Simulated examples for the survival ensemble methods

Select data type

Hnscc ▼

Time point for event prediction:

4

Random seed for calibration and validation

43

K_Outer loop CV (for validation)

5

K_ inner CV folds (model tuning)

3

Simulated data: random seed (generation):

4242

Sample size:

150

Observation time

5

Expected event prevalence by study end

0.5

Expected drop out rate

0.3

Custom data: path to data file

~/Desktop/Study_KCL/PhD P

Predictors to use in the model

"baseline_age_", "genderdun

Time variable name

time

Event indicator variable name

event

Sample statistics   CoxPH   SRF   Ens1: CoxPH->SRF   Ens2: CoxPH in clusters

Ens3: extended CoxPH   Summary   Conclusions

Internally cross-validated results:

Show [10 ∨] entries   Search: [   ]

	AUCROC	BS	BS_scaled	C_score	Calib_slope	Calib_alpha	T
test	0.539	0.3461	-2.319	0.5379	-0.1211	-0.2014	4
train	0.7637	0.2109	-0.9611	0.7573	0.319	-0.1473	4

Showing 1 to 2 of 2 entries   Previous   [1]   Next

Internally cross-validated Test results for each CV fold:

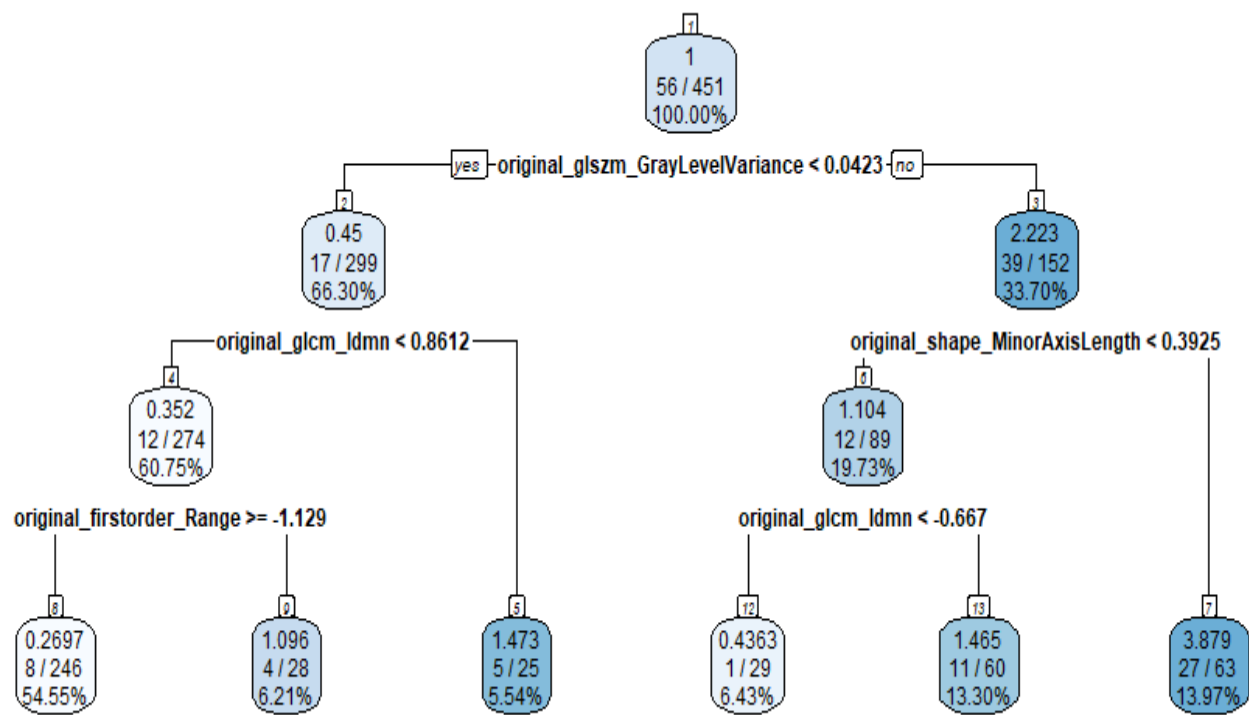Show [10 ∨] entries   Search: [   ]

	AUCROC	BS	BS_scaled	C_score	Calib_slope	Calib_alpha	T
test.1	0.4089	0.4757	-4.8462	0.4127	-0.0122	-0.3494	4
test.2	0.6963	0.3558	-1.4111	0.677	0.067	-0.2683	4
test.3	0.4834	0.2263	-1.6881	0.4859	-0.7134	-0.0345	4
test.4	0.5207	0.4572	-2.2776	0.527	-0.0176	-0.2244	4
test.5	0.5858	0.2152	-1.3721	0.5868	0.0704	-0.1306	4

Showing 1 to 5 of 5 entries   Previous   [1]   Next

Error: figure margins too large

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[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	-7.340e+03
original_firstorder_90Percentile	2.529e+03
original_firstorder_Energy	-1.117e+03
original_firstorder_Entropy	3.110e+03
original_firstorder_InterquartileRange	8.169e+03
original_firstorder_Kurtosis	1.486e+02
original_firstorder_Maximum	-1.126e+03
original_firstorder_Mean	2.116e+03
original_firstorder_MeanAbsoluteDeviation	-4.127e+03
original_firstorder_Median	-1.131e+03
original_firstorder_Minimum	-8.579e+03
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	-8.440e+03
original_firstorder_RootMeanSquared	2.593e+03
original_firstorder_Skewness	3.908e+02
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	2.711e+03
original_firstorder_Variance	1.667e+04
original_glcm_Autocorrelation	4.655e+04
original_glcm_ClusterProminence	-1.599e+05
original_glcm_ClusterShade	-7.705e+02
original_glcm_ClusterTendency	-2.067e+04
original_glcm_Contrast	-6.182e+04
original_glcm_Correlation	2.333e+01
original_glcm_DifferenceAverage	-8.862e+03
original_glcm_DifferenceEntropy	4.750e+03
original_glcm_DifferenceVariance	7.248e+04
original_glcm_Id	-3.487e+04
original_glcm_Idm	3.227e+04
original_glcm_Idmn	-5.654e+02
original_glcm_Idn	2.992e+03
original_glcm_Imc1	1.455e+03
original_glcm_Imc2	2.181e+02
original_glcm_InverseVariance	-2.375e+03
original_glcm_JointAverage	-1.414e+04
original_glcm_JointEnergy	-5.666e+03
original_glcm_JointEntropy	1.417e+03
original_glcm_MCC	-9.627e+01
original_glcm_MaximumProbability	1.255e+03
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	-3.434e+03
original_glcm_SumSquares	4.829e+04
original_gldm_DependenceEntropy	1.008e+03
original_gldm_DependenceNonUniformity	1.138e+03
original_gldm_DependenceNonUniformityNormalized	-6.747e+02
original_gldm_DependenceVariance	-1.277e+03
original_gldm_GrayLevelNonUniformity	3.115e+03
original_gldm_GrayLevelVariance	-4.286e+04

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original_gldm_HighGrayLevelEmphasis                          1.227e+02
original_gldm_LargeDependenceEmphasis                       -4.548e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis          -2.724e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis            8.407e+04
original_gldm_LowGrayLevelEmphasis                          -7.605e+03
original_gldm_SmallDependenceEmphasis                       -6.917e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis           1.118e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis            1.731e+02
original_glrlm_GrayLevelNonUniformity                       -5.180e+03
original_glrlm_GrayLevelNonUniformityNormalized              2.690e+03
original_glrlm_GrayLevelVariance                             1.025e+04
original_glrlm_HighGrayLevelRunEmphasis                     -4.036e+04
original_glrlm_LongRunEmphasis                              -3.885e+03
original_glrlm_LongRunHighGrayLevelEmphasis                  5.594e+03
original_glrlm_LongRunLowGrayLevelEmphasis                   2.359e+04
original_glrlm_LowGrayLevelRunEmphasis                      -6.996e+02
original_glrlm_RunEntropy                                    7.207e+02
original_glrlm_RunLengthNonUniformity                        2.392e+02
original_glrlm_RunLengthNonUniformityNormalized              5.613e+01
original_glrlm_RunPercentage                                 6.395e+01
original_glrlm_RunVariance                                   0.000e+00
original_glrlm_ShortRunEmphasis                              0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis                 0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis                  0.000e+00
original_glszm_GrayLevelNonUniformity                       -3.717e+02
original_glszm_GrayLevelNonUniformityNormalized              6.736e+01
original_glszm_GrayLevelVariance                             0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                    -5.507e+01
original_glszm_LargeAreaEmphasis                             0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis                0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis                 1.051e+04
original_glszm_LowGrayLevelZoneEmphasis                     -2.719e+01
original_glszm_SizeZoneNonUniformity                         0.000e+00
original_glszm_SizeZoneNonUniformityNormalized               0.000e+00
original_glszm_SmallAreaEmphasis                             0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis                0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis                 0.000e+00
original_glszm_ZoneEntropy                                   0.000e+00
original_glszm_ZonePercentage                                0.000e+00
original_glszm_ZoneVariance                                  0.000e+00
original_ngtdm_Busyness                                      0.000e+00
original_ngtdm_Coarseness                                    0.000e+00
original_ngtdm_Complexity                                    0.000e+00
original_ngtdm_Contrast                                      0.000e+00
original_ngtdm_Strength                                      0.000e+00
original_shape_Elongation                                   -3.507e+00
original_shape_Flatness                                     -4.070e+00
original_shape_LeastAxisLength                               0.000e+00
original_shape_MajorAxisLength                               0.000e+00
original_shape_Maximum2DDiameterColumn                       0.000e+00
original_shape_Maximum2DDiameterRow                          0.000e+00
original_shape_Maximum2DDiameterSlice                        0.000e+00
original_shape_Maximum3DDiameter                             0.000e+00
original_shape_MeshVolume                                    0.000e+00
original_shape_MinorAxisLength                               1.194e+01
original_shape_Sphericity                                    0.000e+00
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original_shape_SurfaceArea                              0.000e+00
original_shape_SurfaceVolumeRatio                       0.000e+00
original_shape_VoxelVolume                              0.000e+00
                                                         exp(coef)
original_firstorder_10Percentile                        0.000e+00
original_firstorder_90Percentile                              Inf
original_firstorder_Energy                              0.000e+00
original_firstorder_Entropy                                   Inf
original_firstorder_InterquartileRange                        Inf
original_firstorder_Kurtosis                            3.352e+64
original_firstorder_Maximum                             0.000e+00
original_firstorder_Mean                                      Inf
original_firstorder_MeanAbsoluteDeviation               0.000e+00
original_firstorder_Median                              0.000e+00
original_firstorder_Minimum                             0.000e+00
original_firstorder_Range                               1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation         0.000e+00
original_firstorder_RootMeanSquared                           Inf
original_firstorder_Skewness                           5.026e+169
original_firstorder_TotalEnergy                         1.000e+00
original_firstorder_Uniformity                                Inf
original_firstorder_Variance                                  Inf
original_glcm_Autocorrelation                                 Inf
original_glcm_ClusterProminence                         0.000e+00
original_glcm_ClusterShade                              0.000e+00
original_glcm_ClusterTendency                           0.000e+00
original_glcm_Contrast                                  0.000e+00
original_glcm_Correlation                               1.354e+10
original_glcm_DifferenceAverage                         0.000e+00
original_glcm_DifferenceEntropy                               Inf
original_glcm_DifferenceVariance                              Inf
original_glcm_Id                                        0.000e+00
original_glcm_Idm                                             Inf
original_glcm_Idmn                                     2.847e-246
original_glcm_Idn                                             Inf
original_glcm_Imc1                                            Inf
original_glcm_Imc2                                      5.217e+94
original_glcm_InverseVariance                           0.000e+00
original_glcm_JointAverage                              0.000e+00
original_glcm_JointEnergy                               0.000e+00
original_glcm_JointEntropy                                    Inf
original_glcm_MCC                                       1.547e-42
original_glcm_MaximumProbability                              Inf
original_glcm_SumAverage                                1.000e+00
original_glcm_SumEntropy                                0.000e+00
original_glcm_SumSquares                                      Inf
original_gldm_DependenceEntropy                               Inf
original_gldm_DependenceNonUniformity                         Inf
original_gldm_DependenceNonUniformityNormalized        9.217e-294
original_gldm_DependenceVariance                        0.000e+00
original_gldm_GrayLevelNonUniformity                          Inf
original_gldm_GrayLevelVariance                         0.000e+00
original_gldm_HighGrayLevelEmphasis                     1.932e+53
original_gldm_LargeDependenceEmphasis                   0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis      0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis             Inf
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original_gldm_LowGrayLevelEmphasis                      0.000e+00
original_gldm_SmallDependenceEmphasis                   3.785e-301
original_gldm_SmallDependenceHighGrayLevelEmphasis           Inf
original_gldm_SmallDependenceLowGrayLevelEmphasis       1.437e+75
original_glrlm_GrayLevelNonUniformity                   0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized              Inf
original_glrlm_GrayLevelVariance                             Inf
original_glrlm_HighGrayLevelRunEmphasis                 0.000e+00
original_glrlm_LongRunEmphasis                          0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis                  Inf
original_glrlm_LongRunLowGrayLevelEmphasis                   Inf
original_glrlm_LowGrayLevelRunEmphasis                  1.447e-304
original_glrlm_RunEntropy                                    Inf
original_glrlm_RunLengthNonUniformity                   7.354e+103
original_glrlm_RunLengthNonUniformityNormalized         2.372e+24
original_glrlm_RunPercentage                            5.914e+27
original_glrlm_RunVariance                              1.000e+00
original_glrlm_ShortRunEmphasis                         1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis            1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis             1.000e+00
original_glszm_GrayLevelNonUniformity                   3.694e-162
original_glszm_GrayLevelNonUniformityNormalized         1.790e+29
original_glszm_GrayLevelVariance                        1.000e+00
original_glszm_HighGrayLevelZoneEmphasis                1.208e-24
original_glszm_LargeAreaEmphasis                        1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis           1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis                 Inf
original_glszm_LowGrayLevelZoneEmphasis                 1.561e-12
original_glszm_SizeZoneNonUniformity                    1.000e+00
original_glszm_SizeZoneNonUniformityNormalized          1.000e+00
original_glszm_SmallAreaEmphasis                        1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis           1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis            1.000e+00
original_glszm_ZoneEntropy                              1.000e+00
original_glszm_ZonePercentage                           1.000e+00
original_glszm_ZoneVariance                             1.000e+00
original_ngtdm_Busyness                                 1.000e+00
original_ngtdm_Coarseness                               1.000e+00
original_ngtdm_Complexity                               1.000e+00
original_ngtdm_Contrast                                 1.000e+00
original_ngtdm_Strength                                 1.000e+00
original_shape_Elongation                               3.000e-02
original_shape_Flatness                                 1.708e-02
original_shape_LeastAxisLength                          1.000e+00
original_shape_MajorAxisLength                          1.000e+00
original_shape_Maximum2DDiameterColumn                  1.000e+00
original_shape_Maximum2DDiameterRow                     1.000e+00
original_shape_Maximum2DDiameterSlice                   1.000e+00
original_shape_Maximum3DDiameter                        1.000e+00
original_shape_MeshVolume                               1.000e+00
original_shape_MinorAxisLength                          1.535e+05
original_shape_Sphericity                               1.000e+00
original_shape_SurfaceArea                              1.000e+00
original_shape_SurfaceVolumeRatio                       1.000e+00
original_shape_VoxelVolume                              1.000e+00
                                                          se(coef)
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original_firstorder_10Percentile	4.116e+02
original_firstorder_90Percentile	1.349e+02
original_firstorder_Energy	2.664e+02
original_firstorder_Entropy	1.417e+02
original_firstorder_InterquartileRange	2.755e+02
original_firstorder_Kurtosis	2.553e+02
original_firstorder_Maximum	1.027e+02
original_firstorder_Mean	2.030e+02
original_firstorder_MeanAbsoluteDeviation	2.390e+02
original_firstorder_Median	1.335e+02
original_firstorder_Minimum	3.647e+02
original_firstorder_Range	1.179e+02
original_firstorder_RobustMeanAbsoluteDeviation	3.081e+02
original_firstorder_RootMeanSquared	1.658e+02
original_firstorder_Skewness	2.319e+02
original_firstorder_TotalEnergy	2.664e+02
original_firstorder_Uniformity	1.525e+02
original_firstorder_Variance	4.356e+02
original_glcm_Autocorrelation	2.258e+02
original_glcm_ClusterProminence	7.635e+03
original_glcm_ClusterShade	1.173e+03
original_glcm_ClusterTendency	5.386e+02
original_glcm_Contrast	9.604e+02
original_glcm_Correlation	1.729e+02
original_glcm_DifferenceAverage	2.334e+02
original_glcm_DifferenceEntropy	2.075e+02
original_glcm_DifferenceVariance	1.039e+03
original_glcm_Id	1.833e+02
original_glcm_Idm	1.779e+02
original_glcm_Idmn	3.006e+02
original_glcm_Idn	2.697e+02
original_glcm_Imc1	2.164e+02
original_glcm_Imc2	1.442e+02
original_glcm_InverseVariance	2.692e+02
original_glcm_JointAverage	3.348e+02
original_glcm_JointEnergy	2.030e+02
original_glcm_JointEntropy	1.383e+02
original_glcm_MCC	1.343e+02
original_glcm_MaximumProbability	1.526e+02
original_glcm_SumAverage	3.348e+02
original_glcm_SumEntropy	1.371e+02
original_glcm_SumSquares	5.915e+02
original_gldm_DependenceEntropy	1.898e+02
original_gldm_DependenceNonUniformity	4.962e+02
original_gldm_DependenceNonUniformityNormalized	2.376e+02
original_gldm_DependenceVariance	1.316e+02
original_gldm_GrayLevelNonUniformity	2.927e+02
original_gldm_GrayLevelVariance	4.355e+02
original_gldm_HighGrayLevelEmphasis	2.262e+02
original_gldm_LargeDependenceEmphasis	1.514e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.538e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis	2.736e+03
original_gldm_LowGrayLevelEmphasis	5.798e+03
original_gldm_SmallDependenceEmphasis	2.031e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.944e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.254e+03

original_glrlm_GrayLevelNonUniformity	3.587e+02
original_glrlm_GrayLevelNonUniformityNormalized	1.769e+02
original_glrlm_GrayLevelVariance	3.515e+02
original_glrlm_HighGrayLevelRunEmphasis	2.260e+02
original_glrlm_LongRunEmphasis	2.225e+02
original_glrlm_LongRunHighGrayLevelEmphasis	2.085e+02
original_glrlm_LongRunLowGrayLevelEmphasis	4.424e+03
original_glrlm_LowGrayLevelRunEmphasis	4.932e+03
original_glrlm_RunEntropy	1.997e+02
original_glrlm_RunLengthNonUniformity	3.374e+02
original_glrlm_RunLengthNonUniformityNormalized	1.744e+02
original_glrlm_RunPercentage	1.538e+02
original_glrlm_RunVariance	2.508e+02
original_glrlm_ShortRunEmphasis	1.700e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	1.910e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	3.893e+03
original_glszm_GrayLevelNonUniformity	2.992e+02
original_glszm_GrayLevelNonUniformityNormalized	3.790e+02
original_glszm_GrayLevelVariance	1.363e+02
original_glszm_HighGrayLevelZoneEmphasis	2.485e+02
original_glszm_LargeAreaEmphasis	4.795e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	4.012e+02
original_glszm_LargeAreaLowGrayLevelEmphasis	4.565e+03
original_glszm_LowGrayLevelZoneEmphasis	1.358e+03
original_glszm_SizeZoneNonUniformity	2.043e+02
original_glszm_SizeZoneNonUniformityNormalized	1.159e+02
original_glszm_SmallAreaEmphasis	1.313e+02
original_glszm_SmallAreaHighGrayLevelEmphasis	2.240e+02
original_glszm_SmallAreaLowGrayLevelEmphasis	8.296e+02
original_glszm_ZoneEntropy	1.920e+02
original_glszm_ZonePercentage	2.113e+02
original_glszm_ZoneVariance	4.788e+02
original_ngtdm_Busyness	9.994e+02
original_ngtdm_Coarseness	8.186e+02
original_ngtdm_Complexity	1.849e+02
original_ngtdm_Contrast	1.788e+03
original_ngtdm_Strength	4.559e+02
original_shape_Elongation	9.065e+01
original_shape_Flatness	1.133e+02
original_shape_LeastAxisLength	5.198e+02
original_shape_MajorAxisLength	1.415e+02
original_shape_Maximum2DDiameterColumn	1.897e+02
original_shape_Maximum2DDiameterRow	1.416e+02
original_shape_Maximum2DDiameterSlice	4.151e+02
original_shape_Maximum3DDiameter	1.886e+02
original_shape_MeshVolume	3.138e+02
original_shape_MinorAxisLength	5.084e+02
original_shape_Sphericity	1.963e+02
original_shape_SurfaceArea	6.585e+02
original_shape_SurfaceVolumeRatio	1.994e+02
original_shape_VoxelVolume	3.150e+02
	z
original_firstorder_10Percentile	-17.833
original_firstorder_90Percentile	18.757
original_firstorder_Energy	-4.195
original_firstorder_Entropy	21.953

original_firstorder_InterquartileRange	29.650
original_firstorder_Kurtosis	0.582
original_firstorder_Maximum	-10.964
original_firstorder_Mean	10.423
original_firstorder_MeanAbsoluteDeviation	-17.268
original_firstorder_Median	-8.473
original_firstorder_Minimum	-23.524
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	-27.392
original_firstorder_RootMeanSquared	15.644
original_firstorder_Skewness	1.685
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	17.775
original_firstorder_Variance	38.257
original_glcm_Autocorrelation	206.174
original_glcm_ClusterProminence	-20.938
original_glcm_ClusterShade	-0.657
original_glcm_ClusterTendency	-38.385
original_glcm_Contrast	-64.370
original_glcm_Correlation	0.135
original_glcm_DifferenceAverage	-37.973
original_glcm_DifferenceEntropy	22.892
original_glcm_DifferenceVariance	69.760
original_glcm_Id	-190.248
original_glcm_Idm	181.372
original_glcm_Idmn	-1.881
original_glcm_Idn	11.094
original_glcm_Imc1	6.723
original_glcm_Imc2	1.512
original_glcm_InverseVariance	-8.823
original_glcm_JointAverage	-42.221
original_glcm_JointEnergy	-27.910
original_glcm_JointEntropy	10.244
original_glcm_MCC	-0.717
original_glcm_MaximumProbability	8.225
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	-25.046
original_glcm_SumSquares	81.644
original_gldm_DependenceEntropy	5.309
original_gldm_DependenceNonUniformity	2.293
original_gldm_DependenceNonUniformityNormalized	-2.839
original_gldm_DependenceVariance	-9.707
original_gldm_GrayLevelNonUniformity	10.641
original_gldm_GrayLevelVariance	-98.423
original_gldm_HighGrayLevelEmphasis	0.542
original_gldm_LargeDependenceEmphasis	-30.036
original_gldm_LargeDependenceHighGrayLevelEmphasis	-17.714
original_gldm_LargeDependenceLowGrayLevelEmphasis	30.726
original_gldm_LowGrayLevelEmphasis	-1.312
original_gldm_SmallDependenceEmphasis	-3.406
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.751
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.138
original_glrlm_GrayLevelNonUniformity	-14.440
original_glrlm_GrayLevelNonUniformityNormalized	15.205
original_glrlm_GrayLevelVariance	29.173
original_glrlm_HighGrayLevelRunEmphasis	-178.635

original_glrlm_LongRunEmphasis	-17.462
original_glrlm_LongRunHighGrayLevelEmphasis	26.827
original_glrlm_LongRunLowGrayLevelEmphasis	5.332
original_glrlm_LowGrayLevelRunEmphasis	-0.142
original_glrlm_RunEntropy	3.609
original_glrlm_RunLengthNonUniformity	0.709
original_glrlm_RunLengthNonUniformityNormalized	0.322
original_glrlm_RunPercentage	0.416
original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	-1.242
original_glszm_GrayLevelNonUniformityNormalized	0.178
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	-0.222
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	2.302
original_glszm_LowGrayLevelZoneEmphasis	-0.020
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	-0.039
original_shape_Flatness	-0.036
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.023
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	< 2e-16
original_firstorder_Energy	2.73e-05
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	0.560516
original_firstorder_Maximum	< 2e-16
original_firstorder_Mean	< 2e-16

```
original_firstorder_MeanAbsoluteDeviation            < 2e-16
original_firstorder_Median                           < 2e-16
original_firstorder_Minimum                          < 2e-16
original_firstorder_Range                            1.000000
original_firstorder_RobustMeanAbsoluteDeviation      < 2e-16
original_firstorder_RootMeanSquared                  < 2e-16
original_firstorder_Skewness                         0.092024
original_firstorder_TotalEnergy                      1.000000
original_firstorder_Uniformity                       < 2e-16
original_firstorder_Variance                         < 2e-16
original_glcm_Autocorrelation                        < 2e-16
original_glcm_ClusterProminence                      < 2e-16
original_glcm_ClusterShade                           0.511374
original_glcm_ClusterTendency                        < 2e-16
original_glcm_Contrast                               < 2e-16
original_glcm_Correlation                            0.892676
original_glcm_DifferenceAverage                      < 2e-16
original_glcm_DifferenceEntropy                      < 2e-16
original_glcm_DifferenceVariance                     < 2e-16
original_glcm_Id                                     < 2e-16
original_glcm_Idm                                    < 2e-16
original_glcm_Idmn                                   0.060018
original_glcm_Idn                                    < 2e-16
original_glcm_Imc1                                   1.78e-11
original_glcm_Imc2                                   0.130510
original_glcm_InverseVariance                        < 2e-16
original_glcm_JointAverage                           < 2e-16
original_glcm_JointEnergy                            < 2e-16
original_glcm_JointEntropy                           < 2e-16
original_glcm_MCC                                     0.473351
original_glcm_MaximumProbability                     < 2e-16
original_glcm_SumAverage                             1.000000
original_glcm_SumEntropy                             < 2e-16
original_glcm_SumSquares                             < 2e-16
original_gldm_DependenceEntropy                      1.10e-07
original_gldm_DependenceNonUniformity                0.021840
original_gldm_DependenceNonUniformityNormalized      0.004521
original_gldm_DependenceVariance                     < 2e-16
original_gldm_GrayLevelNonUniformity                 < 2e-16
original_gldm_GrayLevelVariance                      < 2e-16
original_gldm_HighGrayLevelEmphasis                  0.587508
original_gldm_LargeDependenceEmphasis                < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis   < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis    < 2e-16
original_gldm_LowGrayLevelEmphasis                   0.189632
original_gldm_SmallDependenceEmphasis                0.000658
original_gldm_SmallDependenceHighGrayLevelEmphasis   8.89e-09
original_gldm_SmallDependenceLowGrayLevelEmphasis    0.890207
original_glrlm_GrayLevelNonUniformity                < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized      < 2e-16
original_glrlm_GrayLevelVariance                     < 2e-16
original_glrlm_HighGrayLevelRunEmphasis              < 2e-16
original_glrlm_LongRunEmphasis                       < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis          < 2e-16
original_glrlm_LongRunLowGrayLevelEmphasis           9.73e-08
original_glrlm_LowGrayLevelRunEmphasis               0.887194
```

```
original_glrlm_RunEntropy                           0.000307
original_glrlm_RunLengthNonUniformity               0.478426
original_glrlm_RunLengthNonUniformityNormalized     0.747549
original_glrlm_RunPercentage                        0.677522
original_glrlm_RunVariance                          1.000000
original_glrlm_ShortRunEmphasis                     1.000000
original_glrlm_ShortRunHighGrayLevelEmphasis        1.000000
original_glrlm_ShortRunLowGrayLevelEmphasis         1.000000
original_glszm_GrayLevelNonUniformity               0.214170
original_glszm_GrayLevelNonUniformityNormalized     0.858954
original_glszm_GrayLevelVariance                    1.000000
original_glszm_HighGrayLevelZoneEmphasis            0.824633
original_glszm_LargeAreaEmphasis                    1.000000
original_glszm_LargeAreaHighGrayLevelEmphasis       1.000000
original_glszm_LargeAreaLowGrayLevelEmphasis        0.021314
original_glszm_LowGrayLevelZoneEmphasis             0.984025
original_glszm_SizeZoneNonUniformity                1.000000
original_glszm_SizeZoneNonUniformityNormalized      1.000000
original_glszm_SmallAreaEmphasis                    1.000000
original_glszm_SmallAreaHighGrayLevelEmphasis       1.000000
original_glszm_SmallAreaLowGrayLevelEmphasis        1.000000
original_glszm_ZoneEntropy                          1.000000
original_glszm_ZonePercentage                       1.000000
original_glszm_ZoneVariance                         1.000000
original_ngtdm_Busyness                             1.000000
original_ngtdm_Coarseness                           1.000000
original_ngtdm_Complexity                           1.000000
original_ngtdm_Contrast                             1.000000
original_ngtdm_Strength                             1.000000
original_shape_Elongation                           0.969142
original_shape_Flatness                             0.971348
original_shape_LeastAxisLength                      1.000000
original_shape_MajorAxisLength                      1.000000
original_shape_Maximum2DDiameterColumn              1.000000
original_shape_Maximum2DDiameterRow                 1.000000
original_shape_Maximum2DDiameterSlice               1.000000
original_shape_Maximum3DDiameter                    1.000000
original_shape_MeshVolume                           1.000000
original_shape_MinorAxisLength                      0.981262
original_shape_Sphericity                           1.000000
original_shape_SurfaceArea                          1.000000
original_shape_SurfaceVolumeRatio                   1.000000
original_shape_VoxelVolume                          1.000000


Likelihood ratio test=87.78  on 107 df, p=0.9124
n= 60, number of events= 11


[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                coef
original_firstorder_10Percentile                1.435e+04
original_firstorder_90Percentile               -1.167e+04
```

```
original_firstorder_Energy                                      2.101e+03
original_firstorder_Entropy                                     6.689e+03
original_firstorder_InterquartileRange                         -1.339e+03
original_firstorder_Kurtosis                                    7.505e+01
original_firstorder_Maximum                                    -2.949e+04
original_firstorder_Mean                                        1.032e+04
original_firstorder_MeanAbsoluteDeviation                      -1.849e+04
original_firstorder_Median                                     -1.669e+04
original_firstorder_Minimum                                     2.956e+04
original_firstorder_Range                                       4.934e+04
original_firstorder_RobustMeanAbsoluteDeviation                 5.159e+03
original_firstorder_RootMeanSquared                             1.962e+04
original_firstorder_Skewness                                    1.142e+03
original_firstorder_TotalEnergy                                 0.000e+00
original_firstorder_Uniformity                                 -1.367e+03
original_firstorder_Variance                                    5.789e+04
original_glcm_Autocorrelation                                   2.389e+04
original_glcm_ClusterProminence                                -7.302e+08
original_glcm_ClusterShade                                     -1.420e+07
original_glcm_ClusterTendency                                   4.661e+05
original_glcm_Contrast                                          1.326e+06
original_glcm_Correlation                                      -3.643e+03
original_glcm_DifferenceAverage                                -1.264e+04
original_glcm_DifferenceEntropy                                -6.679e+03
original_glcm_DifferenceVariance                               -9.308e+05
original_glcm_Id                                               -1.440e+04
original_glcm_Idm                                               1.967e+04
original_glcm_Idmn                                             -1.399e+02
original_glcm_Idn                                               5.292e+01
original_glcm_Imc1                                             -2.496e+01
original_glcm_Imc2                                              2.111e+01
original_glcm_InverseVariance                                 -2.657e+01
original_glcm_JointAverage                                      0.000e+00
original_glcm_JointEnergy                                       1.846e+01
original_glcm_JointEntropy                                      0.000e+00
original_glcm_MCC                                               2.863e+00
original_glcm_MaximumProbability                               1.401e+01
original_glcm_SumAverage                                        0.000e+00
original_glcm_SumEntropy                                        3.289e+02
original_glcm_SumSquares                                       -2.011e+04
original_gldm_DependenceEntropy                                 0.000e+00
original_gldm_DependenceNonUniformity                          0.000e+00
original_gldm_DependenceNonUniformityNormalized               -1.969e+01
original_gldm_DependenceVariance                               0.000e+00
original_gldm_GrayLevelNonUniformity                          -2.397e+00
original_gldm_GrayLevelVariance                               -3.862e+03
original_gldm_HighGrayLevelEmphasis                            0.000e+00
original_gldm_LargeDependenceEmphasis                          0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis            0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis             1.095e-01
original_gldm_LowGrayLevelEmphasis                            7.993e+00
original_gldm_SmallDependenceEmphasis                          0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis            0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis             0.000e+00
original_glrlm_GrayLevelNonUniformity                         2.127e+00
original_glrlm_GrayLevelNonUniformityNormalized               0.000e+00
```

