade  
wavelet-LLH glcm ClusterProminence  
wavelet-LLH glcm Autocorrelation  
wavelet-LLH glcm SumSquares  
wavelet-LLH glcm SumEntropy  
wavelet-LLH glcm DifferenceVariance  
wavelet-LLH glcm Idmn  
wavelet-LLH glcm Imc2  
wavelet-LLH glcm Imc1

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wavelet-LLH glcm DifferenceAverage  
wavelet-LLH glcm JointAverage  
wavelet-LLH glcm InverseVariance  
wavelet-LLH glcm DifferenceEntropy  
wavelet-LLH glcm Idm  
wavelet-LLH glcm SumAverage  
wavelet-LLH glcm Idn  
wavelet-LLH glcm Correlation  
wavelet-LLH glcm MCC  
wavelet-LLH glcm ClusterTendency  
wavelet-LLH glcm Contrast  
wavelet-LLH glcm Id  
wavelet-LLH glcm MaximumProbability  
wavelet-LLH glcm JointEnergy  
wavelet-LLH gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-LLH gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-LLH gldm DependenceNonUniformity  
wavelet-LLH gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-LLH gldm DependenceNonUniformityNormalized  
wavelet-LLH gldm LowGrayLevelEmphasis  
wavelet-LLH gldm LargeDependenceEmphasis

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wavelet-LLH gldm SmallDependenceEmphasis  
wavelet-LLH gldm DependenceEntropy  
wavelet-LLH gldm DependenceVariance  
wavelet-LLH gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-LLH gldm GrayLevelNonUniformity  
wavelet-LLH gldm HighGrayLevelEmphasis  
wavelet-LLH gldm GrayLevelVariance  
wavelet-LLH glszm GrayLevelNonUniformityNormalized  
wavelet-LLH glszm SmallAreaHighGrayLevelEmphasis  
wavelet-LLH glszm GrayLevelVariance  
wavelet-LLH glszm LargeAreaEmphasis  
wavelet-LLH glszm SizeZoneNonUniformity  
wavelet-LLH glszm LargeAreaLowGrayLevelEmphasis  
wavelet-LLH glszm HighGrayLevelZoneEmphasis  
wavelet-LLH glszm ZonePercentage  
wavelet-LLH glszm ZoneVariance  
wavelet-LLH glszm GrayLevelNonUniformity  
wavelet-LLH glszm LargeAreaHighGrayLevelEmphasis  
wavelet-LLH glszm SizeZoneNonUniformityNormalized  
wavelet-LLH glszm SmallAreaEmphasis  
wavelet-LLH glszm ZoneEntropy

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wavelet-LLH glszm SmallAreaLowGrayLevelEmphasis  
wavelet-LLH glszm LowGrayLevelZoneEmphasis  
wavelet-LLH firstorder InterquartileRange  
wavelet-LLH firstorder Median  
wavelet-LLH firstorder Uniformity  
wavelet-LLH firstorder Range  
wavelet-LLH firstorder Entropy  
wavelet-LLH firstorder Minimum  
wavelet-LLH firstorder Kurtosis  
wavelet-LLH firstorder RootMeanSquared  
wavelet-LLH firstorder 90Percentile  
wavelet-LLH firstorder Energy  
wavelet-LLH firstorder Skewness  
wavelet-LLH firstorder Mean  
wavelet-LLH firstorder Variance  
wavelet-LLH firstorder RobustMeanAbsoluteDeviation  
wavelet-LLH firstorder MeanAbsoluteDeviation  
wavelet-LLH firstorder Maximum  
wavelet-LLH firstorder 10Percentile  
wavelet-LLL glrlm RunLengthNonUniformity  
wavelet-LLL glrlm GrayLevelNonUniformityNormalized

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wavelet-LLL glrlm LongRunLowGrayLevelEmphasis  
wavelet-LLL glrlm HighGrayLevelRunEmphasis  
wavelet-LLL glrlm RunVariance  
wavelet-LLL glrlm RunLengthNonUniformityNormalized  
wavelet-LLL glrlm ShortRunEmphasis  
wavelet-LLL glrlm LongRunEmphasis  
wavelet-LLL glrlm LongRunHighGrayLevelEmphasis  
wavelet-LLL glrlm GrayLevelNonUniformity  
wavelet-LLL glrlm ShortRunHighGrayLevelEmphasis  
wavelet-LLL glrlm ShortRunLowGrayLevelEmphasis  
wavelet-LLL glrlm RunPercentage  
wavelet-LLL glrlm GrayLevelVariance  
wavelet-LLL glrlm RunEntropy  
wavelet-LLL glrlm LowGrayLevelRunEmphasis  
wavelet-LLL ngtdm Coarseness  
wavelet-LLL ngtdm Complexity  
wavelet-LLL ngtdm Busyness  
wavelet-LLL ngtdm Strength  
wavelet-LLL ngtdm Contrast  
wavelet-LLL glcm JointEntropy  
wavelet-LLL glcm ClusterShade

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wavelet-LLL glcm ClusterProminence  
wavelet-LLL glcm Autocorrelation  
wavelet-LLL glcm SumSquares  
wavelet-LLL glcm SumEntropy  
wavelet-LLL glcm DifferenceVariance  
wavelet-LLL glcm Idmn  
wavelet-LLL glcm Imc2  
wavelet-LLL glcm Imc1  
wavelet-LLL glcm DifferenceAverage  
wavelet-LLL glcm JointAverage  
wavelet-LLL glcm InverseVariance  
wavelet-LLL glcm DifferenceEntropy  
wavelet-LLL glcm Idm  
wavelet-LLL glcm SumAverage  
wavelet-LLL glcm Idn  
wavelet-LLL glcm Correlation  
wavelet-LLL glcm MCC  
wavelet-LLL glcm ClusterTendency  
wavelet-LLL glcm Contrast  
wavelet-LLL glcm Id  
wavelet-LLL glcm MaximumProbability

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wavelet-LLL glcm JointEnergy  
wavelet-LLL gldm SmallDependenceHighGrayLevelEmphasis  
wavelet-LLL gldm LargeDependenceLowGrayLevelEmphasis  
wavelet-LLL gldm DependenceNonUniformity  
wavelet-LLL gldm LargeDependenceHighGrayLevelEmphasis  
wavelet-LLL gldm DependenceNonUniformityNormalized  
wavelet-LLL gldm LowGrayLevelEmphasis  
wavelet-LLL gldm LargeDependenceEmphasis  
wavelet-LLL gldm SmallDependenceEmphasis  
wavelet-LLL gldm DependenceEntropy  
wavelet-LLL gldm DependenceVariance  
wavelet-LLL gldm SmallDependenceLowGrayLevelEmphasis  
wavelet-LLL gldm GrayLevelNonUniformity  
wavelet-LLL gldm HighGrayLevelEmphasis  
wavelet-LLL gldm GrayLevelVariance  
wavelet-LLL glszm GrayLevelNonUniformityNormalized  
wavelet-LLL glszm SmallAreaHighGrayLevelEmphasis  
wavelet-LLL glszm GrayLevelVariance  
wavelet-LLL glszm LargeAreaEmphasis  
wavelet-LLL glszm SizeZoneNonUniformity  
wavelet-LLL glszm LargeAreaLowGrayLevelEmphasis