original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	3.742e+00
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	0.000e+00
original_glrlm_RunLengthNonUniformity	0.000e+00
original_glrlm_RunLengthNonUniformityNormalized	0.000e+00
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	0.000e+00
original_glrlm_ShortRunEmphasis	0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	0.000e+00
original_glszm_GrayLevelNonUniformityNormalized	0.000e+00
original_glszm_GrayLevelVariance	0.000e+00
original_glszm_HighGrayLevelZoneEmphasis	2.803e+02
original_glszm_LargeAreaEmphasis	0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	-9.801e-02
original_glszm_LowGrayLevelZoneEmphasis	0.000e+00
original_glszm_SizeZoneNonUniformity	0.000e+00
original_glszm_SizeZoneNonUniformityNormalized	0.000e+00
original_glszm_SmallAreaEmphasis	0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_ZoneEntropy	0.000e+00
original_glszm_ZonePercentage	0.000e+00
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	0.000e+00
original_ngtdm_Coarseness	0.000e+00
original_ngtdm_Complexity	0.000e+00
original_ngtdm_Contrast	0.000e+00
original_ngtdm_Strength	0.000e+00
original_shape_Elongation	0.000e+00
original_shape_Flatness	0.000e+00
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	1.139e+01
original_shape_Maximum2DDiameterSlice	0.000e+00
original_shape_Maximum3DDiameter	0.000e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	Inf
original_firstorder_90Percentile	0.000e+00
original_firstorder_Energy	Inf
original_firstorder_Entropy	Inf
original_firstorder_InterquartileRange	0.000e+00
original_firstorder_Kurtosis	3.933e+32

```
original_firstorder_Maximum                                   0.000e+00
original_firstorder_Mean                                            Inf
original_firstorder_MeanAbsoluteDeviation                     0.000e+00
original_firstorder_Median                                    0.000e+00
original_firstorder_Minimum                                        Inf
original_firstorder_Range                                          Inf
original_firstorder_RobustMeanAbsoluteDeviation                    Inf
original_firstorder_RootMeanSquared                                Inf
original_firstorder_Skewness                                       Inf
original_firstorder_TotalEnergy                               1.000e+00
original_firstorder_Uniformity                               0.000e+00
original_firstorder_Variance                                       Inf
original_glcm_Autocorrelation                                     Inf
original_glcm_ClusterProminence                              0.000e+00
original_glcm_ClusterShade                                   0.000e+00
original_glcm_ClusterTendency                                     Inf
original_glcm_Contrast                                            Inf
original_glcm_Correlation                                    0.000e+00
original_glcm_DifferenceAverage                              0.000e+00
original_glcm_DifferenceEntropy                              0.000e+00
original_glcm_DifferenceVariance                             0.000e+00
original_glcm_Id                                             0.000e+00
original_glcm_Idm                                                 Inf
original_glcm_Idmn                                           1.786e-61
original_glcm_Idn                                            9.579e+22
original_glcm_Imc1                                           1.443e-11
original_glcm_Imc2                                           1.476e+09
original_glcm_InverseVariance                                2.882e-12
original_glcm_JointAverage                                   1.000e+00
original_glcm_JointEnergy                                    1.036e+08
original_glcm_JointEntropy                                   1.000e+00
original_glcm_MCC                                            1.752e+01
original_glcm_MaximumProbability                             1.216e+06
original_glcm_SumAverage                                     1.000e+00
original_glcm_SumEntropy                                    6.858e+142
original_glcm_SumSquares                                     0.000e+00
original_gldm_DependenceEntropy                              1.000e+00
original_gldm_DependenceNonUniformity                        1.000e+00
original_gldm_DependenceNonUniformityNormalized              2.822e-09
original_gldm_DependenceVariance                             1.000e+00
original_gldm_GrayLevelNonUniformity                         9.103e-02
original_gldm_GrayLevelVariance                              0.000e+00
original_gldm_HighGrayLevelEmphasis                          1.000e+00
original_gldm_LargeDependenceEmphasis                        1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis           1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis            1.116e+00
original_gldm_LowGrayLevelEmphasis                           2.959e+03
original_gldm_SmallDependenceEmphasis                        1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis           1.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis            1.000e+00
original_glrlm_GrayLevelNonUniformity                        8.394e+00
original_glrlm_GrayLevelNonUniformityNormalized              1.000e+00
original_glrlm_GrayLevelVariance                             1.000e+00
original_glrlm_HighGrayLevelRunEmphasis                      1.000e+00
original_glrlm_LongRunEmphasis                               1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis                  1.000e+00
```

original_glrlm_LongRunLowGrayLevelEmphasis	4.218e+01
original_glrlm_LowGrayLevelRunEmphasis	1.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	5.514e+121
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	9.066e-01
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.000e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	8.850e+04
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	1.932e+04
original_firstorder_90Percentile	1.218e+04
original_firstorder_Energy	8.593e+04
original_firstorder_Entropy	1.080e+04
original_firstorder_InterquartileRange	3.698e+04
original_firstorder_Kurtosis	1.686e+04
original_firstorder_Maximum	9.442e+04
original_firstorder_Mean	1.042e+04
original_firstorder_MeanAbsoluteDeviation	4.120e+04
original_firstorder_Median	8.721e+03

original_firstorder_Minimum	1.586e+04
original_firstorder_Range	3.249e+04
original_firstorder_RobustMeanAbsoluteDeviation	3.827e+04
original_firstorder_RootMeanSquared	1.636e+04
original_firstorder_Skewness	1.326e+04
original_firstorder_TotalEnergy	8.593e+04
original_firstorder_Uniformity	7.960e+03
original_firstorder_Variance	5.955e+05
original_glcm_Autocorrelation	5.805e+04
original_glcm_ClusterProminence	7.842e+08
original_glcm_ClusterShade	1.796e+07
original_glcm_ClusterTendency	8.243e+05
original_glcm_Contrast	1.029e+06
original_glcm_Correlation	9.701e+03
original_glcm_DifferenceAverage	4.037e+04
original_glcm_DifferenceEntropy	1.739e+04
original_glcm_DifferenceVariance	1.214e+06
original_glcm_Id	1.265e+04
original_glcm_Idm	1.369e+04
original_glcm_Idmn	4.155e+03
original_glcm_Idn	4.347e+03
original_glcm_Imc1	6.511e+03
original_glcm_Imc2	6.350e+03
original_glcm_InverseVariance	6.205e+03
original_glcm_JointAverage	1.767e+04
original_glcm_JointEnergy	7.264e+03
original_glcm_JointEntropy	1.230e+04
original_glcm_MCC	8.317e+03
original_glcm_MaximumProbability	7.924e+03
original_glcm_SumAverage	1.767e+04
original_glcm_SumEntropy	1.102e+04
original_glcm_SumSquares	8.757e+05
original_gldm_DependenceEntropy	5.872e+03
original_gldm_DependenceNonUniformity	1.919e+04
original_gldm_DependenceNonUniformityNormalized	5.952e+03
original_gldm_DependenceVariance	6.077e+03
original_gldm_GrayLevelNonUniformity	1.619e+04
original_gldm_GrayLevelVariance	6.054e+05
original_gldm_HighGrayLevelEmphasis	5.825e+04
original_gldm_LargeDependenceEmphasis	5.263e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	8.042e+04
original_gldm_LargeDependenceLowGrayLevelEmphasis	2.627e+03
original_gldm_LowGrayLevelEmphasis	2.424e+03
original_gldm_SmallDependenceEmphasis	9.565e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.207e+05
original_gldm_SmallDependenceLowGrayLevelEmphasis	2.963e+03
original_glrlm_GrayLevelNonUniformity	1.764e+04
original_glrlm_GrayLevelNonUniformityNormalized	5.183e+03
original_glrlm_GrayLevelVariance	4.580e+05
original_glrlm_HighGrayLevelRunEmphasis	5.859e+04
original_glrlm_LongRunEmphasis	4.312e+03
original_glrlm_LongRunHighGrayLevelEmphasis	3.612e+04
original_glrlm_LongRunLowGrayLevelEmphasis	3.208e+03
original_glrlm_LowGrayLevelRunEmphasis	2.403e+03
original_glrlm_RunEntropy	4.670e+03
original_glrlm_RunLengthNonUniformity	2.594e+04

original_glrlm_RunLengthNonUniformityNormalized	5.516e+03
original_glrlm_RunPercentage	5.342e+03
original_glrlm_RunVariance	4.311e+03
original_glrlm_ShortRunEmphasis	5.612e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	5.670e+04
original_glrlm_ShortRunLowGrayLevelEmphasis	2.191e+03
original_glszm_GrayLevelNonUniformity	1.482e+04
original_glszm_GrayLevelNonUniformityNormalized	7.535e+03
original_glszm_GrayLevelVariance	1.890e+05
original_glszm_HighGrayLevelZoneEmphasis	6.102e+04
original_glszm_LargeAreaEmphasis	9.584e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	1.498e+05
original_glszm_LargeAreaLowGrayLevelEmphasis	2.445e+03
original_glszm_LowGrayLevelZoneEmphasis	2.522e+03
original_glszm_SizeZoneNonUniformity	8.068e+04
original_glszm_SizeZoneNonUniformityNormalized	5.817e+03
original_glszm_SmallAreaEmphasis	4.708e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	7.194e+04
original_glszm_SmallAreaLowGrayLevelEmphasis	4.631e+03
original_glszm_ZoneEntropy	1.045e+04
original_glszm_ZonePercentage	9.913e+03
original_glszm_ZoneVariance	9.667e+03
original_ngtdm_Busyness	2.698e+03
original_ngtdm_Coarseness	2.538e+03
original_ngtdm_Complexity	9.080e+05
original_ngtdm_Contrast	7.338e+04
original_ngtdm_Strength	9.856e+04
original_shape_Elongation	4.968e+03
original_shape_Flatness	4.470e+03
original_shape_LeastAxisLength	5.600e+03
original_shape_MajorAxisLength	4.558e+03
original_shape_Maximum2DDiameterColumn	6.280e+03
original_shape_Maximum2DDiameterRow	5.556e+03
original_shape_Maximum2DDiameterSlice	6.301e+03
original_shape_Maximum3DDiameter	5.496e+03
original_shape_MeshVolume	2.514e+04
original_shape_MinorAxisLength	4.701e+03
original_shape_Sphericity	6.153e+03
original_shape_SurfaceArea	2.168e+04
original_shape_SurfaceVolumeRatio	5.432e+03
original_shape_VoxelVolume	2.502e+04

	z
original_firstorder_10Percentile	0.743
original_firstorder_90Percentile	-0.958
original_firstorder_Energy	0.024
original_firstorder_Entropy	0.619
original_firstorder_InterquartileRange	-0.036
original_firstorder_Kurtosis	0.004
original_firstorder_Maximum	-0.312
original_firstorder_Mean	0.991
original_firstorder_MeanAbsoluteDeviation	-0.449
original_firstorder_Median	-1.914
original_firstorder_Minimum	1.863
original_firstorder_Range	1.519
original_firstorder_RobustMeanAbsoluteDeviation	0.135
original_firstorder_RootMeanSquared	1.199

```
original_firstorder_Skewness                                    0.086
original_firstorder_TotalEnergy                                 0.000
original_firstorder_Uniformity                                 -0.172
original_firstorder_Variance                                    0.097
original_glcm_Autocorrelation                                   0.412
original_glcm_ClusterProminence                                -0.931
original_glcm_ClusterShade                                     -0.791
original_glcm_ClusterTendency                                   0.565
original_glcm_Contrast                                          1.288
original_glcm_Correlation                                      -0.376
original_glcm_DifferenceAverage                                -0.313
original_glcm_DifferenceEntropy                                -0.384
original_glcm_DifferenceVariance                               -0.766
original_glcm_Id                                               -1.138
original_glcm_Idm                                               1.437
original_glcm_Idmn                                             -0.034
original_glcm_Idn                                               0.012
original_glcm_Imc1                                             -0.004
original_glcm_Imc2                                              0.003
original_glcm_InverseVariance                                  -0.004
original_glcm_JointAverage                                      0.000
original_glcm_JointEnergy                                       0.003
original_glcm_JointEntropy                                      0.000
original_glcm_MCC                                               0.000
original_glcm_MaximumProbability                                0.002
original_glcm_SumAverage                                        0.000
original_glcm_SumEntropy                                        0.030
original_glcm_SumSquares                                       -0.023
original_gldm_DependenceEntropy                                 0.000
original_gldm_DependenceNonUniformity                           0.000
original_gldm_DependenceNonUniformityNormalized                -0.003
original_gldm_DependenceVariance                                0.000
original_gldm_GrayLevelNonUniformity                            0.000
original_gldm_GrayLevelVariance                                -0.006
original_gldm_HighGrayLevelEmphasis                             0.000
original_gldm_LargeDependenceEmphasis                           0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis              0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis               0.000
original_gldm_LowGrayLevelEmphasis                              0.003
original_gldm_SmallDependenceEmphasis                           0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis              0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis               0.000
original_glrlm_GrayLevelNonUniformity                           0.000
original_glrlm_GrayLevelNonUniformityNormalized                 0.000
original_glrlm_GrayLevelVariance                                0.000
original_glrlm_HighGrayLevelRunEmphasis                         0.000
original_glrlm_LongRunEmphasis                                  0.000
original_glrlm_LongRunHighGrayLevelEmphasis                     0.000
original_glrlm_LongRunLowGrayLevelEmphasis                      0.001
original_glrlm_LowGrayLevelRunEmphasis                          0.000
original_glrlm_RunEntropy                                       0.000
original_glrlm_RunLengthNonUniformity                           0.000
original_glrlm_RunLengthNonUniformityNormalized                 0.000
original_glrlm_RunPercentage                                    0.000
original_glrlm_RunVariance                                      0.000
original_glrlm_ShortRunEmphasis                                 0.000
```

original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.005
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.002
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	0.4575
original_firstorder_90Percentile	0.3381
original_firstorder_Energy	0.9805
original_firstorder_Entropy	0.5356
original_firstorder_InterquartileRange	0.9711
original_firstorder_Kurtosis	0.9964
original_firstorder_Maximum	0.7548
original_firstorder_Mean	0.3218
original_firstorder_MeanAbsoluteDeviation	0.6536
original_firstorder_Median	0.0557
original_firstorder_Minimum	0.0624
original_firstorder_Range	0.1289
original_firstorder_RobustMeanAbsoluteDeviation	0.8928
original_firstorder_RootMeanSquared	0.2305
original_firstorder_Skewness	0.9314
original_firstorder_TotalEnergy	1.0000
original_firstorder_Uniformity	0.8636
original_firstorder_Variance	0.9226

```
original_glcm_Autocorrelation                            0.6807
original_glcm_ClusterProminence                          0.3518
original_glcm_ClusterShade                               0.4292
original_glcm_ClusterTendency                            0.5718
original_glcm_Contrast                                   0.1978
original_glcm_Correlation                                0.7073
original_glcm_DifferenceAverage                          0.7542
original_glcm_DifferenceEntropy                          0.7009
original_glcm_DifferenceVariance                         0.4434
original_glcm_Id                                         0.2551
original_glcm_Idm                                        0.1507
original_glcm_Idmn                                       0.9731
original_glcm_Idn                                        0.9903
original_glcm_Imc1                                       0.9969
original_glcm_Imc2                                       0.9973
original_glcm_InverseVariance                            0.9966
original_glcm_JointAverage                               1.0000
original_glcm_JointEnergy                                0.9980
original_glcm_JointEntropy                               1.0000
original_glcm_MCC                                        0.9997
original_glcm_MaximumProbability                         0.9986
original_glcm_SumAverage                                 1.0000
original_glcm_SumEntropy                                 0.9762
original_glcm_SumSquares                                 0.9817
original_gldm_DependenceEntropy                          1.0000
original_gldm_DependenceNonUniformity                    1.0000
original_gldm_DependenceNonUniformityNormalized          0.9974
original_gldm_DependenceVariance                         1.0000
original_gldm_GrayLevelNonUniformity                     0.9999
original_gldm_GrayLevelVariance                          0.9949
original_gldm_HighGrayLevelEmphasis                      1.0000
original_gldm_LargeDependenceEmphasis                    1.0000
original_gldm_LargeDependenceHighGrayLevelEmphasis 1.0000
original_gldm_LargeDependenceLowGrayLevelEmphasis  1.0000
original_gldm_LowGrayLevelEmphasis                       0.9974
original_gldm_SmallDependenceEmphasis                    1.0000
original_gldm_SmallDependenceHighGrayLevelEmphasis 1.0000
original_gldm_SmallDependenceLowGrayLevelEmphasis  1.0000
original_glrlm_GrayLevelNonUniformity                    0.9999
original_glrlm_GrayLevelNonUniformityNormalized          1.0000
original_glrlm_GrayLevelVariance                         1.0000
original_glrlm_HighGrayLevelRunEmphasis                  1.0000
original_glrlm_LongRunEmphasis                           1.0000
original_glrlm_LongRunHighGrayLevelEmphasis              1.0000
original_glrlm_LongRunLowGrayLevelEmphasis               0.9991
original_glrlm_LowGrayLevelRunEmphasis                   1.0000
original_glrlm_RunEntropy                                1.0000
original_glrlm_RunLengthNonUniformity                    1.0000
original_glrlm_RunLengthNonUniformityNormalized          1.0000
original_glrlm_RunPercentage                             1.0000
original_glrlm_RunVariance                               1.0000
original_glrlm_ShortRunEmphasis                          1.0000
original_glrlm_ShortRunHighGrayLevelEmphasis             1.0000
original_glrlm_ShortRunLowGrayLevelEmphasis              1.0000
original_glszm_GrayLevelNonUniformity                    1.0000
original_glszm_GrayLevelNonUniformityNormalized          1.0000
```

```
original_glszm_GrayLevelVariance                    1.0000
original_glszm_HighGrayLevelZoneEmphasis            0.9963
original_glszm_LargeAreaEmphasis                    1.0000
original_glszm_LargeAreaHighGrayLevelEmphasis       1.0000
original_glszm_LargeAreaLowGrayLevelEmphasis        1.0000
original_glszm_LowGrayLevelZoneEmphasis             1.0000
original_glszm_SizeZoneNonUniformity                1.0000
original_glszm_SizeZoneNonUniformityNormalized      1.0000
original_glszm_SmallAreaEmphasis                    1.0000
original_glszm_SmallAreaHighGrayLevelEmphasis       1.0000
original_glszm_SmallAreaLowGrayLevelEmphasis        1.0000
original_glszm_ZoneEntropy                          1.0000
original_glszm_ZonePercentage                       1.0000
original_glszm_ZoneVariance                         1.0000
original_ngtdm_Busyness                             1.0000
original_ngtdm_Coarseness                           1.0000
original_ngtdm_Complexity                           1.0000
original_ngtdm_Contrast                             1.0000
original_ngtdm_Strength                             1.0000
original_shape_Elongation                           1.0000
original_shape_Flatness                             1.0000
original_shape_LeastAxisLength                      1.0000
original_shape_MajorAxisLength                      1.0000
original_shape_Maximum2DDiameterColumn              1.0000
original_shape_Maximum2DDiameterRow                 0.9984
original_shape_Maximum2DDiameterSlice               1.0000
original_shape_Maximum3DDiameter                    1.0000
original_shape_MeshVolume                           1.0000
original_shape_MinorAxisLength                      1.0000
original_shape_Sphericity                           1.0000
original_shape_SurfaceArea                          1.0000
original_shape_SurfaceVolumeRatio                   1.0000
original_shape_VoxelVolume                          1.0000


Likelihood ratio test=26.21  on 107 df, p=1
n= 28, number of events= 4


[[3]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                   7.969e+01
original_firstorder_90Percentile                  -3.906e+01
original_firstorder_Energy                         5.367e+01
original_firstorder_Entropy                       -1.497e+02
original_firstorder_InterquartileRange            -9.604e+01
original_firstorder_Kurtosis                       9.239e+00
original_firstorder_Maximum                       -4.282e+00
original_firstorder_Mean                           8.738e+00
original_firstorder_MeanAbsoluteDeviation         -3.301e+01
original_firstorder_Median                         2.736e+01
original_firstorder_Minimum                       -8.687e+00
original_firstorder_Range                          0.000e+00
```

original_firstorder_RobustMeanAbsoluteDeviation	1.509e+02
original_firstorder_RootMeanSquared	-7.147e+01
original_firstorder_Skewness	1.342e+01
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-7.742e+01
original_firstorder_Variance	8.607e+02
original_glcm_Autocorrelation	1.087e+03
original_glcm_ClusterProminence	4.875e+03
original_glcm_ClusterShade	5.019e+02
original_glcm_ClusterTendency	-1.577e+02
original_glcm_Contrast	-4.108e+03
original_glcm_Correlation	9.131e+00
original_glcm_DifferenceAverage	6.787e+02
original_glcm_DifferenceEntropy	-4.931e+01
original_glcm_DifferenceVariance	2.829e+03
original_glcm_Id	1.602e+03
original_glcm_Idm	-1.279e+03
original_glcm_Idmn	3.390e+01
original_glcm_Idn	-4.230e+01
original_glcm_Imc1	-1.996e+01
original_glcm_Imc2	-4.343e+01
original_glcm_InverseVariance	1.389e+02
original_glcm_JointAverage	7.496e+00
original_glcm_JointEnergy	5.176e+01
original_glcm_JointEntropy	-1.628e+00
original_glcm_MCC	9.382e-01
original_glcm_MaximumProbability	-1.804e+00
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	4.516e+01
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	3.112e+01
original_gldm_DependenceNonUniformity	9.246e+01
original_gldm_DependenceNonUniformityNormalized	1.129e+01
original_gldm_DependenceVariance	-1.154e+01
original_gldm_GrayLevelNonUniformity	-3.975e+01
original_gldm_GrayLevelVariance	1.185e+02
original_gldm_HighGrayLevelEmphasis	-1.781e+03
original_gldm_LargeDependenceEmphasis	-1.714e+01
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.006e+01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.273e+02
original_gldm_LowGrayLevelEmphasis	1.525e+02
original_gldm_SmallDependenceEmphasis	-9.711e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	-1.366e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	-1.310e+01
original_glrlm_GrayLevelNonUniformity	1.870e+00
original_glrlm_GrayLevelNonUniformityNormalized	1.519e+01
original_glrlm_GrayLevelVariance	-5.903e+02
original_glrlm_HighGrayLevelRunEmphasis	5.818e+02
original_glrlm_LongRunEmphasis	-8.562e+01
original_glrlm_LongRunHighGrayLevelEmphasis	5.199e+00
original_glrlm_LongRunLowGrayLevelEmphasis	2.682e+01
original_glrlm_LowGrayLevelRunEmphasis	-9.506e+02
original_glrlm_RunEntropy	1.076e+02
original_glrlm_RunLengthNonUniformity	-7.532e+01
original_glrlm_RunLengthNonUniformityNormalized	5.643e+01
original_glrlm_RunPercentage	-5.392e+01

original_glrlm_RunVariance	3.901e+01
original_glrlm_ShortRunEmphasis	-2.186e+01
original_glrlm_ShortRunHighGrayLevelEmphasis	1.134e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	6.829e+02
original_glszm_GrayLevelNonUniformity	2.091e+01
original_glszm_GrayLevelNonUniformityNormalized	2.228e+00
original_glszm_GrayLevelVariance	4.202e+01
original_glszm_HighGrayLevelZoneEmphasis	1.456e+01
original_glszm_LargeAreaEmphasis	-1.718e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	-2.595e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	-7.118e+00
original_glszm_LowGrayLevelZoneEmphasis	2.996e+01
original_glszm_SizeZoneNonUniformity	-6.475e+00
original_glszm_SizeZoneNonUniformityNormalized	-3.181e+01
original_glszm_SmallAreaEmphasis	4.171e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	-4.764e+01
original_glszm_SmallAreaLowGrayLevelEmphasis	-1.027e+01
original_glszm_ZoneEntropy	4.528e+00
original_glszm_ZonePercentage	-4.635e+00
original_glszm_ZoneVariance	1.720e+03
original_ngtdm_Busyness	2.791e+00
original_ngtdm_Coarseness	1.765e+01
original_ngtdm_Complexity	-1.184e+01
original_ngtdm_Contrast	-3.027e+01
original_ngtdm_Strength	-8.717e+00
original_shape_Elongation	4.279e+00
original_shape_Flatness	-9.417e+00
original_shape_LeastAxisLength	2.950e+01
original_shape_MajorAxisLength	1.765e+01
original_shape_Maximum2DDiameterColumn	-1.213e+01
original_shape_Maximum2DDiameterRow	-1.911e+01
original_shape_Maximum2DDiameterSlice	-8.064e+00
original_shape_Maximum3DDiameter	1.102e+01
original_shape_MeshVolume	-1.442e+03
original_shape_MinorAxisLength	3.643e+00
original_shape_Sphericity	-7.596e-01
original_shape_SurfaceArea	-3.708e+01
original_shape_SurfaceVolumeRatio	6.595e+01
original_shape_VoxelVolume	1.442e+03
	exp(coef)
original_firstorder_10Percentile	4.050e+34
original_firstorder_90Percentile	1.086e-17
original_firstorder_Energy	2.034e+23
original_firstorder_Entropy	9.658e-66
original_firstorder_InterquartileRange	1.957e-42
original_firstorder_Kurtosis	1.029e+04
original_firstorder_Maximum	1.382e-02
original_firstorder_Mean	6.235e+03
original_firstorder_MeanAbsoluteDeviation	4.635e-15
original_firstorder_Median	7.649e+11
original_firstorder_Minimum	1.687e-04
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	3.485e+65
original_firstorder_RootMeanSquared	9.104e-32
original_firstorder_Skewness	6.750e+05
original_firstorder_TotalEnergy	1.000e+00

```
original_firstorder_Uniformity                          2.380e-34
original_firstorder_Variance                                 Inf
original_glcm_Autocorrelation                                Inf
original_glcm_ClusterProminence                              Inf
original_glcm_ClusterShade                             9.045e+217
original_glcm_ClusterTendency                           3.137e-69
original_glcm_Contrast                                  0.000e+00
original_glcm_Correlation                               9.240e+03
original_glcm_DifferenceAverage                        5.528e+294
original_glcm_DifferenceEntropy                         3.863e-22
original_glcm_DifferenceVariance                             Inf
original_glcm_Id                                             Inf
original_glcm_Idm                                       0.000e+00
original_glcm_Idmn                                      5.289e+14
original_glcm_Idn                                       4.263e-19
original_glcm_Imc1                                      2.143e-09
original_glcm_Imc2                                      1.377e-19
original_glcm_InverseVariance                           2.144e+60
original_glcm_JointAverage                              1.801e+03
original_glcm_JointEnergy                               3.016e+22
original_glcm_JointEntropy                              1.964e-01
original_glcm_MCC                                       2.555e+00
original_glcm_MaximumProbability                        1.646e-01
original_glcm_SumAverage                                1.000e+00
original_glcm_SumEntropy                                4.114e+19
original_glcm_SumSquares                                1.000e+00
original_gldm_DependenceEntropy                         3.269e+13
original_gldm_DependenceNonUniformity                   1.434e+40
original_gldm_DependenceNonUniformityNormalized         8.023e+04
original_gldm_DependenceVariance                        9.765e-06
original_gldm_GrayLevelNonUniformity                    5.471e-18
original_gldm_GrayLevelVariance                         3.044e+51
original_gldm_HighGrayLevelEmphasis                     0.000e+00
original_gldm_LargeDependenceEmphasis                   3.605e-08
original_gldm_LargeDependenceHighGrayLevelEmphasis      1.135e+13
original_gldm_LargeDependenceLowGrayLevelEmphasis       1.931e+55
original_gldm_LowGrayLevelEmphasis                      1.677e+66
original_gldm_SmallDependenceEmphasis                   6.064e-05
original_gldm_SmallDependenceHighGrayLevelEmphasis      2.551e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis       2.052e-06
original_glrlm_GrayLevelNonUniformity                   6.488e+00
original_glrlm_GrayLevelNonUniformityNormalized         3.956e+06
original_glrlm_GrayLevelVariance                       4.149e-257
original_glrlm_HighGrayLevelRunEmphasis                4.570e+252
original_glrlm_LongRunEmphasis                          6.546e-38
original_glrlm_LongRunHighGrayLevelEmphasis             1.810e+02
original_glrlm_LongRunLowGrayLevelEmphasis              4.423e+11
original_glrlm_LowGrayLevelRunEmphasis                  0.000e+00
original_glrlm_RunEntropy                               5.556e+46
original_glrlm_RunLengthNonUniformity                   1.953e-33
original_glrlm_RunLengthNonUniformityNormalized         3.204e+24
original_glrlm_RunPercentage                            3.826e-24
original_glrlm_RunVariance                              8.768e+16
original_glrlm_ShortRunEmphasis                         3.220e-10
original_glrlm_ShortRunHighGrayLevelEmphasis            1.738e+49
original_glrlm_ShortRunLowGrayLevelEmphasis            3.620e+296
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original_glszm_GrayLevelNonUniformity              1.203e+09
original_glszm_GrayLevelNonUniformityNormalized    9.281e+00
original_glszm_GrayLevelVariance                   1.780e+18
original_glszm_HighGrayLevelZoneEmphasis           2.101e+06
original_glszm_LargeAreaEmphasis                   0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis      7.466e-02
original_glszm_LargeAreaLowGrayLevelEmphasis       8.100e-04
original_glszm_LowGrayLevelZoneEmphasis            1.024e+13
original_glszm_SizeZoneNonUniformity               1.541e-03
original_glszm_SizeZoneNonUniformityNormalized     1.526e-14
original_glszm_SmallAreaEmphasis                   1.299e+18
original_glszm_SmallAreaHighGrayLevelEmphasis      2.046e-21
original_glszm_SmallAreaLowGrayLevelEmphasis       3.467e-05
original_glszm_ZoneEntropy                         9.254e+01
original_glszm_ZonePercentage                      9.706e-03
original_glszm_ZoneVariance                             Inf
original_ngtdm_Busyness                            1.630e+01
original_ngtdm_Coarseness                          4.642e+07
original_ngtdm_Complexity                          7.175e-06
original_ngtdm_Contrast                            7.112e-14
original_ngtdm_Strength                            1.637e-04
original_shape_Elongation                          7.220e+01
original_shape_Flatness                            8.135e-05
original_shape_LeastAxisLength                     6.489e+12
original_shape_MajorAxisLength                     4.636e+07
original_shape_Maximum2DDiameterColumn             5.416e-06
original_shape_Maximum2DDiameterRow                5.015e-09
original_shape_Maximum2DDiameterSlice              3.146e-04
original_shape_Maximum3DDiameter                   6.082e+04
original_shape_MeshVolume                          0.000e+00
original_shape_MinorAxisLength                     3.819e+01
original_shape_Sphericity                          4.679e-01
original_shape_SurfaceArea                         7.908e-17
original_shape_SurfaceVolumeRatio                  4.394e+28
original_shape_VoxelVolume                             Inf
                                                   se(coef)
original_firstorder_10Percentile                   3.500e+00
original_firstorder_90Percentile                   2.483e+00
original_firstorder_Energy                         1.059e+01
original_firstorder_Entropy                        2.583e+00
original_firstorder_InterquartileRange             1.135e+01
original_firstorder_Kurtosis                       8.278e-01
original_firstorder_Maximum                        3.843e+00
original_firstorder_Mean                           2.025e+00
original_firstorder_MeanAbsoluteDeviation          5.526e+00
original_firstorder_Median                         1.714e+00
original_firstorder_Minimum                        1.323e+00
original_firstorder_Range                          1.900e+00
original_firstorder_RobustMeanAbsoluteDeviation    1.089e+01
original_firstorder_RootMeanSquared                3.903e+00
original_firstorder_Skewness                       1.864e+00
original_firstorder_TotalEnergy                    1.059e+01
original_firstorder_Uniformity                     2.775e+00
original_firstorder_Variance                       1.548e+01
original_glcm_Autocorrelation                      1.409e+00
original_glcm_ClusterProminence                    7.323e+02
```