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wavelet-LLL glszm HighGrayLevelZoneEmphasis  
wavelet-LLL glszm ZonePercentage  
wavelet-LLL glszm ZoneVariance  
wavelet-LLL glszm GrayLevelNonUniformity  
wavelet-LLL glszm LargeAreaHighGrayLevelEmphasis  
wavelet-LLL glszm SizeZoneNonUniformityNormalized  
wavelet-LLL glszm SmallAreaEmphasis  
wavelet-LLL glszm ZoneEntropy  
wavelet-LLL glszm SmallAreaLowGrayLevelEmphasis  
wavelet-LLL glszm LowGrayLevelZoneEmphasis  
wavelet-LLL firstorder InterquartileRange  
wavelet-LLL firstorder Median  
wavelet-LLL firstorder Uniformity  
wavelet-LLL firstorder Range  
wavelet-LLL firstorder Entropy  
wavelet-LLL firstorder Minimum  
wavelet-LLL firstorder Kurtosis  
wavelet-LLL firstorder RootMeanSquared  
wavelet-LLL firstorder 90Percentile  
wavelet-LLL firstorder Energy  
wavelet-LLL firstorder Skewness

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*LoG (n = 736)*

wavelet-LLL firstorder Mean  
wavelet-LLL firstorder Variance  
wavelet-LLL firstorder RobustMeanAbsoluteDeviation  
wavelet-LLL firstorder MeanAbsoluteDeviation  
wavelet-LLL firstorder Maximum  
wavelet-LLL firstorder 10Percentile  
log-sigma-1-0-mm-3D glrlm RunLengthNonUniformity  
log-sigma-1-0-mm-3D glrlm GrayLevelNonUniformityNormalized  
log-sigma-1-0-mm-3D glrlm LongRunLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D glrlm HighGrayLevelRunEmphasis  
log-sigma-1-0-mm-3D glrlm RunVariance  
log-sigma-1-0-mm-3D glrlm RunLengthNonUniformityNormalized  
log-sigma-1-0-mm-3D glrlm ShortRunEmphasis  
log-sigma-1-0-mm-3D glrlm LongRunEmphasis  
log-sigma-1-0-mm-3D glrlm LongRunHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D glrlm GrayLevelNonUniformity  
log-sigma-1-0-mm-3D glrlm ShortRunHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D glrlm ShortRunLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D glrlm RunPercentage  
log-sigma-1-0-mm-3D glrlm GrayLevelVariance  
log-sigma-1-0-mm-3D glrlm RunEntropy

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log-sigma-1-0-mm-3D glrlm LowGrayLevelRunEmphasis  
log-sigma-1-0-mm-3D ngtdm Coarseness  
log-sigma-1-0-mm-3D ngtdm Complexity  
log-sigma-1-0-mm-3D ngtdm Busyness  
log-sigma-1-0-mm-3D ngtdm Stregth  
log-sigma-1-0-mm-3D ngtdm Contrast  
log-sigma-1-0-mm-3D glcm JointEntropy  
log-sigma-1-0-mm-3D glcm ClusterShade  
log-sigma-1-0-mm-3D glcm ClusterProminence  
log-sigma-1-0-mm-3D glcm Autocorrelation  
log-sigma-1-0-mm-3D glcm SumSquares  
log-sigma-1-0-mm-3D glcm SumEntropy  
log-sigma-1-0-mm-3D glcm DifferenceVariance  
log-sigma-1-0-mm-3D glcm Idmn  
log-sigma-1-0-mm-3D glcm Imc2  
log-sigma-1-0-mm-3D glcm Imc1  
log-sigma-1-0-mm-3D glcm DifferenceAverage  
log-sigma-1-0-mm-3D glcm JointAverage  
log-sigma-1-0-mm-3D glcm InverseVariance  
log-sigma-1-0-mm-3D glcm DifferenceEntropy  
log-sigma-1-0-mm-3D glcm Idm

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log-sigma-1-0-mm-3D glcm SumAverage  
log-sigma-1-0-mm-3D glcm Idn  
log-sigma-1-0-mm-3D glcm Correlation  
log-sigma-1-0-mm-3D glcm MCC  
log-sigma-1-0-mm-3D glcm ClusterTendency  
log-sigma-1-0-mm-3D glcm Contrast  
log-sigma-1-0-mm-3D glcm Id  
log-sigma-1-0-mm-3D glcm MaximumProbability  
log-sigma-1-0-mm-3D glcm JointEnergy  
log-sigma-1-0-mm-3D gldm SmallDependenceHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm LargeDependenceLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm DependenceNonUniformity  
log-sigma-1-0-mm-3D gldm LargeDependenceHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm DependenceNonUniformityNormalized  
log-sigma-1-0-mm-3D gldm LowGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm LargeDependenceEmphasis  
log-sigma-1-0-mm-3D gldm SmallDependenceEmphasis  
log-sigma-1-0-mm-3D gldm DependenceEntropy  
log-sigma-1-0-mm-3D gldm DependenceVariance  
log-sigma-1-0-mm-3D gldm SmallDependenceLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm GrayLevelNonUniformity

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log-sigma-1-0-mm-3D gldm HighGrayLevelEmphasis  
log-sigma-1-0-mm-3D gldm GrayLevelVariance  
log-sigma-1-0-mm-3D glszm GrayLevelNonUniformityNormalized  
log-sigma-1-0-mm-3D glszm SmallAreaHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D glszm GrayLevelVariance  
log-sigma-1-0-mm-3D glszm LargeAreaEmphasis  
log-sigma-1-0-mm-3D glszm SizeZoneNonUniformity  
log-sigma-1-0-mm-3D glszm LargeAreaLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D glszm HighGrayLevelZoneEmphasis  
log-sigma-1-0-mm-3D glszm ZonePercentage  
log-sigma-1-0-mm-3D glszm ZoneVariance  
log-sigma-1-0-mm-3D glszm GrayLevelNonUniformity  
log-sigma-1-0-mm-3D glszm LargeAreaHighGrayLevelEmphasis  
log-sigma-1-0-mm-3D glszm SizeZoneNonUniformityNormalized  
log-sigma-1-0-mm-3D glszm SmallAreaEmphasis  
log-sigma-1-0-mm-3D glszm ZoneEntropy  
log-sigma-1-0-mm-3D glszm SmallAreaLowGrayLevelEmphasis  
log-sigma-1-0-mm-3D glszm LowGrayLevelZoneEmphasis  
log-sigma-1-0-mm-3D firstorder InterquartileRange  
log-sigma-1-0-mm-3D firstorder Median  
log-sigma-1-0-mm-3D firstorder Uniformity

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log-sigma-1-0-mm-3D firstorder Range  
log-sigma-1-0-mm-3D firstorder Entropy  
log-sigma-1-0-mm-3D firstorder Minimum  
log-sigma-1-0-mm-3D firstorder Kurtosis  
log-sigma-1-0-mm-3D firstorder RootMeanSquared  
log-sigma-1-0-mm-3D firstorder 90Percentile  
log-sigma-1-0-mm-3D firstorder Energy  
log-sigma-1-0-mm-3D firstorder Skewness  
log-sigma-1-0-mm-3D firstorder Mean  
log-sigma-1-0-mm-3D firstorder Variance  
log-sigma-1-0-mm-3D firstorder RobustMeanAbsoluteDeviation  
log-sigma-1-0-mm-3D firstorder MeanAbsoluteDeviation  
log-sigma-1-0-mm-3D firstorder Maximum  
log-sigma-1-0-mm-3D firstorder 10Percentile  
log-sigma-2-0-mm-3D glrlm RunLengthNonUniformity  
log-sigma-2-0-mm-3D glrlm GrayLevelNonUniformityNormalized  
log-sigma-2-0-mm-3D glrlm LongRunLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D glrlm HighGrayLevelRunEmphasis  
log-sigma-2-0-mm-3D glrlm RunVariance  
log-sigma-2-0-mm-3D glrlm RunLengthNonUniformityNormalized  
log-sigma-2-0-mm-3D glrlm ShortRunEmphasis