original_glcm_ClusterShade	8.447e+01
original_glcm_ClusterTendency	3.070e+01
original_glcm_Contrast	3.750e+01
original_glcm_Correlation	1.836e+00
original_glcm_DifferenceAverage	5.455e+00
original_glcm_DifferenceEntropy	3.080e+00
original_glcm_DifferenceVariance	3.897e+01
original_glcm_Id	3.516e+00
original_glcm_Idm	3.424e+00
original_glcm_Idmn	8.524e-01
original_glcm_Idn	9.062e-01
original_glcm_Imc1	2.187e+00
original_glcm_Imc2	1.648e+00
original_glcm_InverseVariance	2.419e+00
original_glcm_JointAverage	1.337e+00
original_glcm_JointEnergy	3.580e+00
original_glcm_JointEntropy	3.164e+00
original_glcm_MCC	1.196e+00
original_glcm_MaximumProbability	2.978e+00
original_glcm_SumAverage	1.337e+00
original_glcm_SumEntropy	2.952e+00
original_glcm_SumSquares	3.296e+01
original_gldm_DependenceEntropy	3.164e+00
original_gldm_DependenceNonUniformity	2.477e+00
original_gldm_DependenceNonUniformityNormalized	3.104e+00
original_gldm_DependenceVariance	2.538e+00
original_gldm_GrayLevelNonUniformity	2.834e+00
original_gldm_GrayLevelVariance	1.587e+01
original_gldm_HighGrayLevelEmphasis	1.420e+00
original_gldm_LargeDependenceEmphasis	2.292e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.007e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	8.203e+00
original_gldm_LowGrayLevelEmphasis	3.265e+00
original_gldm_SmallDependenceEmphasis	1.869e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.460e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	6.671e-01
original_glrlm_GrayLevelNonUniformity	2.357e+00
original_glrlm_GrayLevelNonUniformityNormalized	2.486e+00
original_glrlm_GrayLevelVariance	1.320e+01
original_glrlm_HighGrayLevelRunEmphasis	1.410e+00
original_glrlm_LongRunEmphasis	4.207e+00
original_glrlm_LongRunHighGrayLevelEmphasis	2.586e+00
original_glrlm_LongRunLowGrayLevelEmphasis	9.244e+00
original_glrlm_LowGrayLevelRunEmphasis	3.012e+00
original_glrlm_RunEntropy	2.601e+00
original_glrlm_RunLengthNonUniformity	1.848e+00
original_glrlm_RunLengthNonUniformityNormalized	2.062e+00
original_glrlm_RunPercentage	2.127e+00
original_glrlm_RunVariance	5.434e+00
original_glrlm_ShortRunEmphasis	1.998e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.262e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	2.494e+00
original_glszm_GrayLevelNonUniformity	9.453e-01
original_glszm_GrayLevelNonUniformityNormalized	1.251e+00
original_glszm_GrayLevelVariance	4.722e+00
original_glszm_HighGrayLevelZoneEmphasis	1.349e+00

original_glszm_LargeAreaEmphasis	3.093e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	4.807e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	7.667e+00
original_glszm_LowGrayLevelZoneEmphasis	1.879e+00
original_glszm_SizeZoneNonUniformity	1.964e+00
original_glszm_SizeZoneNonUniformityNormalized	1.627e+00
original_glszm_SmallAreaEmphasis	1.580e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.573e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.288e+00
original_glszm_ZoneEntropy	1.013e+00
original_glszm_ZonePercentage	1.685e+00
original_glszm_ZoneVariance	3.090e+00
original_ngtdm_Busyness	3.436e+00
original_ngtdm_Coarseness	3.166e-01
original_ngtdm_Complexity	5.675e+00
original_ngtdm_Contrast	3.295e+00
original_ngtdm_Strength	5.576e+00
original_shape_Elongation	6.367e-01
original_shape_Flatness	1.084e+00
original_shape_LeastAxisLength	9.233e-01
original_shape_MajorAxisLength	8.159e-01
original_shape_Maximum2DDiameterColumn	9.353e-01
original_shape_Maximum2DDiameterRow	9.996e-01
original_shape_Maximum2DDiameterSlice	1.061e+00
original_shape_Maximum3DDiameter	9.759e-01
original_shape_MeshVolume	3.039e+00
original_shape_MinorAxisLength	1.233e+00
original_shape_Sphericity	1.494e+00
original_shape_SurfaceArea	1.581e+00
original_shape_SurfaceVolumeRatio	2.206e+00
original_shape_VoxelVolume	2.974e+00

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original_firstorder_10Percentile	22.770
original_firstorder_90Percentile	-15.732
original_firstorder_Energy	5.068
original_firstorder_Entropy	-57.959
original_firstorder_InterquartileRange	-8.465
original_firstorder_Kurtosis	11.160
original_firstorder_Maximum	-1.114
original_firstorder_Mean	4.315
original_firstorder_MeanAbsoluteDeviation	-5.972
original_firstorder_Median	15.963
original_firstorder_Minimum	-6.566
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	13.857
original_firstorder_RootMeanSquared	-18.312
original_firstorder_Skewness	7.201
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	-27.903
original_firstorder_Variance	55.619
original_glcm_Autocorrelation	771.352
original_glcm_ClusterProminence	6.658
original_glcm_ClusterShade	5.941
original_glcm_ClusterTendency	-5.137
original_glcm_Contrast	-109.528
original_glcm_Correlation	4.973

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original_glcm_DifferenceAverage                             124.403
original_glcm_DifferenceEntropy                             -16.006
original_glcm_DifferenceVariance                            72.586
original_glcm_Id                                            455.528
original_glcm_Idm                                          -373.573
original_glcm_Idmn                                          39.774
original_glcm_Idn                                          -46.679
original_glcm_Imc1                                          -9.126
original_glcm_Imc2                                         -26.354
original_glcm_InverseVariance                              57.418
original_glcm_JointAverage                                  5.609
original_glcm_JointEnergy                                  14.457
original_glcm_JointEntropy                                 -0.514
original_glcm_MCC                                           0.784
original_glcm_MaximumProbability                          -0.606
original_glcm_SumAverage                                    0.000
original_glcm_SumEntropy                                   15.299
original_glcm_SumSquares                                    0.000
original_gldm_DependenceEntropy                             9.836
original_gldm_DependenceNonUniformity                      37.328
original_gldm_DependenceNonUniformityNormalized            3.638
original_gldm_DependenceVariance                           -4.546
original_gldm_GrayLevelNonUniformity                      -14.023
original_gldm_GrayLevelVariance                            7.471
original_gldm_HighGrayLevelEmphasis                      -1254.749
original_gldm_LargeDependenceEmphasis                      -7.478
original_gldm_LargeDependenceHighGrayLevelEmphasis         9.997
original_gldm_LargeDependenceLowGrayLevelEmphasis         15.519
original_gldm_LowGrayLevelEmphasis                        46.701
original_gldm_SmallDependenceEmphasis                      -5.196
original_gldm_SmallDependenceHighGrayLevelEmphasis        -0.936
original_gldm_SmallDependenceLowGrayLevelEmphasis        -19.632
original_glrlm_GrayLevelNonUniformity                      0.793
original_glrlm_GrayLevelNonUniformityNormalized            6.110
original_glrlm_GrayLevelVariance                          -44.731
original_glrlm_HighGrayLevelRunEmphasis                   412.686
original_glrlm_LongRunEmphasis                            -20.354
original_glrlm_LongRunHighGrayLevelEmphasis                2.010
original_glrlm_LongRunLowGrayLevelEmphasis                 2.901
original_glrlm_LowGrayLevelRunEmphasis                   -315.624
original_glrlm_RunEntropy                                  41.382
original_glrlm_RunLengthNonUniformity                     -40.758
original_glrlm_RunLengthNonUniformityNormalized           27.362
original_glrlm_RunPercentage                              -25.349
original_glrlm_RunVariance                                 7.179
original_glrlm_ShortRunEmphasis                           -10.938
original_glrlm_ShortRunHighGrayLevelEmphasis              89.868
original_glrlm_ShortRunLowGrayLevelEmphasis              273.845
original_glszm_GrayLevelNonUniformity                     22.118
original_glszm_GrayLevelNonUniformityNormalized            1.781
original_glszm_GrayLevelVariance                           8.900
original_glszm_HighGrayLevelZoneEmphasis                  10.795
original_glszm_LargeAreaEmphasis                         -555.355
original_glszm_LargeAreaHighGrayLevelEmphasis             -0.540
original_glszm_LargeAreaLowGrayLevelEmphasis              -0.928
original_glszm_LowGrayLevelZoneEmphasis                   15.941
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original_glszm_SizeZoneNonUniformity                    -3.297
original_glszm_SizeZoneNonUniformityNormalized         -19.558
original_glszm_SmallAreaEmphasis                        26.391
original_glszm_SmallAreaHighGrayLevelEmphasis          -30.293
original_glszm_SmallAreaLowGrayLevelEmphasis            -7.975
original_glszm_ZoneEntropy                               4.468
original_glszm_ZonePercentage                           -2.751
original_glszm_ZoneVariance                            556.545
original_ngtdm_Busyness                                  0.812
original_ngtdm_Coarseness                               55.754
original_ngtdm_Complexity                               -2.087
original_ngtdm_Contrast                                 -9.188
original_ngtdm_Strength                                 -1.563
original_shape_Elongation                                6.721
original_shape_Flatness                                 -8.687
original_shape_LeastAxisLength                          31.953
original_shape_MajorAxisLength                          21.635
original_shape_Maximum2DDiameterColumn                 -12.965
original_shape_Maximum2DDiameterRow                    -19.119
original_shape_Maximum2DDiameterSlice                   -7.599
original_shape_Maximum3DDiameter                        11.288
original_shape_MeshVolume                             -474.574
original_shape_MinorAxisLength                           2.955
original_shape_Sphericity                               -0.509
original_shape_SurfaceArea                             -23.458
original_shape_SurfaceVolumeRatio                       29.897
original_shape_VoxelVolume                             484.899
                                                             p
original_firstorder_10Percentile                      < 2e-16
original_firstorder_90Percentile                      < 2e-16
original_firstorder_Energy                           4.03e-07
original_firstorder_Entropy                           < 2e-16
original_firstorder_InterquartileRange                < 2e-16
original_firstorder_Kurtosis                          < 2e-16
original_firstorder_Maximum                          0.265210
original_firstorder_Mean                             1.60e-05
original_firstorder_MeanAbsoluteDeviation            2.34e-09
original_firstorder_Median                            < 2e-16
original_firstorder_Minimum                          5.19e-11
original_firstorder_Range                            1.000000
original_firstorder_RobustMeanAbsoluteDeviation       < 2e-16
original_firstorder_RootMeanSquared                   < 2e-16
original_firstorder_Skewness                         5.97e-13
original_firstorder_TotalEnergy                      1.000000
original_firstorder_Uniformity                        < 2e-16
original_firstorder_Variance                          < 2e-16
original_glcm_Autocorrelation                         < 2e-16
original_glcm_ClusterProminence                      2.79e-11
original_glcm_ClusterShade                           2.83e-09
original_glcm_ClusterTendency                        2.78e-07
original_glcm_Contrast                                < 2e-16
original_glcm_Correlation                            6.60e-07
original_glcm_DifferenceAverage                       < 2e-16
original_glcm_DifferenceEntropy                       < 2e-16
original_glcm_DifferenceVariance                      < 2e-16
original_glcm_Id                                      < 2e-16
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original_glcm_Idm                                        < 2e-16
original_glcm_Idmn                                       < 2e-16
original_glcm_Idn                                        < 2e-16
original_glcm_Imc1                                       < 2e-16
original_glcm_Imc2                                       < 2e-16
original_glcm_InverseVariance                            < 2e-16
original_glcm_JointAverage                              2.04e-08
original_glcm_JointEnergy                                < 2e-16
original_glcm_JointEntropy                             0.606946
original_glcm_MCC                                       0.432946
original_glcm_MaximumProbability                       0.544685
original_glcm_SumAverage                               1.000000
original_glcm_SumEntropy                                < 2e-16
original_glcm_SumSquares                               1.000000
original_gldm_DependenceEntropy                          < 2e-16
original_gldm_DependenceNonUniformity                    < 2e-16
original_gldm_DependenceNonUniformityNormalized        0.000275
original_gldm_DependenceVariance                       5.46e-06
original_gldm_GrayLevelNonUniformity                     < 2e-16
original_gldm_GrayLevelVariance                        7.95e-14
original_gldm_HighGrayLevelEmphasis                      < 2e-16
original_gldm_LargeDependenceEmphasis                  7.54e-14
original_gldm_LargeDependenceHighGrayLevelEmphasis       < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis        < 2e-16
original_gldm_LowGrayLevelEmphasis                       < 2e-16
original_gldm_SmallDependenceEmphasis                  2.03e-07
original_gldm_SmallDependenceHighGrayLevelEmphasis     0.349475
original_gldm_SmallDependenceLowGrayLevelEmphasis        < 2e-16
original_glrlm_GrayLevelNonUniformity                  0.427661
original_glrlm_GrayLevelNonUniformityNormalized        9.94e-10
original_glrlm_GrayLevelVariance                         < 2e-16
original_glrlm_HighGrayLevelRunEmphasis                  < 2e-16
original_glrlm_LongRunEmphasis                           < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis            0.044411
original_glrlm_LongRunLowGrayLevelEmphasis             0.003722
original_glrlm_LowGrayLevelRunEmphasis                   < 2e-16
original_glrlm_RunEntropy                                < 2e-16
original_glrlm_RunLengthNonUniformity                    < 2e-16
original_glrlm_RunLengthNonUniformityNormalized          < 2e-16
original_glrlm_RunPercentage                             < 2e-16
original_glrlm_RunVariance                             7.03e-13
original_glrlm_ShortRunEmphasis                          < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis             < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis              < 2e-16
original_glszm_GrayLevelNonUniformity                    < 2e-16
original_glszm_GrayLevelNonUniformityNormalized        0.074913
original_glszm_GrayLevelVariance                         < 2e-16
original_glszm_HighGrayLevelZoneEmphasis                 < 2e-16
original_glszm_LargeAreaEmphasis                         < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis          0.589315
original_glszm_LargeAreaLowGrayLevelEmphasis           0.353153
original_glszm_LowGrayLevelZoneEmphasis                  < 2e-16
original_glszm_SizeZoneNonUniformity                   0.000979
original_glszm_SizeZoneNonUniformityNormalized           < 2e-16
original_glszm_SmallAreaEmphasis                         < 2e-16
original_glszm_SmallAreaHighGrayLevelEmphasis            < 2e-16
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original_glszm_SmallAreaLowGrayLevelEmphasis        1.52e-15
original_glszm_ZoneEntropy                          7.91e-06
original_glszm_ZonePercentage                       0.005938
original_glszm_ZoneVariance                          < 2e-16
original_ngtdm_Busyness                             0.416632
original_ngtdm_Coarseness                            < 2e-16
original_ngtdm_Complexity                           0.036877
original_ngtdm_Contrast                              < 2e-16
original_ngtdm_Strength                             0.117949
original_shape_Elongation                           1.80e-11
original_shape_Flatness                              < 2e-16
original_shape_LeastAxisLength                       < 2e-16
original_shape_MajorAxisLength                       < 2e-16
original_shape_Maximum2DDiameterColumn               < 2e-16
original_shape_Maximum2DDiameterRow                  < 2e-16
original_shape_Maximum2DDiameterSlice               2.99e-14
original_shape_Maximum3DDiameter                     < 2e-16
original_shape_MeshVolume                            < 2e-16
original_shape_MinorAxisLength                       0.003123
original_shape_Sphericity                           0.611043
original_shape_SurfaceArea                           < 2e-16
original_shape_SurfaceVolumeRatio                    < 2e-16
original_shape_VoxelVolume                           < 2e-16


Likelihood ratio test=81.64  on 107 df, p=0.9676
n= 246, number of events= 8


[[4]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                   5.757e+03
original_firstorder_90Percentile                  -6.385e+03
original_firstorder_Energy                         1.425e+03
original_firstorder_Entropy                       -4.266e+03
original_firstorder_InterquartileRange            -1.080e+04
original_firstorder_Kurtosis                       6.699e+02
original_firstorder_Maximum                       -9.927e+02
original_firstorder_Mean                          -4.242e+03
original_firstorder_MeanAbsoluteDeviation          1.284e+04
original_firstorder_Median                         4.516e+03
original_firstorder_Minimum                        3.113e+03
original_firstorder_Range                          0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation    1.039e+04
original_firstorder_RootMeanSquared                1.736e+03
original_firstorder_Skewness                      -1.179e+03
original_firstorder_TotalEnergy                    0.000e+00
original_firstorder_Uniformity                     1.013e+04
original_firstorder_Variance                      -1.937e+05
original_glcm_Autocorrelation                      1.648e+04
original_glcm_ClusterProminence                    1.602e+05
original_glcm_ClusterShade                         5.794e+03
original_glcm_ClusterTendency                     -1.844e+04
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original_glcm_Contrast                                    4.474e+05
original_glcm_Correlation                                 1.393e+03
original_glcm_DifferenceAverage                          -4.468e+04
original_glcm_DifferenceEntropy                           1.124e+04
original_glcm_DifferenceVariance                         -3.896e+05
original_glcm_Id                                         -8.946e+04
original_glcm_Idm                                         6.455e+04
original_glcm_Idmn                                       -3.728e+03
original_glcm_Idn                                         7.760e+03
original_glcm_Imc1                                        6.351e+02
original_glcm_Imc2                                       -7.867e+02
original_glcm_InverseVariance                           -1.160e+04
original_glcm_JointAverage                              -4.912e+03
original_glcm_JointEnergy                               -8.571e+03
original_glcm_JointEntropy                              -1.870e+04
original_glcm_MCC                                       -1.211e+03
original_glcm_MaximumProbability                         1.927e+03
original_glcm_SumAverage                                 0.000e+00
original_glcm_SumEntropy                                 1.495e+04
original_glcm_SumSquares                                 0.000e+00
original_gldm_DependenceEntropy                          7.167e+03
original_gldm_DependenceNonUniformity                   -1.581e+03
original_gldm_DependenceNonUniformityNormalized          4.526e+03
original_gldm_DependenceVariance                        -2.832e+03
original_gldm_GrayLevelNonUniformity                    -3.823e+03
original_gldm_GrayLevelVariance                          1.473e+05
original_gldm_HighGrayLevelEmphasis                     -6.628e+04
original_gldm_LargeDependenceEmphasis                    6.022e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis      -4.138e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis        5.257e+03
original_gldm_LowGrayLevelEmphasis                       6.911e+04
original_gldm_SmallDependenceEmphasis                    1.301e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis      -2.289e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis        1.083e+03
original_glrlm_GrayLevelNonUniformity                    6.138e+03
original_glrlm_GrayLevelNonUniformityNormalized         -7.478e+03
original_glrlm_GrayLevelVariance                         2.652e+04
original_glrlm_HighGrayLevelRunEmphasis                  5.530e+04
original_glrlm_LongRunEmphasis                          -1.457e+03
original_glrlm_LongRunHighGrayLevelEmphasis              2.470e+03
original_glrlm_LongRunLowGrayLevelEmphasis              -1.030e+04
original_glrlm_LowGrayLevelRunEmphasis                  -6.663e+04
original_glrlm_RunEntropy                               -1.560e+03
original_glrlm_RunLengthNonUniformity                   -1.734e+03
original_glrlm_RunLengthNonUniformityNormalized          0.000e+00
original_glrlm_RunPercentage                             0.000e+00
original_glrlm_RunVariance                              -1.525e+02
original_glrlm_ShortRunEmphasis                          0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis             0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis              0.000e+00
original_glszm_GrayLevelNonUniformity                   -2.805e+02
original_glszm_GrayLevelNonUniformityNormalized         -1.181e+02
original_glszm_GrayLevelVariance                         0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                 0.000e+00
original_glszm_LargeAreaEmphasis                        -1.988e+02
original_glszm_LargeAreaHighGrayLevelEmphasis            0.000e+00
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original_glszm_LargeAreaLowGrayLevelEmphasis        0.000e+00
original_glszm_LowGrayLevelZoneEmphasis             3.038e+03
original_glszm_SizeZoneNonUniformity                0.000e+00
original_glszm_SizeZoneNonUniformityNormalized      0.000e+00
original_glszm_SmallAreaEmphasis                    0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis       6.803e+01
original_glszm_SmallAreaLowGrayLevelEmphasis        0.000e+00
original_glszm_ZoneEntropy                          0.000e+00
original_glszm_ZonePercentage                       0.000e+00
original_glszm_ZoneVariance                         0.000e+00
original_ngtdm_Busyness                             6.079e+02
original_ngtdm_Coarseness                           8.557e+01
original_ngtdm_Complexity                           0.000e+00
original_ngtdm_Contrast                             0.000e+00
original_ngtdm_Strength                             0.000e+00
original_shape_Elongation                           5.412e+01
original_shape_Flatness                            -4.930e+01
original_shape_LeastAxisLength                      0.000e+00
original_shape_MajorAxisLength                     -5.066e+01
original_shape_Maximum2DDiameterColumn             -7.424e+01
original_shape_Maximum2DDiameterRow                 0.000e+00
original_shape_Maximum2DDiameterSlice               0.000e+00
original_shape_Maximum3DDiameter                    0.000e+00
original_shape_MeshVolume                           0.000e+00
original_shape_MinorAxisLength                      0.000e+00
original_shape_Sphericity                           0.000e+00
original_shape_SurfaceArea                          0.000e+00
original_shape_SurfaceVolumeRatio                   0.000e+00
original_shape_VoxelVolume                          0.000e+00
                                                     exp(coef)
original_firstorder_10Percentile                          Inf
original_firstorder_90Percentile                    0.000e+00
original_firstorder_Energy                                Inf
original_firstorder_Entropy                         0.000e+00
original_firstorder_InterquartileRange              0.000e+00
original_firstorder_Kurtosis                        8.962e+290
original_firstorder_Maximum                         0.000e+00
original_firstorder_Mean                            0.000e+00
original_firstorder_MeanAbsoluteDeviation                 Inf
original_firstorder_Median                                Inf
original_firstorder_Minimum                               Inf
original_firstorder_Range                           1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation           Inf
original_firstorder_RootMeanSquared                       Inf
original_firstorder_Skewness                        0.000e+00
original_firstorder_TotalEnergy                     1.000e+00
original_firstorder_Uniformity                            Inf
original_firstorder_Variance                        0.000e+00
original_glcm_Autocorrelation                             Inf
original_glcm_ClusterProminence                           Inf
original_glcm_ClusterShade                                Inf
original_glcm_ClusterTendency                       0.000e+00
original_glcm_Contrast                                    Inf
original_glcm_Correlation                                 Inf
original_glcm_DifferenceAverage                     0.000e+00
original_glcm_DifferenceEntropy                           Inf
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original_glcm_DifferenceVariance                      0.000e+00
original_glcm_Id                                      0.000e+00
original_glcm_Idm                                           Inf
original_glcm_Idmn                                    0.000e+00
original_glcm_Idn                                          Inf
original_glcm_Imc1                                   6.876e+275
original_glcm_Imc2                                    0.000e+00
original_glcm_InverseVariance                        0.000e+00
original_glcm_JointAverage                           0.000e+00
original_glcm_JointEnergy                            0.000e+00
original_glcm_JointEntropy                           0.000e+00
original_glcm_MCC                                     0.000e+00
original_glcm_MaximumProbability                          Inf
original_glcm_SumAverage                             1.000e+00
original_glcm_SumEntropy                                  Inf
original_glcm_SumSquares                             1.000e+00
original_gldm_DependenceEntropy                          Inf
original_gldm_DependenceNonUniformity                0.000e+00
original_gldm_DependenceNonUniformityNormalized          Inf
original_gldm_DependenceVariance                     0.000e+00
original_gldm_GrayLevelNonUniformity                 0.000e+00
original_gldm_GrayLevelVariance                          Inf
original_gldm_HighGrayLevelEmphasis                  0.000e+00
original_gldm_LargeDependenceEmphasis                    Inf
original_gldm_LargeDependenceHighGrayLevelEmphasis   0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis        Inf
original_gldm_LowGrayLevelEmphasis                       Inf
original_gldm_SmallDependenceEmphasis                    Inf
original_gldm_SmallDependenceHighGrayLevelEmphasis   4.036e-100
original_gldm_SmallDependenceLowGrayLevelEmphasis        Inf
original_glrlm_GrayLevelNonUniformity                    Inf
original_glrlm_GrayLevelNonUniformityNormalized      0.000e+00
original_glrlm_GrayLevelVariance                         Inf
original_glrlm_HighGrayLevelRunEmphasis                  Inf
original_glrlm_LongRunEmphasis                       0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis              Inf
original_glrlm_LongRunLowGrayLevelEmphasis           0.000e+00
original_glrlm_LowGrayLevelRunEmphasis               0.000e+00
original_glrlm_RunEntropy                            0.000e+00
original_glrlm_RunLengthNonUniformity                0.000e+00
original_glrlm_RunLengthNonUniformityNormalized      1.000e+00
original_glrlm_RunPercentage                         1.000e+00
original_glrlm_RunVariance                           5.703e-67
original_glrlm_ShortRunEmphasis                      1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis         1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis          1.000e+00
original_glszm_GrayLevelNonUniformity                1.499e-122
original_glszm_GrayLevelNonUniformityNormalized      5.007e-52
original_glszm_GrayLevelVariance                     1.000e+00
original_glszm_HighGrayLevelZoneEmphasis             1.000e+00
original_glszm_LargeAreaEmphasis                     4.402e-87
original_glszm_LargeAreaHighGrayLevelEmphasis        1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis         1.000e+00
original_glszm_LowGrayLevelZoneEmphasis                  Inf
original_glszm_SizeZoneNonUniformity                 1.000e+00
original_glszm_SizeZoneNonUniformityNormalized       1.000e+00
```

```
original_glszm_SmallAreaEmphasis                        1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis           3.496e+29
original_glszm_SmallAreaLowGrayLevelEmphasis            1.000e+00
original_glszm_ZoneEntropy                              1.000e+00
original_glszm_ZonePercentage                           1.000e+00
original_glszm_ZoneVariance                             1.000e+00
original_ngtdm_Busyness                                1.068e+264
original_ngtdm_Coarseness                               1.457e+37
original_ngtdm_Complexity                               1.000e+00
original_ngtdm_Contrast                                 1.000e+00
original_ngtdm_Strength                                 1.000e+00
original_shape_Elongation                               3.177e+23
original_shape_Flatness                                 3.882e-22
original_shape_LeastAxisLength                          1.000e+00
original_shape_MajorAxisLength                          1.000e-22
original_shape_Maximum2DDiameterColumn                  5.715e-33
original_shape_Maximum2DDiameterRow                     1.000e+00
original_shape_Maximum2DDiameterSlice                   1.000e+00
original_shape_Maximum3DDiameter                        1.000e+00
original_shape_MeshVolume                               1.000e+00
original_shape_MinorAxisLength                          1.000e+00
original_shape_Sphericity                               1.000e+00
original_shape_SurfaceArea                              1.000e+00
original_shape_SurfaceVolumeRatio                       1.000e+00
original_shape_VoxelVolume                              1.000e+00
                                                         se(coef)
original_firstorder_10Percentile                        1.425e+00
original_firstorder_90Percentile                        1.030e+00
original_firstorder_Energy                              8.731e-01
original_firstorder_Entropy                             1.463e+00
original_firstorder_InterquartileRange                  7.682e+00
original_firstorder_Kurtosis                            9.285e-01
original_firstorder_Maximum                             1.106e+00
original_firstorder_Mean                                1.066e+00
original_firstorder_MeanAbsoluteDeviation               3.736e+00
original_firstorder_Median                              7.091e-01
original_firstorder_Minimum                             1.775e+00
original_firstorder_Range                               1.196e+00
original_firstorder_RobustMeanAbsoluteDeviation         5.438e+00
original_firstorder_RootMeanSquared                     2.507e+00
original_firstorder_Skewness                            1.242e+00
original_firstorder_TotalEnergy                         8.731e-01
original_firstorder_Uniformity                          2.107e+00
original_firstorder_Variance                            1.097e+01
original_glcm_Autocorrelation                           1.193e+00
original_glcm_ClusterProminence                         1.409e+02
original_glcm_ClusterShade                              1.007e+02
original_glcm_ClusterTendency                           8.728e+00
original_glcm_Contrast                                  1.616e+01
original_glcm_Correlation                               1.274e+00
original_glcm_DifferenceAverage                         2.142e+00
original_glcm_DifferenceEntropy                         1.488e+00
original_glcm_DifferenceVariance                        1.863e+01
original_glcm_Id                                        1.532e+00
original_glcm_Idm                                       1.490e+00
original_glcm_Idmn                                      3.745e+00
```

original_glcm_Idn	1.955e+00
original_glcm_Imc1	7.541e-01
original_glcm_Imc2	1.006e+00
original_glcm_InverseVariance	2.610e+00
original_glcm_JointAverage	1.693e+00
original_glcm_JointEnergy	3.530e+00
original_glcm_JointEntropy	1.597e+00
original_glcm_MCC	1.543e+00
original_glcm_MaximumProbability	6.141e+00
original_glcm_SumAverage	1.693e+00
original_glcm_SumEntropy	1.404e+00
original_glcm_SumSquares	1.133e+01
original_gldm_DependenceEntropy	1.156e+00
original_gldm_DependenceNonUniformity	3.427e-01
original_gldm_DependenceNonUniformityNormalized	8.526e-01
original_gldm_DependenceVariance	4.986e-01
original_gldm_GrayLevelNonUniformity	3.768e-01
original_gldm_GrayLevelVariance	1.101e+01
original_gldm_HighGrayLevelEmphasis	1.185e+00
original_gldm_LargeDependenceEmphasis	5.734e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.844e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.724e+01
original_gldm_LowGrayLevelEmphasis	1.908e+01
original_gldm_SmallDependenceEmphasis	8.995e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	9.503e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis	6.785e+00
original_glrlm_GrayLevelNonUniformity	3.228e-01
original_glrlm_GrayLevelNonUniformityNormalized	3.181e+00
original_glrlm_GrayLevelVariance	1.474e+01
original_glrlm_HighGrayLevelRunEmphasis	1.175e+00
original_glrlm_LongRunEmphasis	1.300e+00
original_glrlm_LongRunHighGrayLevelEmphasis	6.418e-01
original_glrlm_LongRunLowGrayLevelEmphasis	7.137e+01
original_glrlm_LowGrayLevelRunEmphasis	1.859e+01
original_glrlm_RunEntropy	9.059e-01
original_glrlm_RunLengthNonUniformity	2.633e-01
original_glrlm_RunLengthNonUniformityNormalized	5.941e-01
original_glrlm_RunPercentage	5.749e-01
original_glrlm_RunVariance	1.756e+00
original_glrlm_ShortRunEmphasis	6.070e-01
original_glrlm_ShortRunHighGrayLevelEmphasis	1.559e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.389e+01
original_glszm_GrayLevelNonUniformity	2.115e-01
original_glszm_GrayLevelNonUniformityNormalized	2.695e+00
original_glszm_GrayLevelVariance	3.539e+00
original_glszm_HighGrayLevelZoneEmphasis	1.036e+00
original_glszm_LargeAreaEmphasis	3.586e-01
original_glszm_LargeAreaHighGrayLevelEmphasis	2.361e-01
original_glszm_LargeAreaLowGrayLevelEmphasis	4.536e+00
original_glszm_LowGrayLevelZoneEmphasis	1.317e+01
original_glszm_SizeZoneNonUniformity	4.507e-01
original_glszm_SizeZoneNonUniformityNormalized	1.089e+00
original_glszm_SmallAreaEmphasis	1.190e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.094e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	9.463e+00
original_glszm_ZoneEntropy	2.490e+00