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log-sigma-2-0-mm-3D glrlm LongRunEmphasis  
log-sigma-2-0-mm-3D glrlm LongRunHighGrayLevelEmphasis  
log-sigma-2-0-mm-3D glrlm GrayLevelNonUniformity  
log-sigma-2-0-mm-3D glrlm ShortRunHighGrayLevelEmphasis  
log-sigma-2-0-mm-3D glrlm ShortRunLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D glrlm RunPercentage  
log-sigma-2-0-mm-3D glrlm GrayLevelVariance  
log-sigma-2-0-mm-3D glrlm RunEntropy  
log-sigma-2-0-mm-3D glrlm LowGrayLevelRunEmphasis  
log-sigma-2-0-mm-3D ngtdm Coarseness  
log-sigma-2-0-mm-3D ngtdm Complexity  
log-sigma-2-0-mm-3D ngtdm Busyness  
log-sigma-2-0-mm-3D ngtdm Strength  
log-sigma-2-0-mm-3D ngtdm Contrast  
log-sigma-2-0-mm-3D glcm JointEntropy  
log-sigma-2-0-mm-3D glcm ClusterShade  
log-sigma-2-0-mm-3D glcm ClusterProminence  
log-sigma-2-0-mm-3D glcm Autocorrelation  
log-sigma-2-0-mm-3D glcm SumSquares  
log-sigma-2-0-mm-3D glcm SumEntropy  
log-sigma-2-0-mm-3D glcm DifferenceVariance

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log-sigma-2-0-mm-3D glcm Idmn  
log-sigma-2-0-mm-3D glcm Imc2  
log-sigma-2-0-mm-3D glcm Imc1  
log-sigma-2-0-mm-3D glcm DifferenceAverage  
log-sigma-2-0-mm-3D glcm JointAverage  
log-sigma-2-0-mm-3D glcm InverseVariance  
log-sigma-2-0-mm-3D glcm DifferenceEntropy  
log-sigma-2-0-mm-3D glcm Idm  
log-sigma-2-0-mm-3D glcm SumAverage  
log-sigma-2-0-mm-3D glcm Idn  
log-sigma-2-0-mm-3D glcm Correlation  
log-sigma-2-0-mm-3D glcm MCC  
log-sigma-2-0-mm-3D glcm ClusterTendency  
log-sigma-2-0-mm-3D glcm Contrast  
log-sigma-2-0-mm-3D glcm Id  
log-sigma-2-0-mm-3D glcm MaximumProbability  
log-sigma-2-0-mm-3D glcm JointEnergy  
log-sigma-2-0-mm-3D gldm SmallDependenceHighGrayLevelEmphasis  
log-sigma-2-0-mm-3D gldm LargeDependenceLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D gldm DependenceNonUniformity  
log-sigma-2-0-mm-3D gldm LargeDependenceHighGrayLevelEmphasis

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log-sigma-2-0-mm-3D gldm DependenceNonUniformityNormalized  
log-sigma-2-0-mm-3D gldm LowGrayLevelEmphasis  
log-sigma-2-0-mm-3D gldm LargeDependenceEmphasis  
log-sigma-2-0-mm-3D gldm SmallDependenceEmphasis  
log-sigma-2-0-mm-3D gldm DependenceEntropy  
log-sigma-2-0-mm-3D gldm DependenceVariance  
log-sigma-2-0-mm-3D gldm SmallDependenceLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D gldm GrayLevelNonUniformity  
log-sigma-2-0-mm-3D gldm HighGrayLevelEmphasis  
log-sigma-2-0-mm-3D gldm GrayLevelVariance  
log-sigma-2-0-mm-3D glszm GrayLevelNonUniformityNormalized  
log-sigma-2-0-mm-3D glszm SmallAreaHighGrayLevelEmphasis  
log-sigma-2-0-mm-3D glszm GrayLevelVariance  
log-sigma-2-0-mm-3D glszm LargeAreaEmphasis  
log-sigma-2-0-mm-3D glszm SizeZoneNonUniformity  
log-sigma-2-0-mm-3D glszm LargeAreaLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D glszm HighGrayLevelZoneEmphasis  
log-sigma-2-0-mm-3D glszm ZonePercentage  
log-sigma-2-0-mm-3D glszm ZoneVariance  
log-sigma-2-0-mm-3D glszm GrayLevelNonUniformity  
log-sigma-2-0-mm-3D glszm LargeAreaHighGrayLevelEmphasis

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log-sigma-2-0-mm-3D glszm SizeZoneNonUniformityNormalized  
log-sigma-2-0-mm-3D glszm SmallAreaEmphasis  
log-sigma-2-0-mm-3D glszm ZoneEntropy  
log-sigma-2-0-mm-3D glszm SmallAreaLowGrayLevelEmphasis  
log-sigma-2-0-mm-3D glszm LowGrayLevelZoneEmphasis  
log-sigma-2-0-mm-3D firstorder InterquartileRange  
log-sigma-2-0-mm-3D firstorder Median  
log-sigma-2-0-mm-3D firstorder Uniformity  
log-sigma-2-0-mm-3D firstorder Range  
log-sigma-2-0-mm-3D firstorder Entropy  
log-sigma-2-0-mm-3D firstorder Minimum  
log-sigma-2-0-mm-3D firstorder Kurtosis  
log-sigma-2-0-mm-3D firstorder RootMeanSquared  
log-sigma-2-0-mm-3D firstorder 90Percentile  
log-sigma-2-0-mm-3D firstorder Energy  
log-sigma-2-0-mm-3D firstorder Skewness  
log-sigma-2-0-mm-3D firstorder Mean  
log-sigma-2-0-mm-3D firstorder Variance  
log-sigma-2-0-mm-3D firstorder RobustMeanAbsoluteDeviation  
log-sigma-2-0-mm-3D firstorder MeanAbsoluteDeviation  
log-sigma-2-0-mm-3D firstorder Maximum

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log-sigma-2-0-mm-3D firstorder 10Percentile  
log-sigma-3-0-mm-3D glrlm RunLengthNonUniformity  
log-sigma-3-0-mm-3D glrlm GrayLevelNonUniformityNormalized  
log-sigma-3-0-mm-3D glrlm LongRunLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D glrlm HighGrayLevelRunEmphasis  
log-sigma-3-0-mm-3D glrlm RunVariance  
log-sigma-3-0-mm-3D glrlm RunLengthNonUniformityNormalized  
log-sigma-3-0-mm-3D glrlm ShortRunEmphasis  
log-sigma-3-0-mm-3D glrlm LongRunEmphasis  
log-sigma-3-0-mm-3D glrlm LongRunHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D glrlm GrayLevelNonUniformity  
log-sigma-3-0-mm-3D glrlm ShortRunHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D glrlm ShortRunLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D glrlm RunPercentage  
log-sigma-3-0-mm-3D glrlm GrayLevelVariance  
log-sigma-3-0-mm-3D glrlm RunEntropy  
log-sigma-3-0-mm-3D glrlm LowGrayLevelRunEmphasis  
log-sigma-3-0-mm-3D ngtdm Coarseness  
log-sigma-3-0-mm-3D ngtdm Complexity  
log-sigma-3-0-mm-3D ngtdm Busyness  
log-sigma-3-0-mm-3D ngtdm Strength