```
original_glszm_ZonePercentage                        9.994e-01
original_glszm_ZoneVariance                          3.580e-01
original_ngtdm_Busyness                              2.932e+00
original_ngtdm_Coarseness                            8.663e+00
original_ngtdm_Complexity                            5.678e+00
original_ngtdm_Contrast                              1.778e+01
original_ngtdm_Strength                              7.246e+00
original_shape_Elongation                            1.099e+00
original_shape_Flatness                              1.018e+00
original_shape_LeastAxisLength                       4.341e-01
original_shape_MajorAxisLength                       8.804e-01
original_shape_Maximum2DDiameterColumn               8.311e-01
original_shape_Maximum2DDiameterRow                  5.975e-01
original_shape_Maximum2DDiameterSlice                5.700e-01
original_shape_Maximum3DDiameter                     5.221e-01
original_shape_MeshVolume                            3.117e-01
original_shape_MinorAxisLength                       5.665e-01
original_shape_Sphericity                            7.891e-01
original_shape_SurfaceArea                           2.231e-01
original_shape_SurfaceVolumeRatio                    6.232e-01
original_shape_VoxelVolume                           3.117e-01
                                                             z
original_firstorder_10Percentile                      4040.789
original_firstorder_90Percentile                     -6199.681
original_firstorder_Energy                            1632.165
original_firstorder_Entropy                          -2915.766
original_firstorder_InterquartileRange               -1405.955
original_firstorder_Kurtosis                           721.505
original_firstorder_Maximum                           -897.683
original_firstorder_Mean                             -3978.692
original_firstorder_MeanAbsoluteDeviation             3437.667
original_firstorder_Median                            6368.620
original_firstorder_Minimum                           1753.832
original_firstorder_Range                                0.000
original_firstorder_RobustMeanAbsoluteDeviation       1910.235
original_firstorder_RootMeanSquared                    692.688
original_firstorder_Skewness                          -949.759
original_firstorder_TotalEnergy                          0.000
original_firstorder_Uniformity                        4808.334
original_firstorder_Variance                        -17651.567
original_glcm_Autocorrelation                        13818.313
original_glcm_ClusterProminence                       1136.667
original_glcm_ClusterShade                              57.513
original_glcm_ClusterTendency                        -2112.236
original_glcm_Contrast                               27677.525
original_glcm_Correlation                             1093.320
original_glcm_DifferenceAverage                     -20859.677
original_glcm_DifferenceEntropy                       7552.410
original_glcm_DifferenceVariance                    -20905.375
original_glcm_Id                                    -58386.714
original_glcm_Idm                                    43308.665
original_glcm_Idmn                                     -995.435
original_glcm_Idn                                     3969.526
original_glcm_Imc1                                      842.263
original_glcm_Imc2                                     -782.313
original_glcm_InverseVariance                        -4445.558
```

original_glcm_JointAverage	-2901.204
original_glcm_JointEnergy	-2428.262
original_glcm_JointEntropy	-11706.278
original_glcm_MCC	-785.265
original_glcm_MaximumProbability	313.793
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	10651.061
original_glcm_SumSquares	0.000
original_gldm_DependenceEntropy	6197.596
original_gldm_DependenceNonUniformity	-4613.344
original_gldm_DependenceNonUniformityNormalized	5308.239
original_gldm_DependenceVariance	-5679.308
original_gldm_GrayLevelNonUniformity	-10146.068
original_gldm_GrayLevelVariance	13375.369
original_gldm_HighGrayLevelEmphasis	-55930.499
original_gldm_LargeDependenceEmphasis	10502.095
original_gldm_LargeDependenceHighGrayLevelEmphasis	-10765.302
original_gldm_LargeDependenceLowGrayLevelEmphasis	305.002
original_gldm_LowGrayLevelEmphasis	3621.473
original_gldm_SmallDependenceEmphasis	1446.544
original_gldm_SmallDependenceHighGrayLevelEmphasis	-240.823
original_gldm_SmallDependenceLowGrayLevelEmphasis	159.579
original_glrlm_GrayLevelNonUniformity	19017.084
original_glrlm_GrayLevelNonUniformityNormalized	-2350.349
original_glrlm_GrayLevelVariance	1799.472
original_glrlm_HighGrayLevelRunEmphasis	47060.622
original_glrlm_LongRunEmphasis	-1120.910
original_glrlm_LongRunHighGrayLevelEmphasis	3848.029
original_glrlm_LongRunLowGrayLevelEmphasis	-144.305
original_glrlm_LowGrayLevelRunEmphasis	-3583.147
original_glrlm_RunEntropy	-1722.109
original_glrlm_RunLengthNonUniformity	-6583.607
original_glrlm_RunLengthNonUniformityNormalized	0.000
original_glrlm_RunPercentage	0.000
original_glrlm_RunVariance	-86.841
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	-1326.571
original_glszm_GrayLevelNonUniformityNormalized	-43.834
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	-554.463
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	230.673
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	62.184
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	207.340
original_ngtdm_Coarseness	9.877

```
original_ngtdm_Complexity                                     0.000
original_ngtdm_Contrast                                       0.000
original_ngtdm_Strength                                       0.000
original_shape_Elongation                                    49.244
original_shape_Flatness                                     -48.436
original_shape_LeastAxisLength                                0.000
original_shape_MajorAxisLength                             -57.538
original_shape_Maximum2DDiameterColumn                    -89.325
original_shape_Maximum2DDiameterRow                          0.000
original_shape_Maximum2DDiameterSlice                        0.000
original_shape_Maximum3DDiameter                             0.000
original_shape_MeshVolume                                    0.000
original_shape_MinorAxisLength                               0.000
original_shape_Sphericity                                    0.000
original_shape_SurfaceArea                                   0.000
original_shape_SurfaceVolumeRatio                           0.000
original_shape_VoxelVolume                                   0.000
                                                             p
original_firstorder_10Percentile                          <2e-16
original_firstorder_90Percentile                          <2e-16
original_firstorder_Energy                                <2e-16
original_firstorder_Entropy                               <2e-16
original_firstorder_InterquartileRange                    <2e-16
original_firstorder_Kurtosis                              <2e-16
original_firstorder_Maximum                               <2e-16
original_firstorder_Mean                                  <2e-16
original_firstorder_MeanAbsoluteDeviation                 <2e-16
original_firstorder_Median                                <2e-16
original_firstorder_Minimum                               <2e-16
original_firstorder_Range                                      1
original_firstorder_RobustMeanAbsoluteDeviation           <2e-16
original_firstorder_RootMeanSquared                       <2e-16
original_firstorder_Skewness                              <2e-16
original_firstorder_TotalEnergy                                1
original_firstorder_Uniformity                            <2e-16
original_firstorder_Variance                              <2e-16
original_glcm_Autocorrelation                             <2e-16
original_glcm_ClusterProminence                           <2e-16
original_glcm_ClusterShade                                <2e-16
original_glcm_ClusterTendency                             <2e-16
original_glcm_Contrast                                    <2e-16
original_glcm_Correlation                                 <2e-16
original_glcm_DifferenceAverage                           <2e-16
original_glcm_DifferenceEntropy                           <2e-16
original_glcm_DifferenceVariance                          <2e-16
original_glcm_Id                                          <2e-16
original_glcm_Idm                                         <2e-16
original_glcm_Idmn                                        <2e-16
original_glcm_Idn                                         <2e-16
original_glcm_Imc1                                        <2e-16
original_glcm_Imc2                                        <2e-16
original_glcm_InverseVariance                             <2e-16
original_glcm_JointAverage                                <2e-16
original_glcm_JointEnergy                                 <2e-16
original_glcm_JointEntropy                                <2e-16
original_glcm_MCC                                         <2e-16
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original_glcm_MaximumProbability                       <2e-16
original_glcm_SumAverage                                    1
original_glcm_SumEntropy                               <2e-16
original_glcm_SumSquares                                    1
original_gldm_DependenceEntropy                        <2e-16
original_gldm_DependenceNonUniformity                  <2e-16
original_gldm_DependenceNonUniformityNormalized        <2e-16
original_gldm_DependenceVariance                       <2e-16
original_gldm_GrayLevelNonUniformity                   <2e-16
original_gldm_GrayLevelVariance                        <2e-16
original_gldm_HighGrayLevelEmphasis                    <2e-16
original_gldm_LargeDependenceEmphasis                  <2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis     <2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis      <2e-16
original_gldm_LowGrayLevelEmphasis                     <2e-16
original_gldm_SmallDependenceEmphasis                  <2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis     <2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis      <2e-16
original_glrlm_GrayLevelNonUniformity                  <2e-16
original_glrlm_GrayLevelNonUniformityNormalized        <2e-16
original_glrlm_GrayLevelVariance                       <2e-16
original_glrlm_HighGrayLevelRunEmphasis                <2e-16
original_glrlm_LongRunEmphasis                         <2e-16
original_glrlm_LongRunHighGrayLevelEmphasis            <2e-16
original_glrlm_LongRunLowGrayLevelEmphasis             <2e-16
original_glrlm_LowGrayLevelRunEmphasis                 <2e-16
original_glrlm_RunEntropy                              <2e-16
original_glrlm_RunLengthNonUniformity                  <2e-16
original_glrlm_RunLengthNonUniformityNormalized             1
original_glrlm_RunPercentage                                1
original_glrlm_RunVariance                             <2e-16
original_glrlm_ShortRunEmphasis                             1
original_glrlm_ShortRunHighGrayLevelEmphasis               1
original_glrlm_ShortRunLowGrayLevelEmphasis                1
original_glszm_GrayLevelNonUniformity                  <2e-16
original_glszm_GrayLevelNonUniformityNormalized        <2e-16
original_glszm_GrayLevelVariance                            1
original_glszm_HighGrayLevelZoneEmphasis                   1
original_glszm_LargeAreaEmphasis                       <2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis              1
original_glszm_LargeAreaLowGrayLevelEmphasis               1
original_glszm_LowGrayLevelZoneEmphasis                <2e-16
original_glszm_SizeZoneNonUniformity                       1
original_glszm_SizeZoneNonUniformityNormalized             1
original_glszm_SmallAreaEmphasis                           1
original_glszm_SmallAreaHighGrayLevelEmphasis          <2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis               1
original_glszm_ZoneEntropy                                 1
original_glszm_ZonePercentage                              1
original_glszm_ZoneVariance                                1
original_ngtdm_Busyness                                <2e-16
original_ngtdm_Coarseness                              <2e-16
original_ngtdm_Complexity                                  1
original_ngtdm_Contrast                                    1
original_ngtdm_Strength                                    1
original_shape_Elongation                              <2e-16
```

```
original_shape_Flatness                              <2e-16
original_shape_LeastAxisLength                             1
original_shape_MajorAxisLength                        <2e-16
original_shape_Maximum2DDiameterColumn                <2e-16
original_shape_Maximum2DDiameterRow                       1
original_shape_Maximum2DDiameterSlice                     1
original_shape_Maximum3DDiameter                          1
original_shape_MeshVolume                                 1
original_shape_MinorAxisLength                            1
original_shape_Sphericity                                 1
original_shape_SurfaceArea                                1
original_shape_SurfaceVolumeRatio                         1
original_shape_VoxelVolume                                1


Likelihood ratio test=206.8  on 107 df, p=2.448e-08
n= 63, number of events= 27


[[5]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                       coef
original_firstorder_10Percentile                  -1.947e+01
original_firstorder_90Percentile                   3.194e+02
original_firstorder_Energy                         7.004e+00
original_firstorder_Entropy                       -4.409e+01
original_firstorder_InterquartileRange            -3.767e+01
original_firstorder_Kurtosis                      -1.411e+02
original_firstorder_Maximum                       -7.876e+01
original_firstorder_Mean                          -5.025e+02
original_firstorder_MeanAbsoluteDeviation         -4.639e+02
original_firstorder_Median                         1.665e+02
original_firstorder_Minimum                        7.217e+01
original_firstorder_Range                          1.211e+02
original_firstorder_RobustMeanAbsoluteDeviation    2.131e+01
original_firstorder_RootMeanSquared                3.605e+01
original_firstorder_Skewness                       4.785e+01
original_firstorder_TotalEnergy                    0.000e+00
original_firstorder_Uniformity                     1.540e+01
original_firstorder_Variance                       9.105e+01
original_glcm_Autocorrelation                      2.630e+01
original_glcm_ClusterProminence                   -3.469e+01
original_glcm_ClusterShade                        -2.154e+02
original_glcm_ClusterTendency                     -1.147e+02
original_glcm_Contrast                             7.593e+02
original_glcm_Correlation                          9.116e-01
original_glcm_DifferenceAverage                   -1.766e+02
original_glcm_DifferenceEntropy                    6.074e+01
original_glcm_DifferenceVariance                  -3.982e+02
original_glcm_Id                                   2.264e+02
original_glcm_Idm                                 -2.545e+02
original_glcm_Idmn                                -1.018e+01
original_glcm_Idn                                  0.000e+00
original_glcm_Imc1                                -1.311e+00
```

```
original_glcm_Imc2                                      -3.482e+00
original_glcm_InverseVariance                           -1.395e-01
original_glcm_JointAverage                               4.295e+00
original_glcm_JointEnergy                                0.000e+00
original_glcm_JointEntropy                               0.000e+00
original_glcm_MCC                                        3.352e-01
original_glcm_MaximumProbability                         0.000e+00
original_glcm_SumAverage                                 0.000e+00
original_glcm_SumEntropy                                 0.000e+00
original_glcm_SumSquares                                 1.078e+01
original_gldm_DependenceEntropy                         -2.846e-01
original_gldm_DependenceNonUniformity                    1.492e-01
original_gldm_DependenceNonUniformityNormalized          3.559e-02
original_gldm_DependenceVariance                         2.228e-01
original_gldm_GrayLevelNonUniformity                     0.000e+00
original_gldm_GrayLevelVariance                          0.000e+00
original_gldm_HighGrayLevelEmphasis                      0.000e+00
original_gldm_LargeDependenceEmphasis                    0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis       0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis        0.000e+00
original_gldm_LowGrayLevelEmphasis                       0.000e+00
original_gldm_SmallDependenceEmphasis                   -1.255e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis       0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis        1.100e-01
original_glrlm_GrayLevelNonUniformity                    0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized          0.000e+00
original_glrlm_GrayLevelVariance                         0.000e+00
original_glrlm_HighGrayLevelRunEmphasis                  0.000e+00
original_glrlm_LongRunEmphasis                           0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis              0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis              -8.261e-01
original_glrlm_LowGrayLevelRunEmphasis                   0.000e+00
original_glrlm_RunEntropy                                0.000e+00
original_glrlm_RunLengthNonUniformity                    0.000e+00
original_glrlm_RunLengthNonUniformityNormalized          0.000e+00
original_glrlm_RunPercentage                             0.000e+00
original_glrlm_RunVariance                               0.000e+00
original_glrlm_ShortRunEmphasis                          0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis             0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis              0.000e+00
original_glszm_GrayLevelNonUniformity                    0.000e+00
original_glszm_GrayLevelNonUniformityNormalized          0.000e+00
original_glszm_GrayLevelVariance                         3.206e-01
original_glszm_HighGrayLevelZoneEmphasis                 8.887e-01
original_glszm_LargeAreaEmphasis                         0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis            0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis             0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                  0.000e+00
original_glszm_SizeZoneNonUniformity                     0.000e+00
original_glszm_SizeZoneNonUniformityNormalized           0.000e+00
original_glszm_SmallAreaEmphasis                         0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis           -1.242e+00
original_glszm_SmallAreaLowGrayLevelEmphasis            -1.120e-02
original_glszm_ZoneEntropy                               0.000e+00
original_glszm_ZonePercentage                            0.000e+00
original_glszm_ZoneVariance                              0.000e+00
```

original_ngtdm_Busyness	0.000e+00
original_ngtdm_Coarseness	5.010e-02
original_ngtdm_Complexity	0.000e+00
original_ngtdm_Contrast	0.000e+00
original_ngtdm_Strength	0.000e+00
original_shape_Elongation	0.000e+00
original_shape_Flatness	-2.167e-01
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	0.000e+00
original_shape_Maximum2DDiameterSlice	1.915e-01
original_shape_Maximum3DDiameter	0.000e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	3.499e-09
original_firstorder_90Percentile	4.963e+138
original_firstorder_Energy	1.101e+03
original_firstorder_Entropy	7.128e-20
original_firstorder_InterquartileRange	4.352e-17
original_firstorder_Kurtosis	5.401e-62
original_firstorder_Maximum	6.239e-35
original_firstorder_Mean	5.656e-219
original_firstorder_MeanAbsoluteDeviation	3.550e-202
original_firstorder_Median	2.141e+72
original_firstorder_Minimum	2.206e+31
original_firstorder_Range	3.812e+52
original_firstorder_RobustMeanAbsoluteDeviation	1.796e+09
original_firstorder_RootMeanSquared	4.510e+15
original_firstorder_Skewness	6.044e+20
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	4.896e+06
original_firstorder_Variance	3.499e+39
original_glcm_Autocorrelation	2.645e+11
original_glcm_ClusterProminence	8.614e-16
original_glcm_ClusterShade	2.874e-94
original_glcm_ClusterTendency	1.583e-50
original_glcm_Contrast	Inf
original_glcm_Correlation	2.488e+00
original_glcm_DifferenceAverage	1.929e-77
original_glcm_DifferenceEntropy	2.394e+26
original_glcm_DifferenceVariance	1.179e-173
original_glcm_Id	2.136e+98
original_glcm_Idm	2.835e-111
original_glcm_Idmn	3.810e-05
original_glcm_Idn	1.000e+00
original_glcm_Imc1	2.695e-01
original_glcm_Imc2	3.074e-02
original_glcm_InverseVariance	8.698e-01
original_glcm_JointAverage	7.334e+01
original_glcm_JointEnergy	1.000e+00

original_glcm_JointEntropy	1.000e+00
original_glcm_MCC	1.398e+00
original_glcm_MaximumProbability	1.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	1.000e+00
original_glcm_SumSquares	4.801e+04
original_gldm_DependenceEntropy	7.523e-01
original_gldm_DependenceNonUniformity	1.161e+00
original_gldm_DependenceNonUniformityNormalized	1.036e+00
original_gldm_DependenceVariance	1.250e+00
original_gldm_GrayLevelNonUniformity	1.000e+00
original_gldm_GrayLevelVariance	1.000e+00
original_gldm_HighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceEmphasis	1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.000e+00
original_gldm_LowGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceEmphasis	8.820e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.116e+00
original_glrlm_GrayLevelNonUniformity	1.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	1.000e+00
original_glrlm_GrayLevelVariance	1.000e+00
original_glrlm_HighGrayLevelRunEmphasis	1.000e+00
original_glrlm_LongRunEmphasis	1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	4.377e-01
original_glrlm_LowGrayLevelRunEmphasis	1.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.378e+00
original_glszm_HighGrayLevelZoneEmphasis	2.432e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	2.889e-01
original_glszm_SmallAreaLowGrayLevelEmphasis	9.889e-01
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.051e+00
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00

original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.000e+00
original_shape_Flatness	8.051e-01
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.211e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	2.329e+05
original_firstorder_90Percentile	4.684e+05
original_firstorder_Energy	1.054e+06
original_firstorder_Entropy	5.110e+05
original_firstorder_InterquartileRange	2.042e+05
original_firstorder_Kurtosis	2.792e+06
original_firstorder_Maximum	2.623e+05
original_firstorder_Mean	3.847e+05
original_firstorder_MeanAbsoluteDeviation	2.696e+05
original_firstorder_Median	4.523e+05
original_firstorder_Minimum	1.725e+06
original_firstorder_Range	3.428e+05
original_firstorder_RobustMeanAbsoluteDeviation	2.053e+05
original_firstorder_RootMeanSquared	2.523e+05
original_firstorder_Skewness	1.081e+06
original_firstorder_TotalEnergy	1.054e+06
original_firstorder_Uniformity	5.378e+05
original_firstorder_Variance	1.885e+05
original_glcm_Autocorrelation	1.317e+06
original_glcm_ClusterProminence	1.717e+05
original_glcm_ClusterShade	1.750e+05
original_glcm_ClusterTendency	1.872e+05
original_glcm_Contrast	1.770e+05
original_glcm_Correlation	3.638e+05
original_glcm_DifferenceAverage	3.084e+05
original_glcm_DifferenceEntropy	5.172e+05
original_glcm_DifferenceVariance	1.759e+05
original_glcm_Id	3.590e+05
original_glcm_Idm	3.551e+05
original_glcm_Idmn	4.637e+05
original_glcm_Idn	5.433e+05
original_glcm_Imc1	4.478e+05
original_glcm_Imc2	7.448e+05
original_glcm_InverseVariance	4.080e+05
original_glcm_JointAverage	1.691e+06
original_glcm_JointEnergy	5.579e+05
original_glcm_JointEntropy	4.902e+05
original_glcm_MCC	6.728e+05
original_glcm_MaximumProbability	4.183e+05
original_glcm_SumAverage	1.691e+06

```
original_glcm_SumEntropy                               5.388e+05
original_glcm_SumSquares                               1.837e+05
original_gldm_DependenceEntropy                        6.343e+05
original_gldm_DependenceNonUniformity                  2.669e+06
original_gldm_DependenceNonUniformityNormalized        6.536e+05
original_gldm_DependenceVariance                       4.382e+05
original_gldm_GrayLevelNonUniformity                   2.474e+06
original_gldm_GrayLevelVariance                        1.885e+05
original_gldm_HighGrayLevelEmphasis                    1.331e+06
original_gldm_LargeDependenceEmphasis                  7.021e+05
original_gldm_LargeDependenceHighGrayLevelEmphasis     6.505e+05
original_gldm_LargeDependenceLowGrayLevelEmphasis      2.010e+06
original_gldm_LowGrayLevelEmphasis                     4.481e+05
original_gldm_SmallDependenceEmphasis                  4.594e+05
original_gldm_SmallDependenceHighGrayLevelEmphasis     3.004e+05
original_gldm_SmallDependenceLowGrayLevelEmphasis      3.002e+05
original_glrlm_GrayLevelNonUniformity                  2.704e+06
original_glrlm_GrayLevelNonUniformityNormalized        5.953e+05
original_glrlm_GrayLevelVariance                       1.938e+05
original_glrlm_HighGrayLevelRunEmphasis                1.308e+06
original_glrlm_LongRunEmphasis                         1.098e+06
original_glrlm_LongRunHighGrayLevelEmphasis            9.100e+05
original_glrlm_LongRunLowGrayLevelEmphasis             1.627e+06
original_glrlm_LowGrayLevelRunEmphasis                 4.943e+05
original_glrlm_RunEntropy                              6.159e+05
original_glrlm_RunLengthNonUniformity                  1.642e+06
original_glrlm_RunLengthNonUniformityNormalized        7.964e+05
original_glrlm_RunPercentage                           7.092e+05
original_glrlm_RunVariance                             1.254e+06
original_glrlm_ShortRunEmphasis                        8.416e+05
original_glrlm_ShortRunHighGrayLevelEmphasis           1.005e+06
original_glrlm_ShortRunLowGrayLevelEmphasis            4.242e+05
original_glszm_GrayLevelNonUniformity                  1.379e+06
original_glszm_GrayLevelNonUniformityNormalized        1.898e+06
original_glszm_GrayLevelVariance                       2.698e+05
original_glszm_HighGrayLevelZoneEmphasis               1.042e+06
original_glszm_LargeAreaEmphasis                       8.946e+06
original_glszm_LargeAreaHighGrayLevelEmphasis          6.483e+06
original_glszm_LargeAreaLowGrayLevelEmphasis           9.520e+07
original_glszm_LowGrayLevelZoneEmphasis                1.693e+06
original_glszm_SizeZoneNonUniformity                   7.622e+05
original_glszm_SizeZoneNonUniformityNormalized         8.464e+05
original_glszm_SmallAreaEmphasis                       1.065e+06
original_glszm_SmallAreaHighGrayLevelEmphasis          8.390e+05
original_glszm_SmallAreaLowGrayLevelEmphasis           1.162e+06
original_glszm_ZoneEntropy                             7.529e+05
original_glszm_ZonePercentage                          4.354e+05
original_glszm_ZoneVariance                            8.939e+06
original_ngtdm_Busyness                                6.826e+06
original_ngtdm_Coarseness                              5.640e+05
original_ngtdm_Complexity                              2.009e+05
original_ngtdm_Contrast                                1.887e+05
original_ngtdm_Strength                                1.972e+05
original_shape_Elongation                              4.726e+05
original_shape_Flatness                                4.643e+05
original_shape_LeastAxisLength                         6.741e+05
```

original_shape_MajorAxisLength	5.047e+05
original_shape_Maximum2DDiameterColumn	8.950e+05
original_shape_Maximum2DDiameterRow	8.446e+05
original_shape_Maximum2DDiameterSlice	6.794e+05
original_shape_Maximum3DDiameter	7.571e+05
original_shape_MeshVolume	1.742e+06
original_shape_MinorAxisLength	1.028e+06
original_shape_Sphericity	5.351e+05
original_shape_SurfaceArea	2.612e+06
original_shape_SurfaceVolumeRatio	5.995e+05
original_shape_VoxelVolume	1.738e+06

	z
original_firstorder_10Percentile	0.000
original_firstorder_90Percentile	0.001
original_firstorder_Energy	0.000
original_firstorder_Entropy	0.000
original_firstorder_InterquartileRange	0.000
original_firstorder_Kurtosis	0.000
original_firstorder_Maximum	0.000
original_firstorder_Mean	-0.001
original_firstorder_MeanAbsoluteDeviation	-0.002
original_firstorder_Median	0.000
original_firstorder_Minimum	0.000
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	0.000
original_firstorder_RootMeanSquared	0.000
original_firstorder_Skewness	0.000
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	0.000
original_firstorder_Variance	0.000
original_glcm_Autocorrelation	0.000
original_glcm_ClusterProminence	0.000
original_glcm_ClusterShade	-0.001
original_glcm_ClusterTendency	-0.001
original_glcm_Contrast	0.004
original_glcm_Correlation	0.000
original_glcm_DifferenceAverage	-0.001
original_glcm_DifferenceEntropy	0.000
original_glcm_DifferenceVariance	-0.002
original_glcm_Id	0.001
original_glcm_Idm	-0.001
original_glcm_Idmn	0.000
original_glcm_Idn	0.000
original_glcm_Imc1	0.000
original_glcm_Imc2	0.000
original_glcm_InverseVariance	0.000
original_glcm_JointAverage	0.000
original_glcm_JointEnergy	0.000
original_glcm_JointEntropy	0.000
original_glcm_MCC	0.000
original_glcm_MaximumProbability	0.000
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	0.000
original_glcm_SumSquares	0.000
original_gldm_DependenceEntropy	0.000
original_gldm_DependenceNonUniformity	0.000

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original_gldm_DependenceNonUniformityNormalized      0.000
original_gldm_DependenceVariance                     0.000
original_gldm_GrayLevelNonUniformity                 0.000
original_gldm_GrayLevelVariance                      0.000
original_gldm_HighGrayLevelEmphasis                  0.000
original_gldm_LargeDependenceEmphasis                0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis   0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis    0.000
original_gldm_LowGrayLevelEmphasis                   0.000
original_gldm_SmallDependenceEmphasis                0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis   0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis    0.000
original_glrlm_GrayLevelNonUniformity                0.000
original_glrlm_GrayLevelNonUniformityNormalized      0.000
original_glrlm_GrayLevelVariance                     0.000
original_glrlm_HighGrayLevelRunEmphasis              0.000
original_glrlm_LongRunEmphasis                       0.000
original_glrlm_LongRunHighGrayLevelEmphasis          0.000
original_glrlm_LongRunLowGrayLevelEmphasis           0.000
original_glrlm_LowGrayLevelRunEmphasis               0.000
original_glrlm_RunEntropy                            0.000
original_glrlm_RunLengthNonUniformity                0.000
original_glrlm_RunLengthNonUniformityNormalized      0.000
original_glrlm_RunPercentage                         0.000
original_glrlm_RunVariance                           0.000
original_glrlm_ShortRunEmphasis                      0.000
original_glrlm_ShortRunHighGrayLevelEmphasis         0.000
original_glrlm_ShortRunLowGrayLevelEmphasis          0.000
original_glszm_GrayLevelNonUniformity                0.000
original_glszm_GrayLevelNonUniformityNormalized      0.000
original_glszm_GrayLevelVariance                     0.000
original_glszm_HighGrayLevelZoneEmphasis             0.000
original_glszm_LargeAreaEmphasis                     0.000
original_glszm_LargeAreaHighGrayLevelEmphasis        0.000
original_glszm_LargeAreaLowGrayLevelEmphasis         0.000
original_glszm_LowGrayLevelZoneEmphasis              0.000
original_glszm_SizeZoneNonUniformity                 0.000
original_glszm_SizeZoneNonUniformityNormalized       0.000
original_glszm_SmallAreaEmphasis                     0.000
original_glszm_SmallAreaHighGrayLevelEmphasis        0.000
original_glszm_SmallAreaLowGrayLevelEmphasis         0.000
original_glszm_ZoneEntropy                           0.000
original_glszm_ZonePercentage                        0.000
original_glszm_ZoneVariance                          0.000
original_ngtdm_Busyness                              0.000
original_ngtdm_Coarseness                            0.000
original_ngtdm_Complexity                            0.000
original_ngtdm_Contrast                              0.000
original_ngtdm_Strength                              0.000
original_shape_Elongation                            0.000
original_shape_Flatness                              0.000
original_shape_LeastAxisLength                       0.000
original_shape_MajorAxisLength                       0.000
original_shape_Maximum2DDiameterColumn               0.000
original_shape_Maximum2DDiameterRow                  0.000
original_shape_Maximum2DDiameterSlice                0.000
```

original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	1.000
original_firstorder_90Percentile	0.999
original_firstorder_Energy	1.000
original_firstorder_Entropy	1.000
original_firstorder_InterquartileRange	1.000
original_firstorder_Kurtosis	1.000
original_firstorder_Maximum	1.000
original_firstorder_Mean	0.999
original_firstorder_MeanAbsoluteDeviation	0.999
original_firstorder_Median	1.000
original_firstorder_Minimum	1.000
original_firstorder_Range	1.000
original_firstorder_RobustMeanAbsoluteDeviation	1.000
original_firstorder_RootMeanSquared	1.000
original_firstorder_Skewness	1.000
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	1.000
original_firstorder_Variance	1.000
original_glcm_Autocorrelation	1.000
original_glcm_ClusterProminence	1.000
original_glcm_ClusterShade	0.999
original_glcm_ClusterTendency	1.000
original_glcm_Contrast	0.997
original_glcm_Correlation	1.000
original_glcm_DifferenceAverage	1.000
original_glcm_DifferenceEntropy	1.000
original_glcm_DifferenceVariance	0.998
original_glcm_Id	0.999
original_glcm_Idm	0.999
original_glcm_Idmn	1.000
original_glcm_Idn	1.000
original_glcm_Imc1	1.000
original_glcm_Imc2	1.000
original_glcm_InverseVariance	1.000
original_glcm_JointAverage	1.000
original_glcm_JointEnergy	1.000
original_glcm_JointEntropy	1.000
original_glcm_MCC	1.000
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	1.000
original_glcm_SumSquares	1.000
original_gldm_DependenceEntropy	1.000
original_gldm_DependenceNonUniformity	1.000
original_gldm_DependenceNonUniformityNormalized	1.000
original_gldm_DependenceVariance	1.000
original_gldm_GrayLevelNonUniformity	1.000
original_gldm_GrayLevelVariance	1.000

```
original_gldm_HighGrayLevelEmphasis                      1.000
original_gldm_LargeDependenceEmphasis                    1.000
original_gldm_LargeDependenceHighGrayLevelEmphasis 1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis  1.000
original_gldm_LowGrayLevelEmphasis                       1.000
original_gldm_SmallDependenceEmphasis                    1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis 1.000
original_gldm_SmallDependenceLowGrayLevelEmphasis  1.000
original_glrlm_GrayLevelNonUniformity                    1.000
original_glrlm_GrayLevelNonUniformityNormalized          1.000
original_glrlm_GrayLevelVariance                         1.000
original_glrlm_HighGrayLevelRunEmphasis                  1.000
original_glrlm_LongRunEmphasis                           1.000
original_glrlm_LongRunHighGrayLevelEmphasis              1.000
original_glrlm_LongRunLowGrayLevelEmphasis               1.000
original_glrlm_LowGrayLevelRunEmphasis                   1.000
original_glrlm_RunEntropy                                1.000
original_glrlm_RunLengthNonUniformity                    1.000
original_glrlm_RunLengthNonUniformityNormalized          1.000
original_glrlm_RunPercentage                             1.000
original_glrlm_RunVariance                               1.000
original_glrlm_ShortRunEmphasis                          1.000
original_glrlm_ShortRunHighGrayLevelEmphasis             1.000
original_glrlm_ShortRunLowGrayLevelEmphasis              1.000
original_glszm_GrayLevelNonUniformity                    1.000
original_glszm_GrayLevelNonUniformityNormalized          1.000
original_glszm_GrayLevelVariance                         1.000
original_glszm_HighGrayLevelZoneEmphasis                 1.000
original_glszm_LargeAreaEmphasis                         1.000
original_glszm_LargeAreaHighGrayLevelEmphasis            1.000
original_glszm_LargeAreaLowGrayLevelEmphasis             1.000
original_glszm_LowGrayLevelZoneEmphasis                  1.000
original_glszm_SizeZoneNonUniformity                     1.000
original_glszm_SizeZoneNonUniformityNormalized           1.000
original_glszm_SmallAreaEmphasis                         1.000
original_glszm_SmallAreaHighGrayLevelEmphasis            1.000
original_glszm_SmallAreaLowGrayLevelEmphasis             1.000
original_glszm_ZoneEntropy                               1.000
original_glszm_ZonePercentage                            1.000
original_glszm_ZoneVariance                              1.000
original_ngtdm_Busyness                                  1.000
original_ngtdm_Coarseness                                1.000
original_ngtdm_Complexity                                1.000
original_ngtdm_Contrast                                  1.000
original_ngtdm_Strength                                  1.000
original_shape_Elongation                                1.000
original_shape_Flatness                                  1.000
original_shape_LeastAxisLength                           1.000
original_shape_MajorAxisLength                           1.000
original_shape_Maximum2DDiameterColumn                   1.000
original_shape_Maximum2DDiameterRow                      1.000
original_shape_Maximum2DDiameterSlice                    1.000
original_shape_Maximum3DDiameter                         1.000
original_shape_MeshVolume                                1.000
original_shape_MinorAxisLength                           1.000
original_shape_Sphericity                                1.000
```

```
original_shape_SurfaceArea                              1.000
original_shape_SurfaceVolumeRatio                       1.000
original_shape_VoxelVolume                              1.000


Likelihood ratio test=6.66   on 107 df, p=1
n= 29, number of events= 1


[[6]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                           coef
original_firstorder_10Percentile                       -3.021e+03
original_firstorder_90Percentile                        1.476e+03
original_firstorder_Energy                              4.125e+01
original_firstorder_Entropy                            -3.998e+02
original_firstorder_InterquartileRange                  5.495e+03
original_firstorder_Kurtosis                           -5.111e+01
original_firstorder_Maximum                            -1.221e+02
original_firstorder_Mean                               -5.619e+02
original_firstorder_MeanAbsoluteDeviation              -1.251e+03
original_firstorder_Median                              2.377e+02
original_firstorder_Minimum                            -3.719e+02
original_firstorder_Range                              -1.713e+02
original_firstorder_RobustMeanAbsoluteDeviation        -8.596e+03
original_firstorder_RootMeanSquared                     4.392e+02
original_firstorder_Skewness                            8.009e+01
original_firstorder_TotalEnergy                         0.000e+00
original_firstorder_Uniformity                         -2.558e+02
original_firstorder_Variance                            1.190e+04
original_glcm_Autocorrelation                          -3.572e+02
original_glcm_ClusterProminence                        -6.126e+03
original_glcm_ClusterShade                              4.831e+03
original_glcm_ClusterTendency                          -6.958e+03
original_glcm_Contrast                                  2.615e+04
original_glcm_Correlation                              -7.750e+01
original_glcm_DifferenceAverage                         1.506e+01
original_glcm_DifferenceEntropy                         2.645e+02
original_glcm_DifferenceVariance                       -3.332e+04
original_glcm_Id                                        7.107e+01
original_glcm_Idm                                      -3.497e+01
original_glcm_Idmn                                     -6.974e+01
original_glcm_Idn                                       7.815e+02
original_glcm_Imc1                                      0.000e+00
original_glcm_Imc2                                      3.827e+01
original_glcm_InverseVariance                          -3.577e+00
original_glcm_JointAverage                              0.000e+00
original_glcm_JointEnergy                               2.899e+01
original_glcm_JointEntropy                              0.000e+00
original_glcm_MCC                                       6.396e+00
original_glcm_MaximumProbability                        0.000e+00
original_glcm_SumAverage                                0.000e+00
original_glcm_SumEntropy                               -4.376e+01
original_glcm_SumSquares                               -2.272e+03
```

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original_gldm_DependenceEntropy                          -1.535e+01
original_gldm_DependenceNonUniformity                     1.796e+00
original_gldm_DependenceNonUniformityNormalized           0.000e+00
original_gldm_DependenceVariance                         -1.004e+00
original_gldm_GrayLevelNonUniformity                      0.000e+00
original_gldm_GrayLevelVariance                           0.000e+00
original_gldm_HighGrayLevelEmphasis                       8.271e+01
original_gldm_LargeDependenceEmphasis                     0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis        0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis         1.014e+02
original_gldm_LowGrayLevelEmphasis                        1.412e-01
original_gldm_SmallDependenceEmphasis                     0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis       -6.449e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis        -1.539e+00
original_glrlm_GrayLevelNonUniformity                     0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized           0.000e+00
original_glrlm_GrayLevelVariance                          0.000e+00
original_glrlm_HighGrayLevelRunEmphasis                   0.000e+00
original_glrlm_LongRunEmphasis                            0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis               0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis                0.000e+00
original_glrlm_LowGrayLevelRunEmphasis                    0.000e+00
original_glrlm_RunEntropy                                 0.000e+00
original_glrlm_RunLengthNonUniformity                     0.000e+00
original_glrlm_RunLengthNonUniformityNormalized           0.000e+00
original_glrlm_RunPercentage                              0.000e+00
original_glrlm_RunVariance                                0.000e+00
original_glrlm_ShortRunEmphasis                           0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis              0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis               0.000e+00
original_glszm_GrayLevelNonUniformity                    -2.676e+00
original_glszm_GrayLevelNonUniformityNormalized           0.000e+00
original_glszm_GrayLevelVariance                          0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                  0.000e+00
original_glszm_LargeAreaEmphasis                          0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis             0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis              1.690e+01
original_glszm_LowGrayLevelZoneEmphasis                   0.000e+00
original_glszm_SizeZoneNonUniformity                      0.000e+00
original_glszm_SizeZoneNonUniformityNormalized            0.000e+00
original_glszm_SmallAreaEmphasis                          0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis             0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis              0.000e+00
original_glszm_ZoneEntropy                                0.000e+00
original_glszm_ZonePercentage                             0.000e+00
original_glszm_ZoneVariance                               0.000e+00
original_ngtdm_Busyness                                  -6.518e+00
original_ngtdm_Coarseness                                 0.000e+00
original_ngtdm_Complexity                                 0.000e+00
original_ngtdm_Contrast                                   0.000e+00
original_ngtdm_Strength                                   0.000e+00
original_shape_Elongation                                -7.373e-01
original_shape_Flatness                                  -9.629e-02
original_shape_LeastAxisLength                            0.000e+00
original_shape_MajorAxisLength                            0.000e+00
original_shape_Maximum2DDiameterColumn                    2.519e+00
```

original_shape_Maximum2DDiameterRow	8.029e-01
original_shape_Maximum2DDiameterSlice	0.000e+00
original_shape_Maximum3DDiameter	0.000e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	0.000e+00
original_firstorder_90Percentile	Inf
original_firstorder_Energy	8.198e+17
original_firstorder_Entropy	2.274e-174
original_firstorder_InterquartileRange	Inf
original_firstorder_Kurtosis	6.371e-23
original_firstorder_Maximum	9.573e-54
original_firstorder_Mean	9.491e-245
original_firstorder_MeanAbsoluteDeviation	0.000e+00
original_firstorder_Median	1.673e+103
original_firstorder_Minimum	2.985e-162
original_firstorder_Range	3.988e-75
original_firstorder_RobustMeanAbsoluteDeviation	0.000e+00
original_firstorder_RootMeanSquared	5.360e+190
original_firstorder_Skewness	6.075e+34
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	7.770e-112
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	7.095e-156
original_glcm_ClusterProminence	0.000e+00
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	Inf
original_glcm_Correlation	2.190e-34
original_glcm_DifferenceAverage	3.473e+06
original_glcm_DifferenceEntropy	7.687e+114
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	7.349e+30
original_glcm_Idm	6.500e-16
original_glcm_Idmn	5.161e-31
original_glcm_Idn	Inf
original_glcm_Imc1	1.000e+00
original_glcm_Imc2	4.193e+16
original_glcm_InverseVariance	2.797e-02
original_glcm_JointAverage	1.000e+00
original_glcm_JointEnergy	3.881e+12
original_glcm_JointEntropy	1.000e+00
original_glcm_MCC	5.996e+02
original_glcm_MaximumProbability	1.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	9.854e-20
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	2.147e-07
original_gldm_DependenceNonUniformity	6.027e+00
original_gldm_DependenceNonUniformityNormalized	1.000e+00
original_gldm_DependenceVariance	3.663e-01

original_gldm_GrayLevelNonUniformity	1.000e+00
original_gldm_GrayLevelVariance	1.000e+00
original_gldm_HighGrayLevelEmphasis	8.338e+35
original_gldm_LargeDependenceEmphasis	1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.063e+44
original_gldm_LowGrayLevelEmphasis	1.152e+00
original_gldm_SmallDependenceEmphasis	1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.582e-03
original_gldm_SmallDependenceLowGrayLevelEmphasis	2.146e-01
original_glrlm_GrayLevelNonUniformity	1.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	1.000e+00
original_glrlm_GrayLevelVariance	1.000e+00
original_glrlm_HighGrayLevelRunEmphasis	1.000e+00
original_glrlm_LongRunEmphasis	1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	1.000e+00
original_glrlm_LowGrayLevelRunEmphasis	1.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	6.881e-02
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	2.188e+07
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.476e-03
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	4.784e-01
original_shape_Flatness	9.082e-01
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.241e+01
original_shape_Maximum2DDiameterRow	2.232e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00

original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	8.897e+03
original_firstorder_90Percentile	3.700e+03
original_firstorder_Energy	6.930e+03
original_firstorder_Entropy	5.095e+03
original_firstorder_InterquartileRange	2.023e+04
original_firstorder_Kurtosis	1.588e+03
original_firstorder_Maximum	8.314e+03
original_firstorder_Mean	3.662e+03
original_firstorder_MeanAbsoluteDeviation	1.809e+04
original_firstorder_Median	2.751e+03
original_firstorder_Minimum	2.417e+03
original_firstorder_Range	5.299e+03
original_firstorder_RobustMeanAbsoluteDeviation	2.199e+04
original_firstorder_RootMeanSquared	5.173e+03
original_firstorder_Skewness	1.329e+03
original_firstorder_TotalEnergy	6.930e+03
original_firstorder_Uniformity	4.297e+03
original_firstorder_Variance	9.295e+04
original_glcm_Autocorrelation	2.857e+03
original_glcm_ClusterProminence	5.006e+06
original_glcm_ClusterShade	6.719e+05
original_glcm_ClusterTendency	1.090e+05
original_glcm_Contrast	1.626e+05
original_glcm_Correlation	3.421e+03
original_glcm_DifferenceAverage	1.073e+04
original_glcm_DifferenceEntropy	5.440e+03
original_glcm_DifferenceVariance	1.947e+05
original_glcm_Id	4.300e+03
original_glcm_Idm	4.463e+03
original_glcm_Idmn	7.302e+04
original_glcm_Idn	1.378e+04
original_glcm_Imc1	2.715e+03
original_glcm_Imc2	3.215e+03
original_glcm_InverseVariance	2.770e+03
original_glcm_JointAverage	2.244e+03
original_glcm_JointEnergy	3.334e+03
original_glcm_JointEntropy	5.154e+03
original_glcm_MCC	4.780e+03
original_glcm_MaximumProbability	4.079e+03
original_glcm_SumAverage	2.244e+03
original_glcm_SumEntropy	5.185e+03
original_glcm_SumSquares	1.214e+05
original_gldm_DependenceEntropy	3.845e+03
original_gldm_DependenceNonUniformity	2.449e+03
original_gldm_DependenceNonUniformityNormalized	2.416e+03
original_gldm_DependenceVariance	4.111e+03
original_gldm_GrayLevelNonUniformity	2.776e+03
original_gldm_GrayLevelVariance	9.331e+04
original_gldm_HighGrayLevelEmphasis	2.855e+03
original_gldm_LargeDependenceEmphasis	3.030e+03

original_gldm_LargeDependenceHighGrayLevelEmphasis	3.328e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	2.489e+03
original_gldm_LowGrayLevelEmphasis	3.971e+03
original_gldm_SmallDependenceEmphasis	7.204e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	7.210e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.540e+04
original_glrlm_GrayLevelNonUniformity	2.656e+03
original_glrlm_GrayLevelNonUniformityNormalized	3.483e+03
original_glrlm_GrayLevelVariance	6.440e+04
original_glrlm_HighGrayLevelRunEmphasis	2.826e+03
original_glrlm_LongRunEmphasis	2.292e+03
original_glrlm_LongRunHighGrayLevelEmphasis	2.370e+03
original_glrlm_LongRunLowGrayLevelEmphasis	3.492e+03
original_glrlm_LowGrayLevelRunEmphasis	3.979e+03
original_glrlm_RunEntropy	4.990e+03
original_glrlm_RunLengthNonUniformity	3.286e+03
original_glrlm_RunLengthNonUniformityNormalized	3.298e+03
original_glrlm_RunPercentage	3.291e+03
original_glrlm_RunVariance	2.105e+03
original_glrlm_ShortRunEmphasis	3.062e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	3.008e+03
original_glrlm_ShortRunLowGrayLevelEmphasis	5.206e+03
original_glszm_GrayLevelNonUniformity	2.989e+03
original_glszm_GrayLevelNonUniformityNormalized	2.470e+03
original_glszm_GrayLevelVariance	1.499e+04
original_glszm_HighGrayLevelZoneEmphasis	2.676e+03
original_glszm_LargeAreaEmphasis	2.396e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	2.696e+03
original_glszm_LargeAreaLowGrayLevelEmphasis	2.769e+03
original_glszm_LowGrayLevelZoneEmphasis	3.972e+03
original_glszm_SizeZoneNonUniformity	5.670e+03
original_glszm_SizeZoneNonUniformityNormalized	5.169e+03
original_glszm_SmallAreaEmphasis	4.970e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	2.912e+03
original_glszm_SmallAreaLowGrayLevelEmphasis	3.052e+03
original_glszm_ZoneEntropy	2.396e+03
original_glszm_ZonePercentage	7.983e+03
original_glszm_ZoneVariance	2.395e+03
original_ngtdm_Busyness	3.287e+03
original_ngtdm_Coarseness	3.025e+04
original_ngtdm_Complexity	1.699e+04
original_ngtdm_Contrast	3.216e+05
original_ngtdm_Strength	1.579e+04
original_shape_Elongation	7.134e+03
original_shape_Flatness	5.727e+03
original_shape_LeastAxisLength	2.935e+03
original_shape_MajorAxisLength	3.720e+03
original_shape_Maximum2DDiameterColumn	3.298e+03
original_shape_Maximum2DDiameterRow	3.203e+03
original_shape_Maximum2DDiameterSlice	3.423e+03
original_shape_Maximum3DDiameter	3.468e+03
original_shape_MeshVolume	2.944e+03
original_shape_MinorAxisLength	3.236e+03
original_shape_Sphericity	3.213e+03
original_shape_SurfaceArea	3.648e+03
original_shape_SurfaceVolumeRatio	3.843e+03

original_shape_VoxelVolume	2.948e+03
	z
original_firstorder_10Percentile	-0.340
original_firstorder_90Percentile	0.399
original_firstorder_Energy	0.006
original_firstorder_Entropy	-0.078
original_firstorder_InterquartileRange	0.272
original_firstorder_Kurtosis	-0.032
original_firstorder_Maximum	-0.015
original_firstorder_Mean	-0.153
original_firstorder_MeanAbsoluteDeviation	-0.069
original_firstorder_Median	0.086
original_firstorder_Minimum	-0.154
original_firstorder_Range	-0.032
original_firstorder_RobustMeanAbsoluteDeviation	-0.391
original_firstorder_RootMeanSquared	0.085
original_firstorder_Skewness	0.060
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	-0.060
original_firstorder_Variance	0.128
original_glcm_Autocorrelation	-0.125
original_glcm_ClusterProminence	-0.001
original_glcm_ClusterShade	0.007
original_glcm_ClusterTendency	-0.064
original_glcm_Contrast	0.161
original_glcm_Correlation	-0.023
original_glcm_DifferenceAverage	0.001
original_glcm_DifferenceEntropy	0.049
original_glcm_DifferenceVariance	-0.171
original_glcm_Id	0.017
original_glcm_Idm	-0.008
original_glcm_Idmn	-0.001
original_glcm_Idn	0.057
original_glcm_Imc1	0.000
original_glcm_Imc2	0.012
original_glcm_InverseVariance	-0.001
original_glcm_JointAverage	0.000
original_glcm_JointEnergy	0.009
original_glcm_JointEntropy	0.000
original_glcm_MCC	0.001
original_glcm_MaximumProbability	0.000
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	-0.008
original_glcm_SumSquares	-0.019
original_gldm_DependenceEntropy	-0.004
original_gldm_DependenceNonUniformity	0.001
original_gldm_DependenceNonUniformityNormalized	0.000
original_gldm_DependenceVariance	0.000
original_gldm_GrayLevelNonUniformity	0.000
original_gldm_GrayLevelVariance	0.000
original_gldm_HighGrayLevelEmphasis	0.029
original_gldm_LargeDependenceEmphasis	0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.041
original_gldm_LowGrayLevelEmphasis	0.000
original_gldm_SmallDependenceEmphasis	0.000

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original_gldm_SmallDependenceHighGrayLevelEmphasis  -0.001
original_gldm_SmallDependenceLowGrayLevelEmphasis    0.000
original_glrlm_GrayLevelNonUniformity                0.000
original_glrlm_GrayLevelNonUniformityNormalized      0.000
original_glrlm_GrayLevelVariance                     0.000
original_glrlm_HighGrayLevelRunEmphasis              0.000
original_glrlm_LongRunEmphasis                       0.000
original_glrlm_LongRunHighGrayLevelEmphasis          0.000
original_glrlm_LongRunLowGrayLevelEmphasis           0.000
original_glrlm_LowGrayLevelRunEmphasis               0.000
original_glrlm_RunEntropy                            0.000
original_glrlm_RunLengthNonUniformity                0.000
original_glrlm_RunLengthNonUniformityNormalized      0.000
original_glrlm_RunPercentage                         0.000
original_glrlm_RunVariance                           0.000
original_glrlm_ShortRunEmphasis                      0.000
original_glrlm_ShortRunHighGrayLevelEmphasis         0.000
original_glrlm_ShortRunLowGrayLevelEmphasis          0.000
original_glszm_GrayLevelNonUniformity               -0.001
original_glszm_GrayLevelNonUniformityNormalized      0.000
original_glszm_GrayLevelVariance                     0.000
original_glszm_HighGrayLevelZoneEmphasis             0.000
original_glszm_LargeAreaEmphasis                     0.000
original_glszm_LargeAreaHighGrayLevelEmphasis        0.000
original_glszm_LargeAreaLowGrayLevelEmphasis         0.006
original_glszm_LowGrayLevelZoneEmphasis              0.000
original_glszm_SizeZoneNonUniformity                 0.000
original_glszm_SizeZoneNonUniformityNormalized       0.000
original_glszm_SmallAreaEmphasis                     0.000
original_glszm_SmallAreaHighGrayLevelEmphasis        0.000
original_glszm_SmallAreaLowGrayLevelEmphasis         0.000
original_glszm_ZoneEntropy                           0.000
original_glszm_ZonePercentage                        0.000
original_glszm_ZoneVariance                          0.000
original_ngtdm_Busyness                             -0.002
original_ngtdm_Coarseness                            0.000
original_ngtdm_Complexity                            0.000
original_ngtdm_Contrast                              0.000
original_ngtdm_Strength                              0.000
original_shape_Elongation                            0.000
original_shape_Flatness                              0.000
original_shape_LeastAxisLength                       0.000
original_shape_MajorAxisLength                       0.000
original_shape_Maximum2DDiameterColumn               0.001
original_shape_Maximum2DDiameterRow                  0.000
original_shape_Maximum2DDiameterSlice                0.000
original_shape_Maximum3DDiameter                     0.000
original_shape_MeshVolume                            0.000
original_shape_MinorAxisLength                       0.000
original_shape_Sphericity                            0.000
original_shape_SurfaceArea                           0.000
original_shape_SurfaceVolumeRatio                    0.000
original_shape_VoxelVolume                           0.000
                                                       p
original_firstorder_10Percentile                    0.734
original_firstorder_90Percentile                    0.690
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original_firstorder_Energy	0.995
original_firstorder_Entropy	0.937
original_firstorder_InterquartileRange	0.786
original_firstorder_Kurtosis	0.974
original_firstorder_Maximum	0.988
original_firstorder_Mean	0.878
original_firstorder_MeanAbsoluteDeviation	0.945
original_firstorder_Median	0.931
original_firstorder_Minimum	0.878
original_firstorder_Range	0.974
original_firstorder_RobustMeanAbsoluteDeviation	0.696
original_firstorder_RootMeanSquared	0.932
original_firstorder_Skewness	0.952
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	0.953
original_firstorder_Variance	0.898
original_glcm_Autocorrelation	0.900
original_glcm_ClusterProminence	0.999
original_glcm_ClusterShade	0.994
original_glcm_ClusterTendency	0.949
original_glcm_Contrast	0.872
original_glcm_Correlation	0.982
original_glcm_DifferenceAverage	0.999
original_glcm_DifferenceEntropy	0.961
original_glcm_DifferenceVariance	0.864
original_glcm_Id	0.987
original_glcm_Idm	0.994
original_glcm_Idmn	0.999
original_glcm_Idn	0.955
original_glcm_Imc1	1.000
original_glcm_Imc2	0.991
original_glcm_InverseVariance	0.999
original_glcm_JointAverage	1.000
original_glcm_JointEnergy	0.993
original_glcm_JointEntropy	1.000
original_glcm_MCC	0.999
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	0.993
original_glcm_SumSquares	0.985
original_gldm_DependenceEntropy	0.997
original_gldm_DependenceNonUniformity	0.999
original_gldm_DependenceNonUniformityNormalized	1.000
original_gldm_DependenceVariance	1.000
original_gldm_GrayLevelNonUniformity	1.000
original_gldm_GrayLevelVariance	1.000
original_gldm_HighGrayLevelEmphasis	0.977
original_gldm_LargeDependenceEmphasis	1.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.968
original_gldm_LowGrayLevelEmphasis	1.000
original_gldm_SmallDependenceEmphasis	1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.999
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.000
original_glrlm_GrayLevelNonUniformity	1.000
original_glrlm_GrayLevelNonUniformityNormalized	1.000

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original_glrlm_GrayLevelVariance                    1.000
original_glrlm_HighGrayLevelRunEmphasis             1.000
original_glrlm_LongRunEmphasis                      1.000
original_glrlm_LongRunHighGrayLevelEmphasis         1.000
original_glrlm_LongRunLowGrayLevelEmphasis          1.000
original_glrlm_LowGrayLevelRunEmphasis              1.000
original_glrlm_RunEntropy                           1.000
original_glrlm_RunLengthNonUniformity               1.000
original_glrlm_RunLengthNonUniformityNormalized     1.000
original_glrlm_RunPercentage                        1.000
original_glrlm_RunVariance                          1.000
original_glrlm_ShortRunEmphasis                     1.000
original_glrlm_ShortRunHighGrayLevelEmphasis        1.000
original_glrlm_ShortRunLowGrayLevelEmphasis         1.000
original_glszm_GrayLevelNonUniformity               0.999
original_glszm_GrayLevelNonUniformityNormalized     1.000
original_glszm_GrayLevelVariance                    1.000
original_glszm_HighGrayLevelZoneEmphasis            1.000
original_glszm_LargeAreaEmphasis                    1.000
original_glszm_LargeAreaHighGrayLevelEmphasis       1.000
original_glszm_LargeAreaLowGrayLevelEmphasis        0.995
original_glszm_LowGrayLevelZoneEmphasis             1.000
original_glszm_SizeZoneNonUniformity                1.000
original_glszm_SizeZoneNonUniformityNormalized      1.000
original_glszm_SmallAreaEmphasis                    1.000
original_glszm_SmallAreaHighGrayLevelEmphasis       1.000
original_glszm_SmallAreaLowGrayLevelEmphasis        1.000
original_glszm_ZoneEntropy                          1.000
original_glszm_ZonePercentage                       1.000
original_glszm_ZoneVariance                         1.000
original_ngtdm_Busyness                             0.998
original_ngtdm_Coarseness                           1.000
original_ngtdm_Complexity                           1.000
original_ngtdm_Contrast                             1.000
original_ngtdm_Strength                             1.000
original_shape_Elongation                           1.000
original_shape_Flatness                             1.000
original_shape_LeastAxisLength                      1.000
original_shape_MajorAxisLength                      1.000
original_shape_Maximum2DDiameterColumn              0.999
original_shape_Maximum2DDiameterRow                 1.000
original_shape_Maximum2DDiameterSlice               1.000
original_shape_Maximum3DDiameter                    1.000
original_shape_MeshVolume                           1.000
original_shape_MinorAxisLength                      1.000
original_shape_Sphericity                           1.000
original_shape_SurfaceArea                          1.000
original_shape_SurfaceVolumeRatio                   1.000
original_shape_VoxelVolume                          1.000

Likelihood ratio test=31.34  on 107 df, p=1
n= 25, number of events= 5
```

```
$test
  T     AUCROC           BS BS_scaled   C_score Calib_slope
1 4 0.4088524 0.4757477 -4.846218 0.4127219 -0.01221094
2 4 0.6963216 0.3558193 -1.411092 0.6769773  0.06701063
3 4 0.4833893 0.2263121 -1.688051 0.4859050 -0.71337284
4 4 0.5206836 0.4571542 -2.277591 0.5269828 -0.01756359
5 4 0.5857813 0.2152437 -1.372065 0.5868102  0.07041431
  Calib_alpha test cv_n
1 -0.34941796    1    1
2 -0.26829356    1    2
3 -0.03449023    1    3
4 -0.22436980    1    4
5 -0.13056267    1    5


$train
  T     AUCROC           BS  BS_scaled   C_score
1 4 0.8705706 0.19543431 -0.6697029 0.8569668
2 4 0.7539411 0.27033025 -1.7030412 0.7417558
3 4 0.5417778 0.23600395 -1.0158195 0.5441780
4 4 0.6559362 0.33731205 -2.2831558 0.6631965
5 4 0.9960889 0.01540794  0.8659992 0.9802244
  Calib_slope   Calib_alpha test cv_n
1  0.21538359 -0.1912184058    0    1
2  0.10565084 -0.2240737153    0    2
3  0.03179508 -0.0345231471    0    3
4  0.07471767 -0.2866858939    0    4
5  1.16721639 -0.0001466993    0    5


$testaverage
        T     AUCROC          BS  BS_scaled
4.0000000   0.5390056   0.3460554  -2.3190033
   C_score Calib_slope Calib_alpha        test
 0.5378795  -0.1211445  -0.2014268   1.0000000


$trainaverage
        T     AUCROC          BS  BS_scaled
4.0000000   0.7636629   0.2108977  -0.9611440
   C_score Calib_slope Calib_alpha        test
 0.7572643   0.3189527  -0.1473296   0.0000000


$model_list
$model_list[[1]]
$model_list[[1]]$vimp10
                 original_firstorder_Maximum
                          0.014342579
            original_glszm_GrayLevelVariance
                          0.005402161
   original_glrlm_LongRunHighGrayLevelEmphasis
                          0.005117837
        original_glszm_SizeZoneNonUniformity
                          0.004707146
      original_glszm_LowGrayLevelZoneEmphasis
                          0.004043723
                   original_glcm_SumAverage
                          0.003917356
```

```
                    original_firstorder_Range
                                 0.003506666
  original_glrlm_ShortRunLowGrayLevelEmphasis
                                 0.003159158
                           original_glcm_Idn
                                 0.002906426
 original_glszm_SmallAreaLowGrayLevelEmphasis
                                 0.002874834
                   original_ngtdm_Complexity
                                 0.002685285
   original_glrlm_LongRunLowGrayLevelEmphasis
                                 0.002622101
       original_glrlm_LowGrayLevelRunEmphasis
                                 0.002306186
original_glszm_LargeAreaHighGrayLevelEmphasis
                                 0.002053453
                   original_glszm_ZoneEntropy
                                 0.001863903


$model_list[[1]]$treemodel
n= 361

node), split, n, deviance, yval
      * denotes terminal node

1) root 361 279.77400 1.0000000
  2) original_glszm_GrayLevelVariance< 0.05296396 241   90.01070 0.4013023
    4) original_firstorder_Maximum< -0.263866 166   42.13061 0.2838154 *
    5) original_firstorder_Maximum>=-0.263866 75   44.80218 0.7128540 *
  3) original_glszm_GrayLevelVariance>=0.05296396 120 151.18110 2.3819630 *

$model_list[[1]]$coxmodels
$model_list[[1]]$coxmodels[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                 -1.714e+02
original_firstorder_90Percentile                 -1.298e+02
original_firstorder_Energy                        4.339e+01
original_firstorder_Entropy                       1.878e+02
original_firstorder_InterquartileRange            1.243e+02
original_firstorder_Kurtosis                      2.141e+01
original_firstorder_Maximum                      -9.734e+01
original_firstorder_Mean                          4.656e+02
original_firstorder_MeanAbsoluteDeviation        -3.268e+02
original_firstorder_Median                       -1.447e+02
original_firstorder_Minimum                      -1.614e+02
original_firstorder_Range                         0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation   7.469e+01
original_firstorder_RootMeanSquared              -1.173e+02
original_firstorder_Skewness                      2.382e+01
original_firstorder_TotalEnergy                   0.000e+00
original_firstorder_Uniformity                    7.181e+01
```

```
original_firstorder_Variance                              1.005e+03
original_glcm_Autocorrelation                             1.083e+02
original_glcm_ClusterProminence                           1.823e+03
original_glcm_ClusterShade                               -9.769e+02
original_glcm_ClusterTendency                            -8.941e+02
original_glcm_Contrast                                   -7.615e+03
original_glcm_Correlation                                 1.389e+00
original_glcm_DifferenceAverage                           2.083e+03
original_glcm_DifferenceEntropy                           2.927e+01
original_glcm_DifferenceVariance                          3.698e+03
original_glcm_Id                                          7.624e+03
original_glcm_Idm                                        -6.206e+03
original_glcm_Idmn                                        6.178e+01
original_glcm_Idn                                        -5.428e+01
original_glcm_Imc1                                        2.220e+01
original_glcm_Imc2                                        5.076e+00
original_glcm_InverseVariance                             7.200e+02
original_glcm_JointAverage                               -1.446e+02
original_glcm_JointEnergy                                -7.372e+01
original_glcm_JointEntropy                               -9.142e+01
original_glcm_MCC                                        -2.208e+00
original_glcm_MaximumProbability                         -2.144e+01
original_glcm_SumAverage                                  0.000e+00
original_glcm_SumEntropy                                 -7.185e+01
original_glcm_SumSquares                                  0.000e+00
original_gldm_DependenceEntropy                          -1.118e+02
original_gldm_DependenceNonUniformity                     1.386e+02
original_gldm_DependenceNonUniformityNormalized          -7.724e+01
original_gldm_DependenceVariance                          8.668e+01
original_gldm_GrayLevelNonUniformity                     -6.854e+01
original_gldm_GrayLevelVariance                           1.716e+03
original_gldm_HighGrayLevelEmphasis                      -1.206e+03
original_gldm_LargeDependenceEmphasis                    -5.952e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis        2.259e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis         8.287e+01
original_gldm_LowGrayLevelEmphasis                       -4.418e+01
original_gldm_SmallDependenceEmphasis                     7.646e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis       -1.070e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis        -9.430e+00
original_glrlm_GrayLevelNonUniformity                    -1.277e+02
original_glrlm_GrayLevelNonUniformityNormalized           1.554e+01
original_glrlm_GrayLevelVariance                         -6.749e+02
original_glrlm_HighGrayLevelRunEmphasis                   4.551e+02
original_glrlm_LongRunEmphasis                            4.847e+02
original_glrlm_LongRunHighGrayLevelEmphasis              -1.066e+02
original_glrlm_LongRunLowGrayLevelEmphasis               -8.827e+01
original_glrlm_LowGrayLevelRunEmphasis                   -6.791e+01
original_glrlm_RunEntropy                                 1.159e+02
original_glrlm_RunLengthNonUniformity                    -1.078e+02
original_glrlm_RunLengthNonUniformityNormalized           1.330e+02
original_glrlm_RunPercentage                             -5.368e+02
original_glrlm_RunVariance                               -3.440e+02
original_glrlm_ShortRunEmphasis                          -1.124e+02
original_glrlm_ShortRunHighGrayLevelEmphasis             7.412e+02
original_glrlm_ShortRunLowGrayLevelEmphasis              1.765e+02
original_glszm_GrayLevelNonUniformity                    1.189e+02
```