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log-sigma-3-0-mm-3D ngtdm Contrast  
log-sigma-3-0-mm-3D glcm JointEntropy  
log-sigma-3-0-mm-3D glcm ClusterShade  
log-sigma-3-0-mm-3D glcm ClusterProminence  
log-sigma-3-0-mm-3D glcm Autocorrelation  
log-sigma-3-0-mm-3D glcm SumSquares  
log-sigma-3-0-mm-3D glcm SumEntropy  
log-sigma-3-0-mm-3D glcm DifferenceVariance  
log-sigma-3-0-mm-3D glcm Idmn  
log-sigma-3-0-mm-3D glcm Imc2  
log-sigma-3-0-mm-3D glcm Imc1  
log-sigma-3-0-mm-3D glcm DifferenceAverage  
log-sigma-3-0-mm-3D glcm JointAverage  
log-sigma-3-0-mm-3D glcm InverseVariance  
log-sigma-3-0-mm-3D glcm DifferenceEntropy  
log-sigma-3-0-mm-3D glcm Idm  
log-sigma-3-0-mm-3D glcm SumAverage  
log-sigma-3-0-mm-3D glcm Idn  
log-sigma-3-0-mm-3D glcm Correlation  
log-sigma-3-0-mm-3D glcm MCC  
log-sigma-3-0-mm-3D glcm ClusterTendency

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log-sigma-3-0-mm-3D glcm Contrast  
log-sigma-3-0-mm-3D glcm Id  
log-sigma-3-0-mm-3D glcm MaximumProbability  
log-sigma-3-0-mm-3D glcm JointEnergy  
log-sigma-3-0-mm-3D gldm SmallDependenceHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm LargeDependenceLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm DependenceNonUniformity  
log-sigma-3-0-mm-3D gldm LargeDependenceHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm DependenceNonUniformityNormalized  
log-sigma-3-0-mm-3D gldm LowGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm LargeDependenceEmphasis  
log-sigma-3-0-mm-3D gldm SmallDependenceEmphasis  
log-sigma-3-0-mm-3D gldm DependenceEntropy  
log-sigma-3-0-mm-3D gldm DependenceVariance  
log-sigma-3-0-mm-3D gldm SmallDependenceLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm GrayLevelNonUniformity  
log-sigma-3-0-mm-3D gldm HighGrayLevelEmphasis  
log-sigma-3-0-mm-3D gldm GrayLevelVariance  
log-sigma-3-0-mm-3D glszm GrayLevelNonUniformityNormalized  
log-sigma-3-0-mm-3D glszm SmallAreaHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D glszm GrayLevelVariance

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log-sigma-3-0-mm-3D glszm LargeAreaEmphasis  
log-sigma-3-0-mm-3D glszm SizeZoneNonUniformity  
log-sigma-3-0-mm-3D glszm LargeAreaLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D glszm HighGrayLevelZoneEmphasis  
log-sigma-3-0-mm-3D glszm ZonePercentage  
log-sigma-3-0-mm-3D glszm ZoneVariance  
log-sigma-3-0-mm-3D glszm GrayLevelNonUniformity  
log-sigma-3-0-mm-3D glszm LargeAreaHighGrayLevelEmphasis  
log-sigma-3-0-mm-3D glszm SizeZoneNonUniformityNormalized  
log-sigma-3-0-mm-3D glszm SmallAreaEmphasis  
log-sigma-3-0-mm-3D glszm ZoneEntropy  
log-sigma-3-0-mm-3D glszm SmallAreaLowGrayLevelEmphasis  
log-sigma-3-0-mm-3D glszm LowGrayLevelZoneEmphasis  
log-sigma-3-0-mm-3D firstorder InterquartileRange  
log-sigma-3-0-mm-3D firstorder Median  
log-sigma-3-0-mm-3D firstorder Uniformity  
log-sigma-3-0-mm-3D firstorder Range  
log-sigma-3-0-mm-3D firstorder Entropy  
log-sigma-3-0-mm-3D firstorder Minimum  
log-sigma-3-0-mm-3D firstorder Kurtosis  
log-sigma-3-0-mm-3D firstorder RootMeanSquared

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log-sigma-3-0-mm-3D firstorder 90Percentile  
log-sigma-3-0-mm-3D firstorder Energy  
log-sigma-3-0-mm-3D firstorder Skewness  
log-sigma-3-0-mm-3D firstorder Mean  
log-sigma-3-0-mm-3D firstorder Variance  
log-sigma-3-0-mm-3D firstorder RobustMeanAbsoluteDeviation  
log-sigma-3-0-mm-3D firstorder MeanAbsoluteDeviation  
log-sigma-3-0-mm-3D firstorder Maximum  
log-sigma-3-0-mm-3D firstorder 10Percentile  
log-sigma-4-0-mm-3D glrlm RunLengthNonUniformity  
log-sigma-4-0-mm-3D glrlm GrayLevelNonUniformityNormalized  
log-sigma-4-0-mm-3D glrlm LongRunLowGrayLevelEmphasis  
log-sigma-4-0-mm-3D glrlm HighGrayLevelRunEmphasis  
log-sigma-4-0-mm-3D glrlm RunVariance  
log-sigma-4-0-mm-3D glrlm RunLengthNonUniformityNormalized  
log-sigma-4-0-mm-3D glrlm ShortRunEmphasis  
log-sigma-4-0-mm-3D glrlm LongRunEmphasis  
log-sigma-4-0-mm-3D glrlm LongRunHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D glrlm GrayLevelNonUniformity  
log-sigma-4-0-mm-3D glrlm ShortRunHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D glrlm ShortRunLowGrayLevelEmphasis

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log-sigma-4-0-mm-3D glrlm RunPercentage  
log-sigma-4-0-mm-3D glrlm GrayLevelVariance  
log-sigma-4-0-mm-3D glrlm RunEntropy  
log-sigma-4-0-mm-3D glrlm LowGrayLevelRunEmphasis  
log-sigma-4-0-mm-3D ngtdm Coarseness  
log-sigma-4-0-mm-3D ngtdm Complexity  
log-sigma-4-0-mm-3D ngtdm Busyness  
log-sigma-4-0-mm-3D ngtdm Strength  
log-sigma-4-0-mm-3D ngtdm Contrast  
log-sigma-4-0-mm-3D glcm JointEntropy  
log-sigma-4-0-mm-3D glcm ClusterShade  
log-sigma-4-0-mm-3D glcm ClusterProminence  
log-sigma-4-0-mm-3D glcm Autocorrelation  
log-sigma-4-0-mm-3D glcm SumSquares  
log-sigma-4-0-mm-3D glcm SumEntropy  
log-sigma-4-0-mm-3D glcm DifferenceVariance  
log-sigma-4-0-mm-3D glcm Idmn  
log-sigma-4-0-mm-3D glcm lmc2  
log-sigma-4-0-mm-3D glcm lmc1  
log-sigma-4-0-mm-3D glcm DifferenceAverage  
log-sigma-4-0-mm-3D glcm JointAverage

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log-sigma-4-0-mm-3D glcm InverseVariance  
log-sigma-4-0-mm-3D glcm DifferenceEntropy  
log-sigma-4-0-mm-3D glcm Idm  
log-sigma-4-0-mm-3D glcm SumAverage  
log-sigma-4-0-mm-3D glcm Idn  
log-sigma-4-0-mm-3D glcm Correlation  
log-sigma-4-0-mm-3D glcm MCC  
log-sigma-4-0-mm-3D glcm ClusterTendency  
log-sigma-4-0-mm-3D glcm Contrast  
log-sigma-4-0-mm-3D glcm Id  
log-sigma-4-0-mm-3D glcm MaximumProbability  
log-sigma-4-0-mm-3D glcm JointEnergy  
log-sigma-4-0-mm-3D gldm SmallDependenceHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm LargeDependenceLowGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm DependenceNonUniformity  
log-sigma-4-0-mm-3D gldm LargeDependenceHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm DependenceNonUniformityNormalized  
log-sigma-4-0-mm-3D gldm LowGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm LargeDependenceEmphasis  
log-sigma-4-0-mm-3D gldm SmallDependenceEmphasis  
log-sigma-4-0-mm-3D gldm DependenceEntropy