original_glszm_GrayLevelNonUniformityNormalized	-2.673e+00
original_glszm_GrayLevelVariance	1.044e+02
original_glszm_HighGrayLevelZoneEmphasis	-1.127e+02
original_glszm_LargeAreaEmphasis	2.418e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	3.718e+01
original_glszm_LargeAreaLowGrayLevelEmphasis	7.938e-01
original_glszm_LowGrayLevelZoneEmphasis	-4.982e+01
original_glszm_SizeZoneNonUniformity	-8.402e+01
original_glszm_SizeZoneNonUniformityNormalized	-4.762e+01
original_glszm_SmallAreaEmphasis	5.122e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	7.060e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.919e+01
original_glszm_ZoneEntropy	2.018e+01
original_glszm_ZonePercentage	-7.480e+01
original_glszm_ZoneVariance	-2.609e+02
original_ngtdm_Busyness	-1.705e+00
original_ngtdm_Coarseness	1.188e+01
original_ngtdm_Complexity	-3.451e+02
original_ngtdm_Contrast	-5.281e+01
original_ngtdm_Strength	-5.084e-01
original_shape_Elongation	9.516e+00
original_shape_Flatness	-1.160e+01
original_shape_LeastAxisLength	4.842e+01
original_shape_MajorAxisLength	6.875e+01
original_shape_Maximum2DDiameterColumn	-3.435e+01
original_shape_Maximum2DDiameterRow	-4.636e+01
original_shape_Maximum2DDiameterSlice	-2.522e+01
original_shape_Maximum3DDiameter	1.003e+01
original_shape_MeshVolume	4.519e+03
original_shape_MinorAxisLength	2.904e+00
original_shape_Sphericity	-7.211e+00
original_shape_SurfaceArea	2.655e+01
original_shape_SurfaceVolumeRatio	1.802e+02
original_shape_VoxelVolume	-4.425e+03
	exp(coef)
original_firstorder_10Percentile	3.827e-75
original_firstorder_90Percentile	4.319e-57
original_firstorder_Energy	6.966e+18
original_firstorder_Entropy	3.530e+81
original_firstorder_InterquartileRange	9.391e+53
original_firstorder_Kurtosis	1.980e+09
original_firstorder_Maximum	5.323e-43
original_firstorder_Mean	1.631e+202
original_firstorder_MeanAbsoluteDeviation	1.159e-142
original_firstorder_Median	1.488e-63
original_firstorder_Minimum	7.801e-71
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	2.744e+32
original_firstorder_RootMeanSquared	1.180e-51
original_firstorder_Skewness	2.216e+10
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	1.537e+31
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	1.100e+47
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	0.000e+00

original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	4.010e+00
original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	5.137e+12
original_glcm_DifferenceVariance	Inf
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	6.795e+26
original_glcm_Idn	2.670e-24
original_glcm_Imc1	4.363e+09
original_glcm_Imc2	1.601e+02
original_glcm_InverseVariance	Inf
original_glcm_JointAverage	1.543e-63
original_glcm_JointEnergy	9.639e-33
original_glcm_JointEntropy	1.981e-40
original_glcm_MCC	1.099e-01
original_glcm_MaximumProbability	4.905e-10
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	6.266e-32
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	2.922e-49
original_gldm_DependenceNonUniformity	1.588e+60
original_gldm_DependenceNonUniformityNormalized	2.864e-34
original_gldm_DependenceVariance	4.404e+37
original_gldm_GrayLevelNonUniformity	1.718e-30
original_gldm_GrayLevelVariance	Inf
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	3.264e-259
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.225e+98
original_gldm_LargeDependenceLowGrayLevelEmphasis	9.796e+35
original_gldm_LowGrayLevelEmphasis	6.501e-20
original_gldm_SmallDependenceEmphasis	1.609e+33
original_gldm_SmallDependenceHighGrayLevelEmphasis	3.293e-47
original_gldm_SmallDependenceLowGrayLevelEmphasis	8.025e-05
original_glrlm_GrayLevelNonUniformity	3.617e-56
original_glrlm_GrayLevelNonUniformityNormalized	5.615e+06
original_glrlm_GrayLevelVariance	8.155e-294
original_glrlm_HighGrayLevelRunEmphasis	4.517e+197
original_glrlm_LongRunEmphasis	3.180e+210
original_glrlm_LongRunHighGrayLevelEmphasis	4.879e-47
original_glrlm_LongRunLowGrayLevelEmphasis	4.611e-39
original_glrlm_LowGrayLevelRunEmphasis	3.215e-30
original_glrlm_RunEntropy	2.089e+50
original_glrlm_RunLengthNonUniformity	1.477e-47
original_glrlm_RunLengthNonUniformityNormalized	5.909e+57
original_glrlm_RunPercentage	7.468e-234
original_glrlm_RunVariance	4.100e-150
original_glrlm_ShortRunEmphasis	1.543e-49
original_glrlm_ShortRunHighGrayLevelEmphasis	Inf
original_glrlm_ShortRunLowGrayLevelEmphasis	4.361e+76
original_glszm_GrayLevelNonUniformity	4.509e+51
original_glszm_GrayLevelNonUniformityNormalized	6.907e-02
original_glszm_GrayLevelVariance	2.115e+45
original_glszm_HighGrayLevelZoneEmphasis	1.107e-49
original_glszm_LargeAreaEmphasis	1.030e+105

original_glszm_LargeAreaHighGrayLevelEmphasis	1.409e+16
original_glszm_LargeAreaLowGrayLevelEmphasis	2.212e+00
original_glszm_LowGrayLevelZoneEmphasis	2.306e-22
original_glszm_SizeZoneNonUniformity	3.247e-37
original_glszm_SizeZoneNonUniformityNormalized	2.076e-21
original_glszm_SmallAreaEmphasis	1.760e+22
original_glszm_SmallAreaHighGrayLevelEmphasis	1.164e+03
original_glszm_SmallAreaLowGrayLevelEmphasis	2.150e+08
original_glszm_ZoneEntropy	5.837e+08
original_glszm_ZonePercentage	3.275e-33
original_glszm_ZoneVariance	4.737e-114
original_ngtdm_Busyness	1.817e-01
original_ngtdm_Coarseness	1.448e+05
original_ngtdm_Complexity	1.390e-150
original_ngtdm_Contrast	1.161e-23
original_ngtdm_Strength	6.014e-01
original_shape_Elongation	1.357e+04
original_shape_Flatness	9.179e-06
original_shape_LeastAxisLength	1.064e+21
original_shape_MajorAxisLength	7.205e+29
original_shape_Maximum2DDiameterColumn	1.211e-15
original_shape_Maximum2DDiameterRow	7.350e-21
original_shape_Maximum2DDiameterSlice	1.117e-11
original_shape_Maximum3DDiameter	2.272e+04
original_shape_MeshVolume	Inf
original_shape_MinorAxisLength	1.825e+01
original_shape_Sphericity	7.385e-04
original_shape_SurfaceArea	3.398e+11
original_shape_SurfaceVolumeRatio	1.780e+78
original_shape_VoxelVolume	0.000e+00
	se(coef)
original_firstorder_10Percentile	8.133e+01
original_firstorder_90Percentile	2.578e+01
original_firstorder_Energy	1.229e+02
original_firstorder_Entropy	2.553e+01
original_firstorder_InterquartileRange	7.765e+01
original_firstorder_Kurtosis	7.585e+00
original_firstorder_Maximum	3.669e+02
original_firstorder_Mean	2.935e+01
original_firstorder_MeanAbsoluteDeviation	7.735e+01
original_firstorder_Median	2.073e+01
original_firstorder_Minimum	2.419e+01
original_firstorder_Range	4.861e+01
original_firstorder_RobustMeanAbsoluteDeviation	8.665e+01
original_firstorder_RootMeanSquared	3.654e+01
original_firstorder_Skewness	2.293e+01
original_firstorder_TotalEnergy	1.229e+02
original_firstorder_Uniformity	1.986e+01
original_firstorder_Variance	3.651e+02
original_glcm_Autocorrelation	2.018e+01
original_glcm_ClusterProminence	5.808e+04
original_glcm_ClusterShade	3.867e+03
original_glcm_ClusterTendency	6.597e+02
original_glcm_Contrast	5.445e+02
original_glcm_Correlation	2.240e+01
original_glcm_DifferenceAverage	8.994e+01

original_glcm_DifferenceEntropy	4.687e+01
original_glcm_DifferenceVariance	5.660e+02
original_glcm_Id	8.760e+01
original_glcm_Idm	8.123e+01
original_glcm_Idmn	7.103e+01
original_glcm_Idn	4.059e+01
original_glcm_Imc1	2.298e+01
original_glcm_Imc2	1.210e+01
original_glcm_InverseVariance	1.028e+02
original_glcm_JointAverage	2.044e+01
original_glcm_JointEnergy	2.834e+01
original_glcm_JointEntropy	2.961e+01
original_glcm_MCC	1.490e+01
original_glcm_MaximumProbability	2.249e+01
original_glcm_SumAverage	2.044e+01
original_glcm_SumEntropy	2.444e+01
original_glcm_SumSquares	6.254e+02
original_gldm_DependenceEntropy	2.719e+01
original_gldm_DependenceNonUniformity	1.228e+02
original_gldm_DependenceNonUniformityNormalized	2.254e+02
original_gldm_DependenceVariance	5.321e+01
original_gldm_GrayLevelNonUniformity	6.787e+01
original_gldm_GrayLevelVariance	3.655e+02
original_gldm_HighGrayLevelEmphasis	2.034e+01
original_gldm_LargeDependenceEmphasis	1.243e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.824e+01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.235e+02
original_gldm_LowGrayLevelEmphasis	1.258e+02
original_gldm_SmallDependenceEmphasis	8.787e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis	8.208e+01
original_gldm_SmallDependenceLowGrayLevelEmphasis	8.464e+01
original_glrlm_GrayLevelNonUniformity	7.659e+01
original_glrlm_GrayLevelNonUniformityNormalized	1.945e+01
original_glrlm_GrayLevelVariance	2.273e+02
original_glrlm_HighGrayLevelRunEmphasis	2.052e+01
original_glrlm_LongRunEmphasis	1.405e+02
original_glrlm_LongRunHighGrayLevelEmphasis	2.197e+01
original_glrlm_LongRunLowGrayLevelEmphasis	1.823e+02
original_glrlm_LowGrayLevelRunEmphasis	1.152e+02
original_glrlm_RunEntropy	2.765e+01
original_glrlm_RunLengthNonUniformity	9.333e+01
original_glrlm_RunLengthNonUniformityNormalized	1.084e+02
original_glrlm_RunPercentage	1.315e+02
original_glrlm_RunVariance	1.616e+02
original_glrlm_ShortRunEmphasis	6.861e+01
original_glrlm_ShortRunHighGrayLevelEmphasis	2.426e+01
original_glrlm_ShortRunLowGrayLevelEmphasis	1.219e+02
original_glszm_GrayLevelNonUniformity	1.052e+02
original_glszm_GrayLevelNonUniformityNormalized	1.174e+01
original_glszm_GrayLevelVariance	6.039e+01
original_glszm_HighGrayLevelZoneEmphasis	2.328e+01
original_glszm_LargeAreaEmphasis	9.744e+01
original_glszm_LargeAreaHighGrayLevelEmphasis	7.031e+01
original_glszm_LargeAreaLowGrayLevelEmphasis	1.378e+03
original_glszm_LowGrayLevelZoneEmphasis	4.354e+01
original_glszm_SizeZoneNonUniformity	1.042e+02

original_glszm_SizeZoneNonUniformityNormalized	1.845e+01
original_glszm_SmallAreaEmphasis	1.770e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	2.581e+01
original_glszm_SmallAreaLowGrayLevelEmphasis	2.845e+01
original_glszm_ZoneEntropy	1.584e+01
original_glszm_ZonePercentage	1.025e+02
original_glszm_ZoneVariance	9.707e+01
original_ngtdm_Busyness	2.714e+02
original_ngtdm_Coarseness	5.964e+01
original_ngtdm_Complexity	1.216e+02
original_ngtdm_Contrast	1.882e+03
original_ngtdm_Strength	1.457e+02
original_shape_Elongation	2.169e+01
original_shape_Flatness	2.025e+01
original_shape_LeastAxisLength	2.111e+01
original_shape_MajorAxisLength	3.597e+01
original_shape_Maximum2DDiameterColumn	2.803e+01
original_shape_Maximum2DDiameterRow	3.351e+01
original_shape_Maximum2DDiameterSlice	6.906e+01
original_shape_Maximum3DDiameter	3.606e+01
original_shape_MeshVolume	5.661e+01
original_shape_MinorAxisLength	6.375e+01
original_shape_Sphericity	3.169e+01
original_shape_SurfaceArea	1.465e+02
original_shape_SurfaceVolumeRatio	2.138e+02
original_shape_VoxelVolume	5.652e+01

	z
original_firstorder_10Percentile	-2.107
original_firstorder_90Percentile	-5.035
original_firstorder_Energy	0.353
original_firstorder_Entropy	7.355
original_firstorder_InterquartileRange	1.600
original_firstorder_Kurtosis	2.822
original_firstorder_Maximum	-0.265
original_firstorder_Mean	15.862
original_firstorder_MeanAbsoluteDeviation	-4.225
original_firstorder_Median	-6.977
original_firstorder_Minimum	-6.674
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	0.862
original_firstorder_RootMeanSquared	-3.209
original_firstorder_Skewness	1.039
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	3.616
original_firstorder_Variance	2.754
original_glcm_Autocorrelation	5.366
original_glcm_ClusterProminence	0.031
original_glcm_ClusterShade	-0.253
original_glcm_ClusterTendency	-1.355
original_glcm_Contrast	-13.985
original_glcm_Correlation	0.062
original_glcm_DifferenceAverage	23.159
original_glcm_DifferenceEntropy	0.624
original_glcm_DifferenceVariance	6.533
original_glcm_Id	87.030
original_glcm_Idm	-76.398

```
original_glcm_Idmn                                           0.870
original_glcm_Idn                                           -1.337
original_glcm_Imc1                                           0.966
original_glcm_Imc2                                           0.419
original_glcm_InverseVariance                                7.004
original_glcm_JointAverage                                  -7.076
original_glcm_JointEnergy                                   -2.601
original_glcm_JointEntropy                                  -3.087
original_glcm_MCC                                           -0.148
original_glcm_MaximumProbability                            -0.953
original_glcm_SumAverage                                     0.000
original_glcm_SumEntropy                                    -2.940
original_glcm_SumSquares                                     0.000
original_gldm_DependenceEntropy                             -4.111
original_gldm_DependenceNonUniformity                        1.129
original_gldm_DependenceNonUniformityNormalized             -0.343
original_gldm_DependenceVariance                             1.629
original_gldm_GrayLevelNonUniformity                        -1.010
original_gldm_GrayLevelVariance                              4.694
original_gldm_HighGrayLevelEmphasis                        -59.272
original_gldm_LargeDependenceEmphasis                       -4.790
original_gldm_LargeDependenceHighGrayLevelEmphasis          12.385
original_gldm_LargeDependenceLowGrayLevelEmphasis            0.671
original_gldm_LowGrayLevelEmphasis                          -0.351
original_gldm_SmallDependenceEmphasis                        0.870
original_gldm_SmallDependenceHighGrayLevelEmphasis          -1.304
original_gldm_SmallDependenceLowGrayLevelEmphasis           -0.111
original_glrlm_GrayLevelNonUniformity                       -1.667
original_glrlm_GrayLevelNonUniformityNormalized              0.799
original_glrlm_GrayLevelVariance                            -2.969
original_glrlm_HighGrayLevelRunEmphasis                     22.175
original_glrlm_LongRunEmphasis                               3.449
original_glrlm_LongRunHighGrayLevelEmphasis                 -4.854
original_glrlm_LongRunLowGrayLevelEmphasis                  -0.484
original_glrlm_LowGrayLevelRunEmphasis                      -0.590
original_glrlm_RunEntropy                                    4.191
original_glrlm_RunLengthNonUniformity                       -1.155
original_glrlm_RunLengthNonUniformityNormalized              1.228
original_glrlm_RunPercentage                                -4.083
original_glrlm_RunVariance                                  -2.129
original_glrlm_ShortRunEmphasis                             -1.638
original_glrlm_ShortRunHighGrayLevelEmphasis                30.551
original_glrlm_ShortRunLowGrayLevelEmphasis                  1.447
original_glszm_GrayLevelNonUniformity                        1.130
original_glszm_GrayLevelNonUniformityNormalized             -0.228
original_glszm_GrayLevelVariance                             1.728
original_glszm_HighGrayLevelZoneEmphasis                    -4.841
original_glszm_LargeAreaEmphasis                             2.482
original_glszm_LargeAreaHighGrayLevelEmphasis                0.529
original_glszm_LargeAreaLowGrayLevelEmphasis                 0.001
original_glszm_LowGrayLevelZoneEmphasis                     -1.144
original_glszm_SizeZoneNonUniformity                        -0.806
original_glszm_SizeZoneNonUniformityNormalized              -2.581
original_glszm_SmallAreaEmphasis                             2.894
original_glszm_SmallAreaHighGrayLevelEmphasis                0.274
original_glszm_SmallAreaLowGrayLevelEmphasis                 0.674
```

original_glszm_ZoneEntropy	1.274
original_glszm_ZonePercentage	-0.730
original_glszm_ZoneVariance	-2.688
original_ngtdm_Busyness	-0.006
original_ngtdm_Coarseness	0.199
original_ngtdm_Complexity	-2.837
original_ngtdm_Contrast	-0.028
original_ngtdm_Strength	-0.003
original_shape_Elongation	0.439
original_shape_Flatness	-0.573
original_shape_LeastAxisLength	2.294
original_shape_MajorAxisLength	1.911
original_shape_Maximum2DDiameterColumn	-1.226
original_shape_Maximum2DDiameterRow	-1.384
original_shape_Maximum2DDiameterSlice	-0.365
original_shape_Maximum3DDiameter	0.278
original_shape_MeshVolume	79.817
original_shape_MinorAxisLength	0.046
original_shape_Sphericity	-0.228
original_shape_SurfaceArea	0.181
original_shape_SurfaceVolumeRatio	0.843
original_shape_VoxelVolume	-78.295
	p
original_firstorder_10Percentile	0.035131
original_firstorder_90Percentile	4.78e-07
original_firstorder_Energy	0.724026
original_firstorder_Entropy	1.90e-13
original_firstorder_InterquartileRange	0.109489
original_firstorder_Kurtosis	0.004767
original_firstorder_Maximum	0.790777
original_firstorder_Mean	< 2e-16
original_firstorder_MeanAbsoluteDeviation	2.39e-05
original_firstorder_Median	3.01e-12
original_firstorder_Minimum	2.49e-11
original_firstorder_Range	1.000000
original_firstorder_RobustMeanAbsoluteDeviation	0.388681
original_firstorder_RootMeanSquared	0.001333
original_firstorder_Skewness	0.298884
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	0.000299
original_firstorder_Variance	0.005894
original_glcm_Autocorrelation	8.03e-08
original_glcm_ClusterProminence	0.974963
original_glcm_ClusterShade	0.800547
original_glcm_ClusterTendency	0.175286
original_glcm_Contrast	< 2e-16
original_glcm_Correlation	0.950571
original_glcm_DifferenceAverage	< 2e-16
original_glcm_DifferenceEntropy	0.532379
original_glcm_DifferenceVariance	6.44e-11
original_glcm_Id	< 2e-16
original_glcm_Idm	< 2e-16
original_glcm_Idmn	0.384425
original_glcm_Idn	0.181164
original_glcm_Imc1	0.334105
original_glcm_Imc2	0.674942

```
original_glcm_InverseVariance                              2.49e-12
original_glcm_JointAverage                                 1.49e-12
original_glcm_JointEnergy                                  0.009290
original_glcm_JointEntropy                                 0.002019
original_glcm_MCC                                          0.882217
original_glcm_MaximumProbability                           0.340498
original_glcm_SumAverage                                   1.000000
original_glcm_SumEntropy                                   0.003284
original_glcm_SumSquares                                   1.000000
original_gldm_DependenceEntropy                            3.94e-05
original_gldm_DependenceNonUniformity                      0.259075
original_gldm_DependenceNonUniformityNormalized            0.731858
original_gldm_DependenceVariance                           0.103315
original_gldm_GrayLevelNonUniformity                       0.312612
original_gldm_GrayLevelVariance                            2.68e-06
original_gldm_HighGrayLevelEmphasis                         < 2e-16
original_gldm_LargeDependenceEmphasis                      1.67e-06
original_gldm_LargeDependenceHighGrayLevelEmphasis          < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis          0.502082
original_gldm_LowGrayLevelEmphasis                         0.725343
original_gldm_SmallDependenceEmphasis                      0.384216
original_gldm_SmallDependenceHighGrayLevelEmphasis         0.192266
original_gldm_SmallDependenceLowGrayLevelEmphasis          0.911288
original_glrlm_GrayLevelNonUniformity                      0.095550
original_glrlm_GrayLevelNonUniformityNormalized            0.424370
original_glrlm_GrayLevelVariance                           0.002990
original_glrlm_HighGrayLevelRunEmphasis                     < 2e-16
original_glrlm_LongRunEmphasis                             0.000562
original_glrlm_LongRunHighGrayLevelEmphasis                1.21e-06
original_glrlm_LongRunLowGrayLevelEmphasis                 0.628233
original_glrlm_LowGrayLevelRunEmphasis                     0.555425
original_glrlm_RunEntropy                                  2.78e-05
original_glrlm_RunLengthNonUniformity                      0.247912
original_glrlm_RunLengthNonUniformityNormalized            0.219607
original_glrlm_RunPercentage                               4.44e-05
original_glrlm_RunVariance                                 0.033262
original_glrlm_ShortRunEmphasis                            0.101391
original_glrlm_ShortRunHighGrayLevelEmphasis                < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis                0.147873
original_glszm_GrayLevelNonUniformity                      0.258396
original_glszm_GrayLevelNonUniformityNormalized            0.819988
original_glszm_GrayLevelVariance                           0.083955
original_glszm_HighGrayLevelZoneEmphasis                   1.29e-06
original_glszm_LargeAreaEmphasis                           0.013080
original_glszm_LargeAreaHighGrayLevelEmphasis              0.596923
original_glszm_LargeAreaLowGrayLevelEmphasis               0.999540
original_glszm_LowGrayLevelZoneEmphasis                    0.252533
original_glszm_SizeZoneNonUniformity                       0.419974
original_glszm_SizeZoneNonUniformityNormalized             0.009855
original_glszm_SmallAreaEmphasis                           0.003809
original_glszm_SmallAreaHighGrayLevelEmphasis              0.784417
original_glszm_SmallAreaLowGrayLevelEmphasis               0.500137
original_glszm_ZoneEntropy                                 0.202665
original_glszm_ZonePercentage                              0.465551
original_glszm_ZoneVariance                                0.007188
original_ngtdm_Busyness                                    0.994987
```

original_ngtdm_Coarseness	0.842079
original_ngtdm_Complexity	0.004561
original_ngtdm_Contrast	0.977613
original_ngtdm_Strength	0.997217
original_shape_Elongation	0.660848
original_shape_Flatness	0.566726
original_shape_LeastAxisLength	0.021801
original_shape_MajorAxisLength	0.055976
original_shape_Maximum2DDiameterColumn	0.220359
original_shape_Maximum2DDiameterRow	0.166498
original_shape_Maximum2DDiameterSlice	0.715001
original_shape_Maximum3DDiameter	0.780853
original_shape_MeshVolume	< 2e-16
original_shape_MinorAxisLength	0.963665
original_shape_Sphericity	0.820009
original_shape_SurfaceArea	0.856208
original_shape_SurfaceVolumeRatio	0.399329
original_shape_VoxelVolume	< 2e-16

```
Likelihood ratio test=60.58  on 107 df, p=0.9999
n= 166, number of events= 6
```

```
$model_list[[1]]$coxmodels[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	1.149e+02
original_firstorder_90Percentile	1.260e+02
original_firstorder_Energy	-6.220e+01
original_firstorder_Entropy	1.653e+00
original_firstorder_InterquartileRange	-1.249e+02
original_firstorder_Kurtosis	-7.307e+00
original_firstorder_Maximum	2.579e+01
original_firstorder_Mean	-2.892e+02
original_firstorder_MeanAbsoluteDeviation	-1.556e+02
original_firstorder_Median	8.022e+01
original_firstorder_Minimum	2.090e+02
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	1.326e+02
original_firstorder_RootMeanSquared	5.504e+00
original_firstorder_Skewness	-8.837e+00
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	1.501e+02
original_firstorder_Variance	-5.637e+02
original_glcm_Autocorrelation	-1.624e+03
original_glcm_ClusterProminence	7.972e+01
original_glcm_ClusterShade	3.901e+02
original_glcm_ClusterTendency	1.275e+02
original_glcm_Contrast	-1.729e+03
original_glcm_Correlation	-2.388e+01
original_glcm_DifferenceAverage	9.063e+02
original_glcm_DifferenceEntropy	2.772e+02
original_glcm_DifferenceVariance	5.886e+02

```
original_glcm_Id                                               8.432e+03
original_glcm_Idm                                             -7.015e+03
original_glcm_Idmn                                            1.223e+02
original_glcm_Idn                                            -2.270e+02
original_glcm_Imc1                                            3.912e+00
original_glcm_Imc2                                            1.712e+00
original_glcm_InverseVariance                                7.078e+02
original_glcm_JointAverage                                   -9.828e+01
original_glcm_JointEnergy                                    -1.216e+01
original_glcm_JointEntropy                                   -2.012e+02
original_glcm_MCC                                             2.388e+01
original_glcm_MaximumProbability                             9.229e-01
original_glcm_SumAverage                                      0.000e+00
original_glcm_SumEntropy                                     -3.128e+01
original_glcm_SumSquares                                      0.000e+00
original_gldm_DependenceEntropy                              2.023e+02
original_gldm_DependenceNonUniformity                        1.013e+01
original_gldm_DependenceNonUniformityNormalized              2.051e+02
original_gldm_DependenceVariance                            -2.094e+02
original_gldm_GrayLevelNonUniformity                        -4.682e+01
original_gldm_GrayLevelVariance                              1.005e+03
original_gldm_HighGrayLevelEmphasis                          1.953e+03
original_gldm_LargeDependenceEmphasis                       -1.999e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis           5.603e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis            7.296e+02
original_gldm_LowGrayLevelEmphasis                          -6.239e+02
original_gldm_SmallDependenceEmphasis                        5.313e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis          -1.917e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis           -4.935e+01
original_glrlm_GrayLevelNonUniformity                        4.557e+01
original_glrlm_GrayLevelNonUniformityNormalized             -1.138e+02
original_glrlm_GrayLevelVariance                            -2.817e+02
original_glrlm_HighGrayLevelRunEmphasis                     -2.594e+03
original_glrlm_LongRunEmphasis                               6.043e+00
original_glrlm_LongRunHighGrayLevelEmphasis                 -6.831e+01
original_glrlm_LongRunLowGrayLevelEmphasis                  -3.292e+01
original_glrlm_LowGrayLevelRunEmphasis                      -2.012e+03
original_glrlm_RunEntropy                                    1.077e+02
original_glrlm_RunLengthNonUniformity                        3.548e+01
original_glrlm_RunLengthNonUniformityNormalized            -3.898e+02
original_glrlm_RunPercentage                                 3.481e+02
original_glrlm_RunVariance                                  -7.261e+01
original_glrlm_ShortRunEmphasis                             -4.472e+02
original_glrlm_ShortRunHighGrayLevelEmphasis                2.330e+03
original_glrlm_ShortRunLowGrayLevelEmphasis                 2.395e+03
original_glszm_GrayLevelNonUniformity                        2.892e+00
original_glszm_GrayLevelNonUniformityNormalized             1.002e+02
original_glszm_GrayLevelVariance                            -2.333e+01
original_glszm_HighGrayLevelZoneEmphasis                    -1.395e+02
original_glszm_LargeAreaEmphasis                             1.380e+04
original_glszm_LargeAreaHighGrayLevelEmphasis               6.895e+01
original_glszm_LargeAreaLowGrayLevelEmphasis                -1.462e+02
original_glszm_LowGrayLevelZoneEmphasis                     -1.099e+02
original_glszm_SizeZoneNonUniformity                         3.759e+01
original_glszm_SizeZoneNonUniformityNormalized              1.030e+02
original_glszm_SmallAreaEmphasis                            -1.724e+02
```

original_glszm_SmallAreaHighGrayLevelEmphasis	1.408e+02
original_glszm_SmallAreaLowGrayLevelEmphasis	2.868e+01
original_glszm_ZoneEntropy	6.951e+01
original_glszm_ZonePercentage	-3.466e+02
original_glszm_ZoneVariance	-1.383e+04
original_ngtdm_Busyness	-7.073e+01
original_ngtdm_Coarseness	-2.575e+00
original_ngtdm_Complexity	2.548e+01
original_ngtdm_Contrast	1.181e+02
original_ngtdm_Strength	-1.690e+00
original_shape_Elongation	-9.877e+00
original_shape_Flatness	-6.806e-01
original_shape_LeastAxisLength	-8.730e+00
original_shape_MajorAxisLength	-2.723e+01
original_shape_Maximum2DDiameterColumn	1.302e+01
original_shape_Maximum2DDiameterRow	1.075e+01
original_shape_Maximum2DDiameterSlice	2.555e+01
original_shape_Maximum3DDiameter	-1.984e+01
original_shape_MeshVolume	1.965e+03
original_shape_MinorAxisLength	3.034e+00
original_shape_Sphericity	-9.122e+00
original_shape_SurfaceArea	-2.434e+01
original_shape_SurfaceVolumeRatio	-1.454e+02
original_shape_VoxelVolume	-1.984e+03
	exp(coef)
original_firstorder_10Percentile	7.784e+49
original_firstorder_90Percentile	5.219e+54
original_firstorder_Energy	9.678e-28
original_firstorder_Entropy	5.224e+00
original_firstorder_InterquartileRange	5.484e-55
original_firstorder_Kurtosis	6.708e-04
original_firstorder_Maximum	1.594e+11
original_firstorder_Mean	2.463e-126
original_firstorder_MeanAbsoluteDeviation	2.534e-68
original_firstorder_Median	6.897e+34
original_firstorder_Minimum	5.688e+90
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	3.733e+57
original_firstorder_RootMeanSquared	2.457e+02
original_firstorder_Skewness	1.453e-04
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	1.488e+65
original_firstorder_Variance	1.487e-245
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	4.208e+34
original_glcm_ClusterShade	2.508e+169
original_glcm_ClusterTendency	2.389e+55
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	4.236e-11
original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	2.347e+120
original_glcm_DifferenceVariance	4.054e+255
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	1.358e+53
original_glcm_Idn	2.549e-99

```
original_glcm_Imc1                                             5.001e+01
original_glcm_Imc2                                             5.541e+00
original_glcm_InverseVariance                                 2.501e+307
original_glcm_JointAverage                                    2.074e-43
original_glcm_JointEnergy                                     5.232e-06
original_glcm_JointEntropy                                    4.125e-88
original_glcm_MCC                                             2.347e+10
original_glcm_MaximumProbability                             2.517e+00
original_glcm_SumAverage                                      1.000e+00
original_glcm_SumEntropy                                      2.608e-14
original_glcm_SumSquares                                      1.000e+00
original_gldm_DependenceEntropy                               7.011e+87
original_gldm_DependenceNonUniformity                         2.498e+04
original_gldm_DependenceNonUniformityNormalized              1.237e+89
original_gldm_DependenceVariance                             1.185e-91
original_gldm_GrayLevelNonUniformity                         4.657e-21
original_gldm_GrayLevelVariance                                     Inf
original_gldm_HighGrayLevelEmphasis                                 Inf
original_gldm_LargeDependenceEmphasis                        1.548e-87
original_gldm_LargeDependenceHighGrayLevelEmphasis          2.065e+243
original_gldm_LargeDependenceLowGrayLevelEmphasis                   Inf
original_gldm_LowGrayLevelEmphasis                          1.083e-271
original_gldm_SmallDependenceEmphasis                        5.420e+230
original_gldm_SmallDependenceHighGrayLevelEmphasis          5.601e-84
original_gldm_SmallDependenceLowGrayLevelEmphasis           3.703e-22
original_glrlm_GrayLevelNonUniformity                        6.160e+19
original_glrlm_GrayLevelNonUniformityNormalized             3.595e-50
original_glrlm_GrayLevelVariance                            4.686e-123
original_glrlm_HighGrayLevelRunEmphasis                      0.000e+00
original_glrlm_LongRunEmphasis                               4.212e+02
original_glrlm_LongRunHighGrayLevelEmphasis                 2.145e-30
original_glrlm_LongRunLowGrayLevelEmphasis                  5.046e-15
original_glrlm_LowGrayLevelRunEmphasis                       0.000e+00
original_glrlm_RunEntropy                                    5.917e+46
original_glrlm_RunLengthNonUniformity                       2.566e+15
original_glrlm_RunLengthNonUniformityNormalized            5.340e-170
original_glrlm_RunPercentage                               1.434e+151
original_glrlm_RunVariance                                  2.910e-32
original_glrlm_ShortRunEmphasis                            5.969e-195
original_glrlm_ShortRunHighGrayLevelEmphasis                       Inf
original_glrlm_ShortRunLowGrayLevelEmphasis                        Inf
original_glszm_GrayLevelNonUniformity                        1.803e+01
original_glszm_GrayLevelNonUniformityNormalized             3.189e+43
original_glszm_GrayLevelVariance                            7.352e-11
original_glszm_HighGrayLevelZoneEmphasis                    2.714e-61
original_glszm_LargeAreaEmphasis                                    Inf
original_glszm_LargeAreaHighGrayLevelEmphasis              8.786e+29
original_glszm_LargeAreaLowGrayLevelEmphasis               3.100e-64
original_glszm_LowGrayLevelZoneEmphasis                     1.902e-48
original_glszm_SizeZoneNonUniformity                        2.108e+16
original_glszm_SizeZoneNonUniformityNormalized             5.164e+44
original_glszm_SmallAreaEmphasis                            1.360e-75
original_glszm_SmallAreaHighGrayLevelEmphasis              1.351e+61
original_glszm_SmallAreaLowGrayLevelEmphasis               2.842e+12
original_glszm_ZoneEntropy                                  1.541e+30
original_glszm_ZonePercentage                             2.996e-151
```

original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	1.912e-31
original_ngtdm_Coarseness	7.615e-02
original_ngtdm_Complexity	1.167e+11
original_ngtdm_Contrast	1.970e+51
original_ngtdm_Strength	1.845e-01
original_shape_Elongation	5.133e-05
original_shape_Flatness	5.063e-01
original_shape_LeastAxisLength	1.617e-04
original_shape_MajorAxisLength	1.491e-12
original_shape_Maximum2DDiameterColumn	4.522e+05
original_shape_Maximum2DDiameterRow	4.669e+04
original_shape_Maximum2DDiameterSlice	1.252e+11
original_shape_Maximum3DDiameter	2.416e-09
original_shape_MeshVolume	Inf
original_shape_MinorAxisLength	2.077e+01
original_shape_Sphericity	1.092e-04
original_shape_SurfaceArea	2.700e-11
original_shape_SurfaceVolumeRatio	7.438e-64
original_shape_VoxelVolume	0.000e+00
	se(coef)
original_firstorder_10Percentile	2.121e-01
original_firstorder_90Percentile	1.862e-01
original_firstorder_Energy	1.876e-01
original_firstorder_Entropy	2.520e-01
original_firstorder_InterquartileRange	3.016e-01
original_firstorder_Kurtosis	2.199e-01
original_firstorder_Maximum	1.761e-01
original_firstorder_Mean	2.374e-01
original_firstorder_MeanAbsoluteDeviation	2.230e-01
original_firstorder_Median	2.731e-01
original_firstorder_Minimum	5.329e-01
original_firstorder_Range	2.462e-01
original_firstorder_RobustMeanAbsoluteDeviation	3.041e-01
original_firstorder_RootMeanSquared	2.380e-01
original_firstorder_Skewness	1.515e-01
original_firstorder_TotalEnergy	1.876e-01
original_firstorder_Uniformity	2.808e-01
original_firstorder_Variance	3.598e-01
original_glcm_Autocorrelation	4.097e-01
original_glcm_ClusterProminence	2.573e+00
original_glcm_ClusterShade	5.387e-01
original_glcm_ClusterTendency	3.082e-01
original_glcm_Contrast	1.500e+00
original_glcm_Correlation	2.904e-01
original_glcm_DifferenceAverage	2.961e-01
original_glcm_DifferenceEntropy	2.800e-01
original_glcm_DifferenceVariance	1.831e+00
original_glcm_Id	2.458e-01
original_glcm_Idm	2.452e-01
original_glcm_Idmn	4.271e-01
original_glcm_Idn	3.762e-01
original_glcm_Imc1	2.513e-01
original_glcm_Imc2	3.154e-01
original_glcm_InverseVariance	2.309e-01
original_glcm_JointAverage	5.153e-01

original_glcm_JointEnergy	3.012e-01
original_glcm_JointEntropy	2.488e-01
original_glcm_MCC	3.185e-01
original_glcm_MaximumProbability	2.558e-01
original_glcm_SumAverage	5.153e-01
original_glcm_SumEntropy	2.575e-01
original_glcm_SumSquares	3.761e-01
original_gldm_DependenceEntropy	2.980e-01
original_gldm_DependenceNonUniformity	1.710e-01
original_gldm_DependenceNonUniformityNormalized	2.969e-01
original_gldm_DependenceVariance	2.349e-01
original_gldm_GrayLevelNonUniformity	1.650e-01
original_gldm_GrayLevelVariance	3.591e-01
original_gldm_HighGrayLevelEmphasis	4.108e-01
original_gldm_LargeDependenceEmphasis	2.618e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.927e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.008e+00
original_gldm_LowGrayLevelEmphasis	2.688e-01
original_gldm_SmallDependenceEmphasis	2.953e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	2.630e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis	5.170e-01
original_glrlm_GrayLevelNonUniformity	1.610e-01
original_glrlm_GrayLevelNonUniformityNormalized	3.087e-01
original_glrlm_GrayLevelVariance	3.447e-01
original_glrlm_HighGrayLevelRunEmphasis	4.134e-01
original_glrlm_LongRunEmphasis	3.154e-01
original_glrlm_LongRunHighGrayLevelEmphasis	2.084e-01
original_glrlm_LongRunLowGrayLevelEmphasis	4.190e-01
original_glrlm_LowGrayLevelRunEmphasis	2.996e-01
original_glrlm_RunEntropy	3.288e-01
original_glrlm_RunLengthNonUniformity	1.577e-01
original_glrlm_RunLengthNonUniformityNormalized	2.660e-01
original_glrlm_RunPercentage	2.663e-01
original_glrlm_RunVariance	3.089e-01
original_glrlm_ShortRunEmphasis	2.677e-01
original_glrlm_ShortRunHighGrayLevelEmphasis	3.921e-01
original_glrlm_ShortRunLowGrayLevelEmphasis	2.706e-01
original_glszm_GrayLevelNonUniformity	1.623e-01
original_glszm_GrayLevelNonUniformityNormalized	7.638e-01
original_glszm_GrayLevelVariance	2.688e-01
original_glszm_HighGrayLevelZoneEmphasis	4.280e-01
original_glszm_LargeAreaEmphasis	1.694e-01
original_glszm_LargeAreaHighGrayLevelEmphasis	1.171e-01
original_glszm_LargeAreaLowGrayLevelEmphasis	1.897e+00
original_glszm_LowGrayLevelZoneEmphasis	1.385e+00
original_glszm_SizeZoneNonUniformity	1.845e-01
original_glszm_SizeZoneNonUniformityNormalized	3.238e-01
original_glszm_SmallAreaEmphasis	3.563e-01
original_glszm_SmallAreaHighGrayLevelEmphasis	3.882e-01
original_glszm_SmallAreaLowGrayLevelEmphasis	1.312e+00
original_glszm_ZoneEntropy	4.127e-01
original_glszm_ZonePercentage	3.063e-01
original_glszm_ZoneVariance	1.691e-01
original_ngtdm_Busyness	9.327e-01
original_ngtdm_Coarseness	8.963e-01
original_ngtdm_Complexity	3.879e-01

original_ngtdm_Contrast	9.125e-01
original_ngtdm_Strength	4.343e-01
original_shape_Elongation	2.637e-01
original_shape_Flatness	3.406e-01
original_shape_LeastAxisLength	1.994e-01
original_shape_MajorAxisLength	2.332e-01
original_shape_Maximum2DDiameterColumn	2.158e-01
original_shape_Maximum2DDiameterRow	2.285e-01
original_shape_Maximum2DDiameterSlice	2.152e-01
original_shape_Maximum3DDiameter	1.912e-01
original_shape_MeshVolume	1.604e-01
original_shape_MinorAxisLength	2.159e-01
original_shape_Sphericity	2.935e-01
original_shape_SurfaceArea	1.424e-01
original_shape_SurfaceVolumeRatio	2.717e-01
original_shape_VoxelVolume	1.607e-01

	z
original_firstorder_10Percentile	541.686
original_firstorder_90Percentile	676.764
original_firstorder_Energy	-331.527
original_firstorder_Entropy	6.562
original_firstorder_InterquartileRange	-414.220
original_firstorder_Kurtosis	-33.223
original_firstorder_Maximum	146.455
original_firstorder_Mean	-1218.278
original_firstorder_MeanAbsoluteDeviation	-697.844
original_firstorder_Median	293.705
original_firstorder_Minimum	392.145
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	435.920
original_firstorder_RootMeanSquared	23.130
original_firstorder_Skewness	-58.319
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	534.514
original_firstorder_Variance	-1566.957
original_glcm_Autocorrelation	-3964.719
original_glcm_ClusterProminence	30.983
original_glcm_ClusterShade	724.117
original_glcm_ClusterTendency	413.792
original_glcm_Contrast	-1152.132
original_glcm_Correlation	-82.236
original_glcm_DifferenceAverage	3061.039
original_glcm_DifferenceEntropy	989.944
original_glcm_DifferenceVariance	321.363
original_glcm_Id	34310.451
original_glcm_Idm	-28610.268
original_glcm_Idmn	286.449
original_glcm_Idn	-603.487
original_glcm_Imc1	15.569
original_glcm_Imc2	5.429
original_glcm_InverseVariance	3065.782
original_glcm_JointAverage	-190.732
original_glcm_JointEnergy	-40.380
original_glcm_JointEntropy	-808.635
original_glcm_MCC	74.977
original_glcm_MaximumProbability	3.608

```
original_glcm_SumAverage                              0.000
original_glcm_SumEntropy                           -121.485
original_glcm_SumSquares                              0.000
original_gldm_DependenceEntropy                     678.845
original_gldm_DependenceNonUniformity                59.200
original_gldm_DependenceNonUniformityNormalized     690.941
original_gldm_DependenceVariance                   -891.115
original_gldm_GrayLevelNonUniformity               -283.730
original_gldm_GrayLevelVariance                    2798.560
original_gldm_HighGrayLevelEmphasis                4753.202
original_gldm_LargeDependenceEmphasis              -763.375
original_gldm_LargeDependenceHighGrayLevelEmphasis 2906.864
original_gldm_LargeDependenceLowGrayLevelEmphasis   723.990
original_gldm_LowGrayLevelEmphasis                -2321.486
original_gldm_SmallDependenceEmphasis              1799.315
original_gldm_SmallDependenceHighGrayLevelEmphasis -728.933
original_gldm_SmallDependenceLowGrayLevelEmphasis   -95.447
original_glrlm_GrayLevelNonUniformity               282.957
original_glrlm_GrayLevelNonUniformityNormalized    -368.795
original_glrlm_GrayLevelVariance                   -817.038
original_glrlm_HighGrayLevelRunEmphasis           -6275.381
original_glrlm_LongRunEmphasis                       19.158
original_glrlm_LongRunHighGrayLevelEmphasis        -327.870
original_glrlm_LongRunLowGrayLevelEmphasis          -78.575
original_glrlm_LowGrayLevelRunEmphasis            -6713.682
original_glrlm_RunEntropy                           327.576
original_glrlm_RunLengthNonUniformity               224.993
original_glrlm_RunLengthNonUniformityNormalized   -1465.297
original_glrlm_RunPercentage                       1307.061
original_glrlm_RunVariance                         -235.080
original_glrlm_ShortRunEmphasis                   -1670.878
original_glrlm_ShortRunHighGrayLevelEmphasis       5942.469
original_glrlm_ShortRunLowGrayLevelEmphasis        8847.976
original_glszm_GrayLevelNonUniformity                17.815
original_glszm_GrayLevelNonUniformityNormalized     131.148
original_glszm_GrayLevelVariance                    -86.792
original_glszm_HighGrayLevelZoneEmphasis           -325.871
original_glszm_LargeAreaEmphasis                  81432.622
original_glszm_LargeAreaHighGrayLevelEmphasis       588.629
original_glszm_LargeAreaLowGrayLevelEmphasis        -77.089
original_glszm_LowGrayLevelZoneEmphasis             -79.364
original_glszm_SizeZoneNonUniformity                203.720
original_glszm_SizeZoneNonUniformityNormalized      317.937
original_glszm_SmallAreaEmphasis                   -483.847
original_glszm_SmallAreaHighGrayLevelEmphasis       362.583
original_glszm_SmallAreaLowGrayLevelEmphasis         21.858
original_glszm_ZoneEntropy                          168.415
original_glszm_ZonePercentage                     -1131.546
original_glszm_ZoneVariance                      -81800.891
original_ngtdm_Busyness                             -75.836
original_ngtdm_Coarseness                            -2.873
original_ngtdm_Complexity                            65.703
original_ngtdm_Contrast                             129.429
original_ngtdm_Strength                              -3.893
original_shape_Elongation                           -37.455
original_shape_Flatness                              -1.998
```

```
original_shape_LeastAxisLength                           -43.792
original_shape_MajorAxisLength                          -116.784
original_shape_Maximum2DDiameterColumn                   60.350
original_shape_Maximum2DDiameterRow                      47.058
original_shape_Maximum2DDiameterSlice                   118.735
original_shape_Maximum3DDiameter                       -103.796
original_shape_MeshVolume                             12252.077
original_shape_MinorAxisLength                           14.054
original_shape_Sphericity                               -31.087
original_shape_SurfaceArea                            -170.941
original_shape_SurfaceVolumeRatio                     -535.027
original_shape_VoxelVolume                          -12345.920
                                                             p
original_firstorder_10Percentile                      < 2e-16
original_firstorder_90Percentile                      < 2e-16
original_firstorder_Energy                            < 2e-16
original_firstorder_Entropy                          5.31e-11
original_firstorder_InterquartileRange                < 2e-16
original_firstorder_Kurtosis                          < 2e-16
original_firstorder_Maximum                           < 2e-16
original_firstorder_Mean                              < 2e-16
original_firstorder_MeanAbsoluteDeviation             < 2e-16
original_firstorder_Median                            < 2e-16
original_firstorder_Minimum                           < 2e-16
original_firstorder_Range                            1.000000
original_firstorder_RobustMeanAbsoluteDeviation       < 2e-16
original_firstorder_RootMeanSquared                   < 2e-16
original_firstorder_Skewness                          < 2e-16
original_firstorder_TotalEnergy                      1.000000
original_firstorder_Uniformity                        < 2e-16
original_firstorder_Variance                          < 2e-16
original_glcm_Autocorrelation                         < 2e-16
original_glcm_ClusterProminence                       < 2e-16
original_glcm_ClusterShade                            < 2e-16
original_glcm_ClusterTendency                         < 2e-16
original_glcm_Contrast                                < 2e-16
original_glcm_Correlation                             < 2e-16
original_glcm_DifferenceAverage                       < 2e-16
original_glcm_DifferenceEntropy                       < 2e-16
original_glcm_DifferenceVariance                      < 2e-16
original_glcm_Id                                      < 2e-16
original_glcm_Idm                                     < 2e-16
original_glcm_Idmn                                    < 2e-16
original_glcm_Idn                                     < 2e-16
original_glcm_Imc1                                    < 2e-16
original_glcm_Imc2                                   5.68e-08
original_glcm_InverseVariance                         < 2e-16
original_glcm_JointAverage                            < 2e-16
original_glcm_JointEnergy                             < 2e-16
original_glcm_JointEntropy                            < 2e-16
original_glcm_MCC                                     < 2e-16
original_glcm_MaximumProbability                     0.000309
original_glcm_SumAverage                             1.000000
original_glcm_SumEntropy                              < 2e-16
original_glcm_SumSquares                             1.000000
original_gldm_DependenceEntropy                       < 2e-16
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original_gldm_DependenceNonUniformity                 < 2e-16
original_gldm_DependenceNonUniformityNormalized       < 2e-16
original_gldm_DependenceVariance                      < 2e-16
original_gldm_GrayLevelNonUniformity                  < 2e-16
original_gldm_GrayLevelVariance                       < 2e-16
original_gldm_HighGrayLevelEmphasis                   < 2e-16
original_gldm_LargeDependenceEmphasis                 < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis    < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis     < 2e-16
original_gldm_LowGrayLevelEmphasis                    < 2e-16
original_gldm_SmallDependenceEmphasis                 < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis    < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis     < 2e-16
original_glrlm_GrayLevelNonUniformity                 < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized       < 2e-16
original_glrlm_GrayLevelVariance                      < 2e-16
original_glrlm_HighGrayLevelRunEmphasis               < 2e-16
original_glrlm_LongRunEmphasis                        < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis           < 2e-16
original_glrlm_LongRunLowGrayLevelEmphasis            < 2e-16
original_glrlm_LowGrayLevelRunEmphasis                < 2e-16
original_glrlm_RunEntropy                             < 2e-16
original_glrlm_RunLengthNonUniformity                 < 2e-16
original_glrlm_RunLengthNonUniformityNormalized       < 2e-16
original_glrlm_RunPercentage                          < 2e-16
original_glrlm_RunVariance                            < 2e-16
original_glrlm_ShortRunEmphasis                       < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis          < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis           < 2e-16
original_glszm_GrayLevelNonUniformity                 < 2e-16
original_glszm_GrayLevelNonUniformityNormalized       < 2e-16
original_glszm_GrayLevelVariance                      < 2e-16
original_glszm_HighGrayLevelZoneEmphasis              < 2e-16
original_glszm_LargeAreaEmphasis                      < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis         < 2e-16
original_glszm_LargeAreaLowGrayLevelEmphasis          < 2e-16
original_glszm_LowGrayLevelZoneEmphasis               < 2e-16
original_glszm_SizeZoneNonUniformity                  < 2e-16
original_glszm_SizeZoneNonUniformityNormalized        < 2e-16
original_glszm_SmallAreaEmphasis                      < 2e-16
original_glszm_SmallAreaHighGrayLevelEmphasis         < 2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis          < 2e-16
original_glszm_ZoneEntropy                            < 2e-16
original_glszm_ZonePercentage                         < 2e-16
original_glszm_ZoneVariance                           < 2e-16
original_ngtdm_Busyness                               < 2e-16
original_ngtdm_Coarseness                             0.004068
original_ngtdm_Complexity                             < 2e-16
original_ngtdm_Contrast                               < 2e-16
original_ngtdm_Strength                               9.92e-05
original_shape_Elongation                             < 2e-16
original_shape_Flatness                               0.045685
original_shape_LeastAxisLength                        < 2e-16
original_shape_MajorAxisLength                        < 2e-16
original_shape_Maximum2DDiameterColumn                < 2e-16
original_shape_Maximum2DDiameterRow                   < 2e-16
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```
original_shape_Maximum2DDiameterSlice            < 2e-16
original_shape_Maximum3DDiameter                 < 2e-16
original_shape_MeshVolume                        < 2e-16
original_shape_MinorAxisLength                   < 2e-16
original_shape_Sphericity                        < 2e-16
original_shape_SurfaceArea                       < 2e-16
original_shape_SurfaceVolumeRatio                < 2e-16
original_shape_VoxelVolume                       < 2e-16