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log-sigma-4-0-mm-3D gldm DependenceVariance  
log-sigma-4-0-mm-3D gldm SmallDependenceLowGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm GrayLevelNonUniformity  
log-sigma-4-0-mm-3D gldm HighGrayLevelEmphasis  
log-sigma-4-0-mm-3D gldm GrayLevelVariance  
log-sigma-4-0-mm-3D glszm GrayLevelNonUniformityNormalized  
log-sigma-4-0-mm-3D glszm SmallAreaHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D glszm GrayLevelVariance  
log-sigma-4-0-mm-3D glszm LargeAreaEmphasis  
log-sigma-4-0-mm-3D glszm SizeZoneNonUniformity  
log-sigma-4-0-mm-3D glszm LargeAreaLowGrayLevelEmphasis  
log-sigma-4-0-mm-3D glszm HighGrayLevelZoneEmphasis  
log-sigma-4-0-mm-3D glszm ZonePercentage  
log-sigma-4-0-mm-3D glszm ZoneVariance  
log-sigma-4-0-mm-3D glszm GrayLevelNonUniformity  
log-sigma-4-0-mm-3D glszm LargeAreaHighGrayLevelEmphasis  
log-sigma-4-0-mm-3D glszm SizeZoneNonUniformityNormalized  
log-sigma-4-0-mm-3D glszm SmallAreaEmphasis  
log-sigma-4-0-mm-3D glszm ZoneEntropy  
log-sigma-4-0-mm-3D glszm SmallAreaLowGrayLevelEmphasis  
log-sigma-4-0-mm-3D glszm LowGrayLevelZoneEmphasis

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log-sigma-4-0-mm-3D firstorder InterquartileRange  
log-sigma-4-0-mm-3D firstorder Median  
log-sigma-4-0-mm-3D firstorder Uniformity  
log-sigma-4-0-mm-3D firstorder Range  
log-sigma-4-0-mm-3D firstorder Entropy  
log-sigma-4-0-mm-3D firstorder Minimum  
log-sigma-4-0-mm-3D firstorder Kurtosis  
log-sigma-4-0-mm-3D firstorder RootMeanSquared  
log-sigma-4-0-mm-3D firstorder 90Percentile  
log-sigma-4-0-mm-3D firstorder Energy  
log-sigma-4-0-mm-3D firstorder Skewness  
log-sigma-4-0-mm-3D firstorder Mean  
log-sigma-4-0-mm-3D firstorder Variance  
log-sigma-4-0-mm-3D firstorder RobustMeanAbsoluteDeviation  
log-sigma-4-0-mm-3D firstorder MeanAbsoluteDeviation  
log-sigma-4-0-mm-3D firstorder Maximum  
log-sigma-4-0-mm-3D firstorder 10Percentile  
log-sigma-5-0-mm-3D glrlm RunLengthNonUniformity  
log-sigma-5-0-mm-3D glrlm GrayLevelNonUniformityNormalized  
log-sigma-5-0-mm-3D glrlm LongRunLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D glrlm HighGrayLevelRunEmphasis

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log-sigma-5-0-mm-3D glrlm RunVariance  
log-sigma-5-0-mm-3D glrlm RunLengthNonUniformityNormalized  
log-sigma-5-0-mm-3D glrlm ShortRunEmphasis  
log-sigma-5-0-mm-3D glrlm LongRunEmphasis  
log-sigma-5-0-mm-3D glrlm LongRunHighGrayLevelEmphasis  
log-sigma-5-0-mm-3D glrlm GrayLevelNonUniformity  
log-sigma-5-0-mm-3D glrlm ShortRunHighGrayLevelEmphasis  
log-sigma-5-0-mm-3D glrlm ShortRunLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D glrlm RunPercentage  
log-sigma-5-0-mm-3D glrlm GrayLevelVariance  
log-sigma-5-0-mm-3D glrlm RunEntropy  
log-sigma-5-0-mm-3D glrlm LowGrayLevelRunEmphasis  
log-sigma-5-0-mm-3D ngtdm Coarseness  
log-sigma-5-0-mm-3D ngtdm Complexity  
log-sigma-5-0-mm-3D ngtdm Busyness  
log-sigma-5-0-mm-3D ngtdm Strength  
log-sigma-5-0-mm-3D ngtdm Contrast  
log-sigma-5-0-mm-3D glcm JointEntropy  
log-sigma-5-0-mm-3D glcm ClusterShade  
log-sigma-5-0-mm-3D glcm ClusterProminence  
log-sigma-5-0-mm-3D glcm Autocorrelation

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log-sigma-5-0-mm-3D glcm SumSquares  
log-sigma-5-0-mm-3D glcm SumEntropy  
log-sigma-5-0-mm-3D glcm DifferenceVariance  
log-sigma-5-0-mm-3D glcm Idmn  
log-sigma-5-0-mm-3D glcm lmc2  
log-sigma-5-0-mm-3D glcm lmc1  
log-sigma-5-0-mm-3D glcm DifferenceAverage  
log-sigma-5-0-mm-3D glcm JointAverage  
log-sigma-5-0-mm-3D glcm InverseVariance  
log-sigma-5-0-mm-3D glcm DifferenceEntropy  
log-sigma-5-0-mm-3D glcm ldm  
log-sigma-5-0-mm-3D glcm SumAverage  
log-sigma-5-0-mm-3D glcm ldn  
log-sigma-5-0-mm-3D glcm Correlation  
log-sigma-5-0-mm-3D glcm MCC  
log-sigma-5-0-mm-3D glcm ClusterTendency  
log-sigma-5-0-mm-3D glcm Contrast  
log-sigma-5-0-mm-3D glcm ld  
log-sigma-5-0-mm-3D glcm MaximumProbability  
log-sigma-5-0-mm-3D glcm JointEnergy  
log-sigma-5-0-mm-3D gldm SmallDependenceHighGrayLevelEmphasis

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log-sigma-5-0-mm-3D gldm LargeDependenceLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D gldm DependenceNonUniformity  
log-sigma-5-0-mm-3D gldm LargeDependenceHighGrayLevelEmphasis  
log-sigma-5-0-mm-3D gldm DependenceNonUniformityNormalized  
log-sigma-5-0-mm-3D gldm LowGrayLevelEmphasis  
log-sigma-5-0-mm-3D gldm LargeDependenceEmphasis  
log-sigma-5-0-mm-3D gldm SmallDependenceEmphasis  
log-sigma-5-0-mm-3D gldm DependenceEntropy  
log-sigma-5-0-mm-3D gldm DependenceVariance  
log-sigma-5-0-mm-3D gldm SmallDependenceLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D gldm GrayLevelNonUniformity  
log-sigma-5-0-mm-3D gldm HighGrayLevelEmphasis  
log-sigma-5-0-mm-3D gldm GrayLevelVariance  
log-sigma-5-0-mm-3D glszm GrayLevelNonUniformityNormalized  
log-sigma-5-0-mm-3D glszm SmallAreaHighGrayLevelEmphasis  
log-sigma-5-0-mm-3D glszm GrayLevelVariance  
log-sigma-5-0-mm-3D glszm LargeAreaEmphasis  
log-sigma-5-0-mm-3D glszm SizeZoneNonUniformity  
log-sigma-5-0-mm-3D glszm LargeAreaLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D glszm HighGrayLevelZoneEmphasis  
log-sigma-5-0-mm-3D glszm ZonePercentage

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log-sigma-5-0-mm-3D glszm ZoneVariance  
log-sigma-5-0-mm-3D glszm GrayLevelNonUniformity  
log-sigma-5-0-mm-3D glszm LargeAreaHighGrayLevelEmphasis  
log-sigma-5-0-mm-3D glszm SizeZoneNonUniformityNormalized  
log-sigma-5-0-mm-3D glszm SmallAreaEmphasis  
log-sigma-5-0-mm-3D glszm ZoneEntropy  
log-sigma-5-0-mm-3D glszm SmallAreaLowGrayLevelEmphasis  
log-sigma-5-0-mm-3D glszm LowGrayLevelZoneEmphasis  
log-sigma-5-0-mm-3D firstorder InterquartileRange  
log-sigma-5-0-mm-3D firstorder Median  
log-sigma-5-0-mm-3D firstorder Uniformity  
log-sigma-5-0-mm-3D firstorder Range  
log-sigma-5-0-mm-3D firstorder Entropy  
log-sigma-5-0-mm-3D firstorder Minimum  
log-sigma-5-0-mm-3D firstorder Kurtosis  
log-sigma-5-0-mm-3D firstorder RootMeanSquared  
log-sigma-5-0-mm-3D firstorder 90Percentile  
log-sigma-5-0-mm-3D firstorder Energy  
log-sigma-5-0-mm-3D firstorder Skewness  
log-sigma-5-0-mm-3D firstorder Mean  
log-sigma-5-0-mm-3D firstorder Variance

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log-sigma-5-0-mm-3D firstorder RobustMeanAbsoluteDeviation

log-sigma-5-0-mm-3D firstorder MeanAbsoluteDeviation

log-sigma-5-0-mm-3D firstorder Maximum

log-sigma-5-0-mm-3D firstorder 10Percentile

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The extracted radiomic features were categorized into five groups: (1) Shape Features (n=14); (2) First-order features including 18 intensity statistics; (3) 74 multi-dimensional texture features including 23 Gray Level Co - occurrence Matrix (GLCM), 16 Gray Level Size Zone Matrix (GLSZM), 16 Gray Level Run Length Matrix (GLRLM), 14 Gray Level Dependence Matrix (GLDM) and 5 Neighboring Gray Tone Difference Matrix (NGTDM) Features; 1196 Transformed first-order and textural features including: (4) 736 wavelet features in frequency channels LHL, LLH, HHH, HLH, HLL,HHL, LHH and LLL, where L and H are low- and high-pass filters, respectively; (5) 460 LoG filtered features with sigma ranging from 1.0 and 5.0, with step size = 1.







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antireflux_treatment_type	CDE _ID:3 44020 6	No Treat ment	[Not Avai lable	[Not Avail able]	[Not Avai lable	[Not Avai lable	No Treat ment	[Not Avai lable	[Not Avai lable	[Not Avai lable	[Not Avai lable	[Not Avai lable	No Treat ment	[Not Avai lable	[Not Avai lable	[Not Avai lable		
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barretts_esophagus	CDE _ID:3 44021 2	No	No	No	No	[Unk now n]	No	No	No	No	No	No	No	No	No	No
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history_of_esophageal_cancer	CDE _ID:3 44021 7	NO	YES	[Unk nown ]	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	[Unk now n]
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esophageal_tumor	CDE	Dista	Mid	Dista	Dista	Dista	Mid	Mid	Mid	Dista	Dista	Dista	Dista	Mid	Mid	Mid



columnar_mucosa_goblet_cell_present	CDE _ID:3 44021 9	NO	[Unk now n]	NO	NO	[Unk now n]	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
columnar_mucosa_dysplasia	CDE _ID:3 44091 7	Neg ative /no	[Unk now n]	[Unk nown ]	[Unk now n]	[Unk now n]	Neg ative /no	[Unk now n]	Neg ative /no	Neg ative /no	Neg ative /no	Neg ative /no	Nega tive/ no	Neg ative /no	Neg ative /no	Neg ative /no
neoplasm_histologic_grade	CDE _ID:2 78583 9	G3	G3	G2	GX	G2	G2	G2	G2	G1	G2	G3	G2	G2	G2	G1
year_of_initial_pathologic_diagnosis	CDE _ID:2 89696 0	2013	2013	2009	2009	2010	2011	2012	2009	2012	2013	2010	2010	2013	2011	2010
age_at_initial_pathologic_diagnosis	CDE _ID:2 00665 7	49	51	73	54	64	51	57	63	44	47	60	53	51	65	70

initial_pathologic_diagnosis_method	CDE _ID:2 75794 1	End osco pic Biop sy	End osco pic Biop sy	Endo scopi c Biops y	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	End osco pic Biop sy	Endo osco c Biops y	End scopi pic Biop sy	End osco pic Biop sy	End osco pic Biop sy
init_pathology_dx_method_other	CDE _ID:2 75794 8	[Not Avai lable ]	[Not Avai lable ]	[Not Avail able] ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avail able] ]	[Not Avai lable ]	[Not Avai lable ]	[Not Avai lable ]
lymph_node_metastasis_radiographic_evidence	CDE _ID:3 44022 8	NO	NO	YES	YES	YES	NO	YES	NO	NO	YES	YES	NO	YES	NO	NO
primary_lymph_node_presentation_assessment	CDE _ID:2 20039 6	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
lymph_node_examined_count	CDE _ID:3	8	27	13	14	17	14	13	34	32	28	87	25	25	27	15
number_of_lymphnodes_pos	CDE _ID:3	0	4	7	3	0	2	4	9	0	7	3	6	1	9	0



itive_by_he	08638																
	8																
number_of_ly	CDE	[Not	[Not	[Not	3	[Not	2	4	9	[Not	[Not	3	[Not	[Not	[Not	[Not	
mphnodes_pos	_ID:3	Avai	Avai	Avail		Avai				Avai	Avai		Avail	Avai	Avai	Avai	
itive_by_ihc	08638	lable	lable	able]		lable				lable	lable		able]	lable	lable	lable	
	3																
		]	]			]				]	]			]	]	]	
clinical_T	CDE	T3	T3	T3	T4	T2	T1	T3	T1	T3	T3	T3	T1	T2	T3	T4	
	_ID:3																
	44032																
	8																
clinical_N	CDE	N0	NX	N1	N1	NX	N1	N2	N1	NX	NX	N1	NX	N2	NX	N0	
	_ID:3																
	44033																
	0																
clinical_M	CDE	M0	M0	M0	M0	M0	M1	M0	M1a	M0	M0	M0	M0	M0	M0	M0	
	_ID:3																
	44033																
	1																
clinical_stage	CDE	Stag	Stag	Stage	Stag	Stag	Stag	Stag	Stag	Stag	Stag	Stag	Stag	Stage	Stag	Stag	Stag
	_ID:3	e IIA	e IIB	III	e III	e IIA	e IV	e	e	e IIA	e IIA	e	IA	e	e IIB	e III	
	44033																
	2							IIIB	IVA				IIIA		IIIA		





radiation_therapy	CDE _ID:2 00531 2	YES	NO	YES	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	
postoperative_rx_tx	CDE _ID:3 39756 7	NO	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	NO	
new_tumor_event_after_initial_treatment	CDE _ID:3 12137 6	NO	YES	NO	[Unk now n]	NO	NO	[Unk now n]	[Unk now n]	NO	YES	NO	YES	NO	YES	[Unk now n]	
alcohol_history_documented	CDE _ID:2 20191 8	YES	NO	YES	YES	YES	YES	YES	NO	NO	NO	YES	NO	NO	NO	YES	
icd_10	CDE _ID:3 22628 7	C15. 5	C15. 4	C15.5 5	C15. 5	C15. 4	C15. 4	C15. 4	C15. 5	C15. 5	C15. 5	C15. 5	C15.5 4	C15. 4	C15. 4	C15. 4	
icd_o_3_histology	CDE _ID:3	8070 /3	8070 /3	8211 /3	8070 /3	8070 /3	8070 /3	8070 /3	8070 /3	8070 /3	8070 /3	8070 /3	8070 /3	8140 /3	8070 /3	8070 /3	8070

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		<b>22627</b>															
		5															
icd_o_3_site	CDE	C15.	C15.	C15.5	C15.	C15.	C15.	C15.	C15.	C15.	C15.	C15.	C15.	C15.5	C15.	C15.	C15.
	_ID:3	5	4		5	5	4	4	4	5	5	5		4	4	4	
		<b>22628</b>															
		1															
informed_cons ent_verified	CDE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	_ID:3																
		<b>28836</b>															
		1															
patient_id	CDE	A8E	A8E	A8E	A8E	A8E	A8E	A8E	A8E	A8E	A8E	A8E	A8Q	AA4	AA4	AA7	AA7
	_ID:	O	P	Q	R	T	U	W	X	Y	Z	7	D	G	B	I	
tissue_source_s ite	CDE	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR	VR
	_ID:																
tumor_tissue_s ite	CDE	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop	Esop
	_ID:3	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu	hagu
	<b>42753</b>	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
		<b>6</b>															

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### S3. Transcriptomic Data

Supplementary Table 3 Transcriptomic data from TCGA

	hsa- mir- 196a-1	hsa- mir- 196a-2	hsa- mir-21 4746	hsa- mir- 4746	hsa- mir-93 429	KIAA1 429	HNRPC	RBM1 5	METT L3	WTAP	YTHD F1	YTHDC 1	YTHD F2	
TCGA- VR- A8EO	47,22	49,39	221204 ,82	20,36	65983, 67	149149 ,60	1417436, 00	169105 ,50	73647, 28	432991 ,60	429111 ,70	317057,3 0	674030 ,00	
TCGA- VR- A8EP	164,28	187,74	221424 ,67	11,06	18305, 00	227203 ,80	832025,5 0	129258 ,00	94099, 98	235894 ,30	651613 ,70	200721,9 0	392573 ,50	
TCGA- VR- A8EQ	203,88	230,96	401571 ,85	7,79	5561,3 8	149782 ,60	901880,3 0	124172 ,00	60925, 06	184466 ,00	334059 ,10	172122,4 0	286549 ,80	
TCGA- VR- A8ER	13,83	11,01	394150 ,48	4,52	8002,8 9	234615 ,20	975816,8 0	104506 ,60	69512, 12	291330 ,40	638749 ,90	245848,2 0	281744 ,50	
TCGA- VR- A8ET	15,02	14,48	547038 ,35	0,46	2139,1 5	201241 ,80	992412,6 0	98849, 85	82989, 25	297218 ,80	625237 ,80	250183,3 0	520225 ,00	
TCGA- VR-	54,97	50,02	395173 ,63	4,12	7647,4 6	189856 ,40	1340553, 00	146990 ,70	60407, 08	395992 ,70	468873 ,90	196034,0 0	445387 ,40	

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**A8EU**

<b>TCGA-VR-</b>	105,51	120,32	262327,58	3,99	11669,00	169024,10	1264161,00	126660,20	73087,61	474169,60	547467,30	430634,70	383620
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**A8EW**

<b>TCGA-VR-</b>	40,25	41,71	235813,09	7,00	8183,85	99596,37	1030000,00	99326,64	93087,24	259515,40	729551,20	274529,50	492091
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**A8EX**

<b>TCGA-VR-</b>	58,81	55,60	246548,16	10,69	12302,92	273535,80	1401358,00	117747,80	112900,40	255186,80	486920,00	192268,50	402150
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**A8EY**

<b>TCGA-VR-</b>	33,11	42,20	312954,43	2,60	10520,00	112734,40	1615764,00	90104,30	108772,20	443557,50	477691,10	245526,00	413673
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**A8EZ**

<b>TCGA-VR-</b>	10,07	11,37	551150,14	2,27	11426,84	279188,90	1068900,00	130635,60	80617,91	349550,60	586449,50	199312,00	321345
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**A8Q7**

<b>TCGA-VR-</b>	258,23	302,74	351755,63	6,31	12531,42	198576,20	1254881,00	126407,20	215509,60	232362,60	623996,90	321344,30	609398
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**AA4D**

<b>TCGA-VR-</b>	22,48	25,26	487499,63	4,93	10710,73	141858,50	792940,40	144109,50	88916,94	403310,60	456084,20	426723,40	463663
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**AA4G**

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TCGA- VR- AA7B	74,86	82,37	512645 ,86	3,93	6220,3 2	NA	NA	NA	NA	NA	NA	NA	NA
TCGA- VR- AA7I	38,56	38,81	366755 ,01	2,85	1899,0 6	157809 ,30	1100080, 00	82451, 24	157631 ,20	350554 ,90	377509 ,40	204990,0 0	420634 ,10

RNA-Seq and miRNA-Seq data of esophageal carcinoma of tumor tissues were downloaded from the GDC Data Portal (<https://gdc-portal.nci.nih.gov/>) considering for TCGA-ESCA project only patients with associated imaging data from TCIA database.



#### S4. Additional predictive models analyses for stage assessment

Supplementary Table 4 Results of multivariate analysis (involving 2 features) for the stageI-II/stageIII-IV classification task. For each model (from order 1 to 2), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-LLH gldm HighGrayLevelEmphasis	0.809 $\pm$ 0.008	0.226 $\pm$ 0.016	0.864 $\pm$ 0.011	0.675 $\pm$ 0.007
2	wavelet-LLH ngtdm Complexity; wavelet-LLH gldm HighGrayLevelEmphasis	0.75 $\pm$ 0.009	0.478 $\pm$ 0.017	0.849 $\pm$ 0.011	0.751 $\pm$ 0.007

Supplementary Table 5 Results of multivariate analysis (involving 3 features) for the stageII/stageIII-IV classification task. For each model (from order 1 to 3), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-HHH glcm Joint Entropy	0.893 $\pm$ 0.005	0.523 $\pm$ 0.021	0.859 $\pm$ 0.008	0.771 $\pm$ 0.006
2	wavelet-LLH ngtdm Complexity; wavelet-HHH glcm Joint Entropy	0.862 $\pm$ 0.008	0.632 $\pm$ 0.021	0.833 $\pm$ 0.008	0.786 $\pm$ 0.006
3	wavelet-LLH gldm High Gray Level Emphasis; wavelet-HHH glcm Joint Entropy; wavelet-LLH ngtdm Complexity	0.762 $\pm$ 0.012	0.422 $\pm$ 0.022	0.843 $\pm$ 0.008	0.735 $\pm$ 0.007

Supplementary Table 6 Results of multivariate analysis (involving 4 features) for the stagel-II/stageIII-IV classification task. For each model (from order 1 to 4), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-HHH glcm JointEntropy	0.89 $\pm$ 0.005	0.519 $\pm$ 0.021	0.857 $\pm$ 0.008	0.767 $\pm$ 0.006
2	wavelet-LLH ngtdm Complexity; wavelet-HHH glcm JointEntropy	0.872 $\pm$ 0.007	0.632 $\pm$ 0.022	0.835 $\pm$ 0.008	0.789 $\pm$ 0.006
3	wavelet-LLH ngtdm Complexity; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy	0.823 $\pm$ 0.009	0.532 $\pm$ 0.023	0.81 $\pm$ 0.009	0.742 $\pm$ 0.007
4	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy; wavelet-LLH ngtdm Complexity	0.75 $\pm$ 0.011	0.444 $\pm$ 0.023	0.785 $\pm$ 0.011	0.703 $\pm$ 0.007

Supplementary Table 7 Results of multivariate analysis (involving 5 features) for the T1-T2/T3-T4 classification task. For each model (from order 1 to 5), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC ± SE	Sens ± SE	Spec ± SE	Acc ± SE
1	wavelet-LLH ngtdm Complexity	0.638 ± 0.007	0.706 ± 0.02	0.238 ± 0.016	0.562 ± 0.008
2	wavelet-HHH glcm JointEntropy; wavelet-LLH gldm HighGrayLevelEmphasis	0.793 ± 0.009	0.818 ± 0.011	0.455 ± 0.016	0.701 ± 0.007
3	wavelet-LLH ngtdm ClusterProminence; wavelet-HHH glcm JointEntropy; wavelet-LLH gldm HighGrayLevelEmphasis	0.803 ± 0.01	0.759 ± 0.013	0.594 ± 0.017	0.714 ± 0.008
4	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy; wavelet-LLH ngtdm ClusterProminence	0.795 ± 0.012	0.776 ± 0.014	0.67 ± 0.019	0.753 ± 0.01
5	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy;	0.745 ± 0.012	0.669 ± 0.017	0.67 ± 0.019	0.692 ± 0.01

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wavelet-LLH ngtdm ClusterProminence; wavelet-LLH ngtdm  
Complexity

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Supplementary Table 8 Results of multivariate analysis (involving 5 features) for the N0/N1-N2-N3 classification task. For each model (from order 1 to 5), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC ± SE	Sens ± SE	Spec ± SE	Acc ± SE
1	wavelet-LLH ngtdm ClusterProminence	0.848 ± 0.007	0.871 ± 0.01	0.439 ± 0.019	0.753 ± 0.007
2	wavelet-HHH glcm JointEntropy; wavelet-LLH ngtdm ClusterProminence	0.807 ± 0.008	0.827 ± 0.01	0.487 ± 0.019	0.737 ± 0.007
3	wavelet-LLH ngtdm Complexity; wavelet-LLH ngtdm ClusterProminence; wavelet-LLH ngtdm ClusterProminence	0.749 ± 0.009	0.771 ± 0.01	0.525 ± 0.017	0.71 ± 0.007
4	wavelet-LLH ngtdm ClusterProminence; wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-LLH ngtdm Complexity	0.683 ± 0.009	0.772 ± 0.011	0.466 ± 0.018	0.698 ± 0.008
5	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy;	0.616 ± 0.008	0.755 ± 0.012	0.391 ± 0.02	0.662 ± 0.008

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wavelet-LLH ngtdm ClusterProminence; wavelet-LLH ngtdm

Complexity

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### S5. Predictive models analyses for T assessment

Supplementary Table 9 Results of multivariate analysis (involving 2 features) for the T1-T2/T3-T4 classification task. For each model (from order 1 to 2), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-LLH gldm HighGrayLevelEmphasis	0.632 $\pm$ 0.007	0.69 $\pm$ 0.021	0.219 $\pm$ 0.016	0.543 $\pm$ 0.008
2	wavelet-LLH ngtdm Complexity; wavelet-LLH gldm HighGrayLevelEmphasis	0.574 $\pm$ 0.006	0.607 $\pm$ 0.02	0.235 $\pm$ 0.014	0.506 $\pm$ 0.009



Supplementary Table 10 Results of multivariate analysis (involving 3 features) for the T1-T2/T3-T4 classification task. For each model (from order 1 to 3), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC ± SE	Sens ± SE	Spec ± SE	Acc ± SE
1	wavelet-LLH glcm High Gray Level Emphasis	0.639 ± 0.007	0.682 ± 0.021	0.223 ± 0.016	0.546 ± 0.008
2	wavelet-LLH glcm High Gray Level Emphasis; wavelet-HHH glcm Joint Entropy	0.798 ± 0.009	0.818 ± 0.011	0.465 ± 0.015	0.704 ± 0.007
3	wavelet-LLH glcm High Gray Level Emphasis; wavelet-HHH glcm Joint Entropy; wavelet-LLH ngtdm Complexity	0.747 ± 0.01	0.77 ± 0.012	0.481 ± 0.015	0.681 ± 0.008

Supplementary Table 11 Results of multivariate analysis (involving 4 features) for the T1-T2/T3-T4 classification task. For each model (from order 1 to 4), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC ± SE	Sens ± SE	Spec ± SE	Acc ± SE
1	wavelet-LLH gldm HighGrayLevelEmphasis	0.637 ± 0.007	0.698 ± 0.021	± 0.207 0.016	± 0.549 0.009
2	wavelet-LLH gldm High Gray Level Emphasis; wavelet-HHH glcm Joint Entropy	0.792 ± 0.009	0.826 ± 0.011	± 0.463 0.015	± 0.708 0.007
3	wavelet-LLH ngtdm Complexity; wavelet-HHH glcm JointEntropy; wavelet-LLH gldm HighGrayLevelEmphasis	0.744 ± 0.009	0.767 ± 0.012	± 0.454 0.016	± 0.67 0.008
4	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy; wavelet-LLH ngtdm Complexity	0.698 ± 0.009	0.656 ± 0.013	± 0.546 0.018	± 0.632 0.009

## S6. Predictive models analyses for N assessment

Supplementary Table 12 Results of multivariate analysis (involving 2 features) for the N0/N1-N2-N3 classification task. For each model (from order 1 to 2), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-LLH gldm HighGrayLevelEmphasis	0.746 $\pm$ 0.009	0.863 $\pm$ 0.012	0.206 $\pm$ 0.015	0.663 $\pm$ 0.007
2	wavelet-LLH ngtdm Complexity; wavelet-LLH gldm HighGrayLevelEmphasis	0.691 $\pm$ 0.009	0.836 $\pm$ 0.013	0.435 $\pm$ 0.017	0.73 $\pm$ 0.009

Supplementary Table 13 Results of multivariate analysis (involving 3 features) for the N0/N1-N2-N3 classification task. For each model (from order 1 to 3), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC ± SE	Sens ± SE	Spec ± SE	Acc ± SE
1	wavelet-HHH glcm Complexity	0.755 ± 0.009	0.865 ± 0.011	0.227 ± 0.015	0.677 ± 0.007
2	wavelet-LLH ngtdm Complexity; wavelet-HHH glcm Joint Entropy	0.719 ± 0.008	0.807 ± 0.012	0.364 ± 0.017	0.69 ± 0.007
3	wavelet-LLH gldm High Gray Level Emphasis; wavelet-HHH glcm Joint Entropy; wavelet-LLH ngtdm Complexity	0.654 ± 0.008	0.799 ± 0.012	0.396 ± 0.018	0.694 ± 0.008

Supplementary Table 14 Results of multivariate analysis (involving 4 features) for the N0/N1-N2-N3 classification task. For each model (from order 1 to 4), AUC, sensitivity, specificity and accuracy were reported with the standard error on a 95% confidence interval over all bootstrap sample

Model Order	Features involved	AUC $\pm$ SE	Sens $\pm$ SE	Spec $\pm$ SE	Acc $\pm$ SE
1	wavelet-HLH firstorder Entropy	0.751 $\pm$ 0.008	0.827 $\pm$ 0.012	0.291 $\pm$ 0.017	0.677 $\pm$ 0.007
2	wavelet-LLH ngtdm Complexity; wavelet-HLH firstorder Entropy	0.735 $\pm$ 0.009	0.744 $\pm$ 0.011	0.469 $\pm$ 0.019	0.672 $\pm$ 0.007
3	wavelet-LLH ngtdm Complexity; wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HLH firstorder Entropy	0.663 $\pm$ 0.008	0.783 $\pm$ 0.013	0.424 $\pm$ 0.018	0.692 $\pm$ 0.008
4	wavelet-LLH gldm HighGrayLevelEmphasis; wavelet-HHH glcm JointEntropy; wavelet-HLH firstorder Entropy; wavelet-LLH ngtdm Complexit	0.57 $\pm$ 0.007	0.787 $\pm$ 0.012	0.297 $\pm$ 0.018	0.655 $\pm$ 0.008