Likelihood ratio test=271.1  on 107 df, p=3.243e-16
n= 120, number of events= 35


$model_list[[1]]$coxmodels[[3]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                  -3.742e+03
original_firstorder_90Percentile                   2.813e+03
original_firstorder_Energy                         4.583e+02
original_firstorder_Entropy                       -7.428e+03
original_firstorder_InterquartileRange             7.727e+03
original_firstorder_Kurtosis                       4.961e+01
original_firstorder_Maximum                        6.787e+01
original_firstorder_Mean                          -3.518e+03
original_firstorder_MeanAbsoluteDeviation         -8.494e+03
original_firstorder_Median                         9.330e+02
original_firstorder_Minimum                        3.637e+02
original_firstorder_Range                          0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation   -9.161e+03
original_firstorder_RootMeanSquared                1.829e+03
original_firstorder_Skewness                      -1.057e+02
original_firstorder_TotalEnergy                    0.000e+00
original_firstorder_Uniformity                    -1.446e+03
original_firstorder_Variance                      -2.235e+04
original_glcm_Autocorrelation                      5.895e+03
original_glcm_ClusterProminence                    1.045e+05
original_glcm_ClusterShade                         3.656e+04
original_glcm_ClusterTendency                     -1.709e+04
original_glcm_Contrast                             4.703e+04
original_glcm_Correlation                          4.004e+02
original_glcm_DifferenceAverage                   -2.865e+03
original_glcm_DifferenceEntropy                   -1.780e+03
original_glcm_DifferenceVariance                  -3.832e+04
original_glcm_Id                                   5.978e+03
original_glcm_Idm                                 -4.492e+03
original_glcm_Idmn                                 6.805e+02
original_glcm_Idn                                 -3.758e+02
original_glcm_Imc1                                 4.996e+02
original_glcm_Imc2                                 3.235e+02
original_glcm_InverseVariance                     -4.634e+02
original_glcm_JointAverage                         1.505e+03
original_glcm_JointEnergy                          3.025e+01
original_glcm_JointEntropy                         9.216e+03
```

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original_glcm_MCC                                          -7.997e+01
original_glcm_MaximumProbability                            7.024e+01
original_glcm_SumAverage                                    0.000e+00
original_glcm_SumEntropy                                   -3.798e+03
original_glcm_SumSquares                                    0.000e+00
original_gldm_DependenceEntropy                            -8.534e+02
original_gldm_DependenceNonUniformity                       1.963e+03
original_gldm_DependenceNonUniformityNormalized           -7.804e+02
original_gldm_DependenceVariance                          -8.832e+02
original_gldm_GrayLevelNonUniformity                        5.382e+02
original_gldm_GrayLevelVariance                             5.866e+04
original_gldm_HighGrayLevelEmphasis                        -7.971e+03
original_gldm_LargeDependenceEmphasis                      -1.178e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis          1.699e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis           2.280e+03
original_gldm_LowGrayLevelEmphasis                          3.560e+03
original_gldm_SmallDependenceEmphasis                       1.815e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis        -2.436e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis         -1.263e+03
original_glrlm_GrayLevelNonUniformity                      -1.375e+03
original_glrlm_GrayLevelNonUniformityNormalized             3.069e+02
original_glrlm_GrayLevelVariance                            3.807e+03
original_glrlm_HighGrayLevelRunEmphasis                    -8.037e+03
original_glrlm_LongRunEmphasis                             -1.831e+03
original_glrlm_LongRunHighGrayLevelEmphasis               -3.606e+02
original_glrlm_LongRunLowGrayLevelEmphasis                -5.438e+02
original_glrlm_LowGrayLevelRunEmphasis                    -1.836e+04
original_glrlm_RunEntropy                                   3.724e+03
original_glrlm_RunLengthNonUniformity                     -5.579e+02
original_glrlm_RunLengthNonUniformityNormalized           -3.460e+03
original_glrlm_RunPercentage                                7.045e+02
original_glrlm_RunVariance                                  9.890e+02
original_glrlm_ShortRunEmphasis                             2.367e+03
original_glrlm_ShortRunHighGrayLevelEmphasis               8.462e+03
original_glrlm_ShortRunLowGrayLevelEmphasis                1.678e+04
original_glszm_GrayLevelNonUniformity                     -2.478e+02
original_glszm_GrayLevelNonUniformityNormalized           -1.523e+02
original_glszm_GrayLevelVariance                          -2.251e+03
original_glszm_HighGrayLevelZoneEmphasis                    1.252e+03
original_glszm_LargeAreaEmphasis                           -7.382e+00
original_glszm_LargeAreaHighGrayLevelEmphasis             -1.859e+02
original_glszm_LargeAreaLowGrayLevelEmphasis              -9.990e+01
original_glszm_LowGrayLevelZoneEmphasis                   -1.323e+00
original_glszm_SizeZoneNonUniformity                       4.150e+00
original_glszm_SizeZoneNonUniformityNormalized             0.000e+00
original_glszm_SmallAreaEmphasis                           8.533e+00
original_glszm_SmallAreaHighGrayLevelEmphasis              0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis               0.000e+00
original_glszm_ZoneEntropy                                 0.000e+00
original_glszm_ZonePercentage                              0.000e+00
original_glszm_ZoneVariance                                1.142e+02
original_ngtdm_Busyness                                   -3.866e+00
original_ngtdm_Coarseness                                 -2.699e+00
original_ngtdm_Complexity                                 -2.806e+01
original_ngtdm_Contrast                                    0.000e+00
original_ngtdm_Strength                                    0.000e+00
```

original_shape_Elongation	-2.671e+00
original_shape_Flatness	4.116e-01
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	3.816e+00
original_shape_Maximum2DDiameterRow	0.000e+00
original_shape_Maximum2DDiameterSlice	0.000e+00
original_shape_Maximum3DDiameter	-8.086e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	0.000e+00
original_firstorder_90Percentile	Inf
original_firstorder_Energy	1.041e+199
original_firstorder_Entropy	0.000e+00
original_firstorder_InterquartileRange	Inf
original_firstorder_Kurtosis	3.503e+21
original_firstorder_Maximum	2.993e+29
original_firstorder_Mean	0.000e+00
original_firstorder_MeanAbsoluteDeviation	0.000e+00
original_firstorder_Median	Inf
original_firstorder_Minimum	9.415e+157
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	0.000e+00
original_firstorder_RootMeanSquared	Inf
original_firstorder_Skewness	1.198e-46
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	0.000e+00
original_firstorder_Variance	0.000e+00
original_glcm_Autocorrelation	Inf
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	Inf
original_glcm_Correlation	7.603e+173
original_glcm_DifferenceAverage	0.000e+00
original_glcm_DifferenceEntropy	0.000e+00
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	3.330e+295
original_glcm_Idn	6.333e-164
original_glcm_Imc1	9.160e+216
original_glcm_Imc2	3.194e+140
original_glcm_InverseVariance	5.861e-202
original_glcm_JointAverage	Inf
original_glcm_JointEnergy	1.375e+13
original_glcm_JointEntropy	Inf
original_glcm_MCC	1.857e-35
original_glcm_MaximumProbability	3.210e+30
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	0.000e+00

original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	0.000e+00
original_gldm_DependenceNonUniformity	Inf
original_gldm_DependenceNonUniformityNormalized	0.000e+00
original_gldm_DependenceVariance	0.000e+00
original_gldm_GrayLevelNonUniformity	5.672e+233
original_gldm_GrayLevelVariance	Inf
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	Inf
original_gldm_LargeDependenceLowGrayLevelEmphasis	Inf
original_gldm_LowGrayLevelEmphasis	Inf
original_gldm_SmallDependenceEmphasis	Inf
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000e+00
original_glrlm_GrayLevelNonUniformity	0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	1.918e+133
original_glrlm_GrayLevelVariance	Inf
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	2.367e-157
original_glrlm_LongRunLowGrayLevelEmphasis	6.776e-237
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	Inf
original_glrlm_RunLengthNonUniformity	5.138e-243
original_glrlm_RunLengthNonUniformityNormalized	0.000e+00
original_glrlm_RunPercentage	9.352e+305
original_glrlm_RunVariance	Inf
original_glrlm_ShortRunEmphasis	Inf
original_glrlm_ShortRunHighGrayLevelEmphasis	Inf
original_glrlm_ShortRunLowGrayLevelEmphasis	Inf
original_glszm_GrayLevelNonUniformity	2.335e-108
original_glszm_GrayLevelNonUniformityNormalized	7.474e-67
original_glszm_GrayLevelVariance	0.000e+00
original_glszm_HighGrayLevelZoneEmphasis	Inf
original_glszm_LargeAreaEmphasis	6.225e-04
original_glszm_LargeAreaHighGrayLevelEmphasis	1.871e-81
original_glszm_LargeAreaLowGrayLevelEmphasis	4.096e-44
original_glszm_LowGrayLevelZoneEmphasis	2.662e-01
original_glszm_SizeZoneNonUniformity	6.342e+01
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	5.081e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	4.043e+49
original_ngtdm_Busyness	2.095e-02
original_ngtdm_Coarseness	6.725e-02
original_ngtdm_Complexity	6.531e-13
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	6.917e-02
original_shape_Flatness	1.509e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00

original_shape_Maximum2DDiameterColumn	4.543e+01
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	3.078e-04
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	7.211e+02
original_firstorder_90Percentile	5.338e+02
original_firstorder_Energy	1.359e+03
original_firstorder_Entropy	4.839e+02
original_firstorder_InterquartileRange	2.171e+03
original_firstorder_Kurtosis	2.457e+02
original_firstorder_Maximum	1.251e+03
original_firstorder_Mean	3.790e+02
original_firstorder_MeanAbsoluteDeviation	1.024e+03
original_firstorder_Median	3.758e+02
original_firstorder_Minimum	2.151e+02
original_firstorder_Range	5.971e+02
original_firstorder_RobustMeanAbsoluteDeviation	2.064e+03
original_firstorder_RootMeanSquared	1.195e+03
original_firstorder_Skewness	1.479e+02
original_firstorder_TotalEnergy	1.359e+03
original_firstorder_Uniformity	5.324e+02
original_firstorder_Variance	3.145e+03
original_glcm_Autocorrelation	2.264e+02
original_glcm_ClusterProminence	8.422e+04
original_glcm_ClusterShade	1.015e+04
original_glcm_ClusterTendency	3.739e+03
original_glcm_Contrast	7.429e+03
original_glcm_Correlation	2.820e+02
original_glcm_DifferenceAverage	1.296e+03
original_glcm_DifferenceEntropy	6.981e+02
original_glcm_DifferenceVariance	7.651e+03
original_glcm_Id	8.874e+02
original_glcm_Idm	9.097e+02
original_glcm_Idmn	1.215e+03
original_glcm_Idn	9.583e+02
original_glcm_Imc1	2.885e+02
original_glcm_Imc2	2.661e+02
original_glcm_InverseVariance	4.381e+02
original_glcm_JointAverage	2.181e+02
original_glcm_JointEnergy	7.471e+02
original_glcm_JointEntropy	6.166e+02
original_glcm_MCC	5.203e+02
original_glcm_MaximumProbability	9.924e+02
original_glcm_SumAverage	2.181e+02
original_glcm_SumEntropy	4.855e+02
original_glcm_SumSquares	4.174e+03
original_gldm_DependenceEntropy	4.198e+02
original_gldm_DependenceNonUniformity	4.100e+02
original_gldm_DependenceNonUniformityNormalized	3.075e+02

original_gldm_DependenceVariance	2.717e+02
original_gldm_GrayLevelNonUniformity	4.523e+02
original_gldm_GrayLevelVariance	3.145e+03
original_gldm_HighGrayLevelEmphasis	2.265e+02
original_gldm_LargeDependenceEmphasis	2.232e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis	8.447e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis	3.519e+02
original_gldm_LowGrayLevelEmphasis	5.728e+02
original_gldm_SmallDependenceEmphasis	2.712e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis	2.726e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.862e+03
original_glrlm_GrayLevelNonUniformity	4.479e+02
original_glrlm_GrayLevelNonUniformityNormalized	5.474e+02
original_glrlm_GrayLevelVariance	2.589e+03
original_glrlm_HighGrayLevelRunEmphasis	2.250e+02
original_glrlm_LongRunEmphasis	3.614e+02
original_glrlm_LongRunHighGrayLevelEmphasis	3.871e+02
original_glrlm_LongRunLowGrayLevelEmphasis	4.949e+02
original_glrlm_LowGrayLevelRunEmphasis	5.740e+02
original_glrlm_RunEntropy	4.052e+02
original_glrlm_RunLengthNonUniformity	3.192e+02
original_glrlm_RunLengthNonUniformityNormalized	2.050e+02
original_glrlm_RunPercentage	2.115e+02
original_glrlm_RunVariance	3.998e+02
original_glrlm_ShortRunEmphasis	2.048e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	1.913e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	7.597e+02
original_glszm_GrayLevelNonUniformity	2.088e+02
original_glszm_GrayLevelNonUniformityNormalized	3.954e+02
original_glszm_GrayLevelVariance	1.031e+03
original_glszm_HighGrayLevelZoneEmphasis	2.154e+02
original_glszm_LargeAreaEmphasis	2.696e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	5.244e+02
original_glszm_LargeAreaLowGrayLevelEmphasis	3.498e+02
original_glszm_LowGrayLevelZoneEmphasis	5.610e+02
original_glszm_SizeZoneNonUniformity	6.166e+02
original_glszm_SizeZoneNonUniformityNormalized	3.924e+02
original_glszm_SmallAreaEmphasis	3.957e+02
original_glszm_SmallAreaHighGrayLevelEmphasis	2.936e+02
original_glszm_SmallAreaLowGrayLevelEmphasis	4.301e+02
original_glszm_ZoneEntropy	2.412e+02
original_glszm_ZonePercentage	2.729e+02
original_glszm_ZoneVariance	2.702e+02
original_ngtdm_Busyness	3.342e+02
original_ngtdm_Coarseness	2.024e+03
original_ngtdm_Complexity	1.664e+03
original_ngtdm_Contrast	4.831e+03
original_ngtdm_Strength	9.688e+02
original_shape_Elongation	2.723e+02
original_shape_Flatness	2.445e+02
original_shape_LeastAxisLength	4.137e+02
original_shape_MajorAxisLength	1.833e+02
original_shape_Maximum2DDiameterColumn	2.771e+02
original_shape_Maximum2DDiameterRow	5.276e+02
original_shape_Maximum2DDiameterSlice	3.238e+02
original_shape_Maximum3DDiameter	2.814e+02

original_shape_MeshVolume	5.224e+02
original_shape_MinorAxisLength	3.566e+02
original_shape_Sphericity	1.947e+02
original_shape_SurfaceArea	2.295e+02
original_shape_SurfaceVolumeRatio	2.129e+02
original_shape_VoxelVolume	5.274e+02
	z
original_firstorder_10Percentile	-5.189
original_firstorder_90Percentile	5.269
original_firstorder_Energy	0.337
original_firstorder_Entropy	-15.349
original_firstorder_InterquartileRange	3.559
original_firstorder_Kurtosis	0.202
original_firstorder_Maximum	0.054
original_firstorder_Mean	-9.283
original_firstorder_MeanAbsoluteDeviation	-8.292
original_firstorder_Median	2.483
original_firstorder_Minimum	1.691
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	-4.438
original_firstorder_RootMeanSquared	1.530
original_firstorder_Skewness	-0.715
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	-2.717
original_firstorder_Variance	-7.108
original_glcm_Autocorrelation	26.044
original_glcm_ClusterProminence	1.240
original_glcm_ClusterShade	3.603
original_glcm_ClusterTendency	-4.572
original_glcm_Contrast	6.331
original_glcm_Correlation	1.420
original_glcm_DifferenceAverage	-2.211
original_glcm_DifferenceEntropy	-2.549
original_glcm_DifferenceVariance	-5.008
original_glcm_Id	6.737
original_glcm_Idm	-4.938
original_glcm_Idmn	0.560
original_glcm_Idn	-0.392
original_glcm_Imc1	1.732
original_glcm_Imc2	1.216
original_glcm_InverseVariance	-1.058
original_glcm_JointAverage	6.903
original_glcm_JointEnergy	0.040
original_glcm_JointEntropy	14.947
original_glcm_MCC	-0.154
original_glcm_MaximumProbability	0.071
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	-7.824
original_glcm_SumSquares	0.000
original_gldm_DependenceEntropy	-2.033
original_gldm_DependenceNonUniformity	4.788
original_gldm_DependenceNonUniformityNormalized	-2.538
original_gldm_DependenceVariance	-3.250
original_gldm_GrayLevelNonUniformity	1.190
original_gldm_GrayLevelVariance	18.652
original_gldm_HighGrayLevelEmphasis	-35.188

original_gldm_LargeDependenceEmphasis	-5.275
original_gldm_LargeDependenceHighGrayLevelEmphasis	2.012
original_gldm_LargeDependenceLowGrayLevelEmphasis	6.479
original_gldm_LowGrayLevelEmphasis	6.216
original_gldm_SmallDependenceEmphasis	6.692
original_gldm_SmallDependenceHighGrayLevelEmphasis	-8.937
original_gldm_SmallDependenceLowGrayLevelEmphasis	-0.679
original_glrlm_GrayLevelNonUniformity	-3.071
original_glrlm_GrayLevelNonUniformityNormalized	0.561
original_glrlm_GrayLevelVariance	1.470
original_glrlm_HighGrayLevelRunEmphasis	-35.726
original_glrlm_LongRunEmphasis	-5.065
original_glrlm_LongRunHighGrayLevelEmphasis	-0.932
original_glrlm_LongRunLowGrayLevelEmphasis	-1.099
original_glrlm_LowGrayLevelRunEmphasis	-31.992
original_glrlm_RunEntropy	9.190
original_glrlm_RunLengthNonUniformity	-1.748
original_glrlm_RunLengthNonUniformityNormalized	-16.882
original_glrlm_RunPercentage	3.331
original_glrlm_RunVariance	2.474
original_glrlm_ShortRunEmphasis	11.561
original_glrlm_ShortRunHighGrayLevelEmphasis	44.238
original_glrlm_ShortRunLowGrayLevelEmphasis	22.083
original_glszm_GrayLevelNonUniformity	-1.187
original_glszm_GrayLevelNonUniformityNormalized	-0.385
original_glszm_GrayLevelVariance	-2.183
original_glszm_HighGrayLevelZoneEmphasis	5.814
original_glszm_LargeAreaEmphasis	-0.027
original_glszm_LargeAreaHighGrayLevelEmphasis	-0.354
original_glszm_LargeAreaLowGrayLevelEmphasis	-0.286
original_glszm_LowGrayLevelZoneEmphasis	-0.002
original_glszm_SizeZoneNonUniformity	0.007
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.022
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.423
original_ngtdm_Busyness	-0.012
original_ngtdm_Coarseness	-0.001
original_ngtdm_Complexity	-0.017
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	-0.010
original_shape_Flatness	0.002
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.014
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	-0.029
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000

original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	2.11e-07
original_firstorder_90Percentile	1.37e-07
original_firstorder_Energy	0.736029
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	0.000372
original_firstorder_Kurtosis	0.839995
original_firstorder_Maximum	0.956741
original_firstorder_Mean	< 2e-16
original_firstorder_MeanAbsoluteDeviation	< 2e-16
original_firstorder_Median	0.013045
original_firstorder_Minimum	0.090835
original_firstorder_Range	1.000000
original_firstorder_RobustMeanAbsoluteDeviation	9.08e-06
original_firstorder_RootMeanSquared	0.125966
original_firstorder_Skewness	0.474752
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	0.006593
original_firstorder_Variance	1.18e-12
original_glcm_Autocorrelation	< 2e-16
original_glcm_ClusterProminence	0.214814
original_glcm_ClusterShade	0.000314
original_glcm_ClusterTendency	4.83e-06
original_glcm_Contrast	2.44e-10
original_glcm_Correlation	0.155699
original_glcm_DifferenceAverage	0.027051
original_glcm_DifferenceEntropy	0.010793
original_glcm_DifferenceVariance	5.50e-07
original_glcm_Id	1.62e-11
original_glcm_Idm	7.88e-07
original_glcm_Idmn	0.575508
original_glcm_Idn	0.694957
original_glcm_Imc1	0.083304
original_glcm_Imc2	0.224015
original_glcm_InverseVariance	0.290270
original_glcm_JointAverage	5.10e-12
original_glcm_JointEnergy	0.967702
original_glcm_JointEntropy	< 2e-16
original_glcm_MCC	0.877841
original_glcm_MaximumProbability	0.943570
original_glcm_SumAverage	1.000000
original_glcm_SumEntropy	5.14e-15
original_glcm_SumSquares	1.000000
original_gldm_DependenceEntropy	0.042065
original_gldm_DependenceNonUniformity	1.69e-06
original_gldm_DependenceNonUniformityNormalized	0.011161
original_gldm_DependenceVariance	0.001153
original_gldm_GrayLevelNonUniformity	0.234004
original_gldm_GrayLevelVariance	< 2e-16
original_gldm_HighGrayLevelEmphasis	< 2e-16
original_gldm_LargeDependenceEmphasis	1.33e-07
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.044251
original_gldm_LargeDependenceLowGrayLevelEmphasis	9.24e-11
original_gldm_LowGrayLevelEmphasis	5.10e-10

```
original_gldm_SmallDependenceEmphasis                2.20e-11
original_gldm_SmallDependenceHighGrayLevelEmphasis   < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis    0.497386
original_glrlm_GrayLevelNonUniformity                0.002136
original_glrlm_GrayLevelNonUniformityNormalized      0.575021
original_glrlm_GrayLevelVariance                     0.141455
original_glrlm_HighGrayLevelRunEmphasis              < 2e-16
original_glrlm_LongRunEmphasis                       4.07e-07
original_glrlm_LongRunHighGrayLevelEmphasis          0.351495
original_glrlm_LongRunLowGrayLevelEmphasis           0.271821
original_glrlm_LowGrayLevelRunEmphasis               < 2e-16
original_glrlm_RunEntropy                            < 2e-16
original_glrlm_RunLengthNonUniformity                0.080464
original_glrlm_RunLengthNonUniformityNormalized      < 2e-16
original_glrlm_RunPercentage                         0.000866
original_glrlm_RunVariance                           0.013369
original_glrlm_ShortRunEmphasis                      < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis         < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis          < 2e-16
original_glszm_GrayLevelNonUniformity                0.235155
original_glszm_GrayLevelNonUniformityNormalized      0.700206
original_glszm_GrayLevelVariance                     0.029037
original_glszm_HighGrayLevelZoneEmphasis             6.09e-09
original_glszm_LargeAreaEmphasis                     0.978155
original_glszm_LargeAreaHighGrayLevelEmphasis        0.722990
original_glszm_LargeAreaLowGrayLevelEmphasis         0.775159
original_glszm_LowGrayLevelZoneEmphasis              0.998118
original_glszm_SizeZoneNonUniformity                 0.994630
original_glszm_SizeZoneNonUniformityNormalized       1.000000
original_glszm_SmallAreaEmphasis                     0.982796
original_glszm_SmallAreaHighGrayLevelEmphasis        1.000000
original_glszm_SmallAreaLowGrayLevelEmphasis         1.000000
original_glszm_ZoneEntropy                           1.000000
original_glszm_ZonePercentage                        1.000000
original_glszm_ZoneVariance                          0.672461
original_ngtdm_Busyness                              0.990771
original_ngtdm_Coarseness                            0.998936
original_ngtdm_Complexity                            0.986549
original_ngtdm_Contrast                              1.000000
original_ngtdm_Strength                              1.000000
original_shape_Elongation                            0.992173
original_shape_Flatness                              0.998657
original_shape_LeastAxisLength                       1.000000
original_shape_MajorAxisLength                       1.000000
original_shape_Maximum2DDiameterColumn               0.989010
original_shape_Maximum2DDiameterRow                  1.000000
original_shape_Maximum2DDiameterSlice                1.000000
original_shape_Maximum3DDiameter                     0.977074
original_shape_MeshVolume                            1.000000
original_shape_MinorAxisLength                       1.000000
original_shape_Sphericity                            1.000000
original_shape_SurfaceArea                           1.000000
original_shape_SurfaceVolumeRatio                    1.000000
original_shape_VoxelVolume                           1.000000


Likelihood ratio test=59.55  on 107 df, p=0.9999
```

```
n= 75, number of events= 7



$model_list[[1]]$clusters
[1] 0.283815 2.381963 0.712854



$model_list[[2]]
$model_list[[2]]$vimp10
                       original_ngtdm_Complexity
                              0.015103933
           original_glrlm_LowGrayLevelRunEmphasis
                              0.007439809
              original_gldm_LowGrayLevelEmphasis
                              0.007028563
              original_glszm_GrayLevelVariance
                              0.006766861
              original_shape_Maximum3DDiameter
                              0.006766861
               original_shape_MajorAxisLength
                              0.006654703
                         original_glcm_Idmn
                              0.004448931
               original_firstorder_Variance
                              0.004336773
           original_gldm_GrayLevelNonUniformity
                              0.004187229
        original_shape_Maximum2DDiameterColumn
                              0.004075071
                 original_glszm_ZoneEntropy
                              0.003215194
        original_glszm_HighGrayLevelZoneEmphasis
                              0.003028264
                      original_ngtdm_Contrast
                              0.002467474
              original_gldm_DependenceVariance
                              0.002392702
original_gldm_SmallDependenceLowGrayLevelEmphasis
                              0.002392702



$model_list[[2]]$treemodel
n= 361

node), split, n, deviance, yval
      * denotes terminal node

 1) root 361 247.558100 1.00000000
   2) original_shape_Maximum3DDiameter< -0.00473189 233  74.220490 0.39271690
     4) original_ngtdm_Complexity>=-0.3623652 180  43.291660 0.27462900
       8) original_shape_Maximum3DDiameter< -0.3905136 122  10.210930 0.13178080
        16) original_glszm_GrayLevelVariance>=-0.4926825 97   1.836603 0.08169863 *
        17) original_glszm_GrayLevelVariance< -0.4926825 25   6.759505 0.50805200 *
        9) original_shape_Maximum3DDiameter>=-0.3905136 58  28.616700 0.65181000 *
     5) original_ngtdm_Complexity< -0.3623652 53  27.490370 0.83771540 *
   3) original_shape_Maximum3DDiameter>=-0.00473189 128 143.075100 2.21586800
     6) original_glszm_GrayLevelVariance< 0.04597914 61  37.867200 0.88710020 *
```

```
      7) original_glszm_GrayLevelVariance>=0.04597914 67  91.571170 3.52156100 *
```

```
$model_list[[2]]$coxmodels
$model_list[[2]]$coxmodels[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	7.649e+03
original_firstorder_90Percentile	3.294e+03
original_firstorder_Energy	-7.301e+02
original_firstorder_Entropy	-6.672e+03
original_firstorder_InterquartileRange	-1.591e+04
original_firstorder_Kurtosis	-9.280e+01
original_firstorder_Maximum	3.227e+02
original_firstorder_Mean	-3.514e+03
original_firstorder_MeanAbsoluteDeviation	-9.955e+03
original_firstorder_Median	-2.989e+03
original_firstorder_Minimum	-7.461e+02
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	2.169e+04
original_firstorder_RootMeanSquared	3.167e+03
original_firstorder_Skewness	2.270e+01
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-3.215e+03
original_firstorder_Variance	6.309e+04
original_glcm_Autocorrelation	-6.437e+04
original_glcm_ClusterProminence	-2.164e+04
original_glcm_ClusterShade	5.771e+02
original_glcm_ClusterTendency	-2.919e+02
original_glcm_Contrast	2.613e+05
original_glcm_Correlation	2.304e+02
original_glcm_DifferenceAverage	-7.267e+04
original_glcm_DifferenceEntropy	4.729e+03
original_glcm_DifferenceVariance	-1.331e+05
original_glcm_Id	-3.802e+05
original_glcm_Idm	3.170e+05
original_glcm_Idmn	5.629e+03
original_glcm_Idn	-5.610e+03
original_glcm_Imc1	-7.525e+02
original_glcm_Imc2	1.135e+03
original_glcm_InverseVariance	-3.574e+04
original_glcm_JointAverage	-6.150e+03
original_glcm_JointEnergy	4.546e+03
original_glcm_JointEntropy	-1.356e+04
original_glcm_MCC	-7.401e+01
original_glcm_MaximumProbability	-1.989e+02
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	-2.462e+03
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	7.896e+03
original_gldm_DependenceNonUniformity	-2.280e+03
original_gldm_DependenceNonUniformityNormalized	3.071e+03
original_gldm_DependenceVariance	-4.483e+03

```
original_gldm_GrayLevelNonUniformity                        -2.119e+03
original_gldm_GrayLevelVariance                             -4.021e+04
original_gldm_HighGrayLevelEmphasis                          1.051e+05
original_gldm_LargeDependenceEmphasis                        5.963e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis          -2.187e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis            9.635e+03
original_gldm_LowGrayLevelEmphasis                           2.424e+04
original_gldm_SmallDependenceEmphasis                        3.782e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis          -1.681e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis            2.806e+03
original_glrlm_GrayLevelNonUniformity                        4.180e+03
original_glrlm_GrayLevelNonUniformityNormalized             -6.404e+03
original_glrlm_GrayLevelVariance                            -1.245e+04
original_glrlm_HighGrayLevelRunEmphasis                     -3.824e+04
original_glrlm_LongRunEmphasis                              -2.022e+04
original_glrlm_LongRunHighGrayLevelEmphasis                  5.482e+03
original_glrlm_LongRunLowGrayLevelEmphasis                   1.769e+04
original_glrlm_LowGrayLevelRunEmphasis                      -3.949e+04
original_glrlm_RunEntropy                                    3.210e+03
original_glrlm_RunLengthNonUniformity                        5.874e+02
original_glrlm_RunLengthNonUniformityNormalized             5.932e+03
original_glrlm_RunPercentage                                -1.992e+03
original_glrlm_RunVariance                                   7.309e+03
original_glrlm_ShortRunEmphasis                             -2.015e+03
original_glrlm_ShortRunHighGrayLevelEmphasis                 2.032e+02
original_glrlm_ShortRunLowGrayLevelEmphasis                  0.000e+00
original_glszm_GrayLevelNonUniformity                       -1.903e+02
original_glszm_GrayLevelNonUniformityNormalized             1.023e+01
original_glszm_GrayLevelVariance                             0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                     4.525e+02
original_glszm_LargeAreaEmphasis                             8.102e+01
original_glszm_LargeAreaHighGrayLevelEmphasis                0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis                 0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                      0.000e+00
original_glszm_SizeZoneNonUniformity                         0.000e+00
original_glszm_SizeZoneNonUniformityNormalized               0.000e+00
original_glszm_SmallAreaEmphasis                             0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis                5.564e+01
original_glszm_SmallAreaLowGrayLevelEmphasis                 3.382e+01
original_glszm_ZoneEntropy                                   0.000e+00
original_glszm_ZonePercentage                                0.000e+00
original_glszm_ZoneVariance                                  0.000e+00
original_ngtdm_Busyness                                     -1.596e+01
original_ngtdm_Coarseness                                    0.000e+00
original_ngtdm_Complexity                                    4.497e+01
original_ngtdm_Contrast                                      0.000e+00
original_ngtdm_Strength                                      0.000e+00
original_shape_Elongation                                   -2.130e+00
original_shape_Flatness                                      0.000e+00
original_shape_LeastAxisLength                               0.000e+00
original_shape_MajorAxisLength                               0.000e+00
original_shape_Maximum2DDiameterColumn                      -2.219e+01
original_shape_Maximum2DDiameterRow                          0.000e+00
original_shape_Maximum2DDiameterSlice                        1.787e+01
original_shape_Maximum3DDiameter                             0.000e+00
original_shape_MeshVolume                                    0.000e+00
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original_shape_MinorAxisLength                          0.000e+00
original_shape_Sphericity                               0.000e+00
original_shape_SurfaceArea                              0.000e+00
original_shape_SurfaceVolumeRatio                       0.000e+00
original_shape_VoxelVolume                              0.000e+00
                                                         exp(coef)
original_firstorder_10Percentile                              Inf
original_firstorder_90Percentile                              Inf
original_firstorder_Energy                             8.380e-318
original_firstorder_Entropy                             0.000e+00
original_firstorder_InterquartileRange                  0.000e+00
original_firstorder_Kurtosis                            4.965e-41
original_firstorder_Maximum                            1.358e+140
original_firstorder_Mean                                0.000e+00
original_firstorder_MeanAbsoluteDeviation               0.000e+00
original_firstorder_Median                              0.000e+00
original_firstorder_Minimum                             0.000e+00
original_firstorder_Range                               1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation               Inf
original_firstorder_RootMeanSquared                           Inf
original_firstorder_Skewness                            7.210e+09
original_firstorder_TotalEnergy                         1.000e+00
original_firstorder_Uniformity                          0.000e+00
original_firstorder_Variance                                  Inf
original_glcm_Autocorrelation                           0.000e+00
original_glcm_ClusterProminence                         0.000e+00
original_glcm_ClusterShade                             4.126e+250
original_glcm_ClusterTendency                          1.696e-127
original_glcm_Contrast                                        Inf
original_glcm_Correlation                              1.170e+100
original_glcm_DifferenceAverage                         0.000e+00
original_glcm_DifferenceEntropy                               Inf
original_glcm_DifferenceVariance                        0.000e+00
original_glcm_Id                                        0.000e+00
original_glcm_Idm                                             Inf
original_glcm_Idmn                                            Inf
original_glcm_Idn                                       0.000e+00
original_glcm_Imc1                                      0.000e+00
original_glcm_Imc2                                            Inf
original_glcm_InverseVariance                           0.000e+00
original_glcm_JointAverage                              0.000e+00
original_glcm_JointEnergy                                     Inf
original_glcm_JointEntropy                              0.000e+00
original_glcm_MCC                                       7.198e-33
original_glcm_MaximumProbability                        4.304e-87
original_glcm_SumAverage                                1.000e+00
original_glcm_SumEntropy                                0.000e+00
original_glcm_SumSquares                                1.000e+00
original_gldm_DependenceEntropy                               Inf
original_gldm_DependenceNonUniformity                   0.000e+00
original_gldm_DependenceNonUniformityNormalized               Inf
original_gldm_DependenceVariance                        0.000e+00
original_gldm_GrayLevelNonUniformity                    0.000e+00
original_gldm_GrayLevelVariance                         0.000e+00
original_gldm_HighGrayLevelEmphasis                           Inf
original_gldm_LargeDependenceEmphasis                         Inf
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original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	Inf
original_gldm_LowGrayLevelEmphasis	Inf
original_gldm_SmallDependenceEmphasis	Inf
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	Inf
original_glrlm_GrayLevelNonUniformity	Inf
original_glrlm_GrayLevelNonUniformityNormalized	0.000e+00
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	Inf
original_glrlm_LongRunLowGrayLevelEmphasis	Inf
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	Inf
original_glrlm_RunLengthNonUniformity	1.214e+255
original_glrlm_RunLengthNonUniformityNormalized	Inf
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	Inf
original_glrlm_ShortRunEmphasis	0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.692e+88
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	2.336e-83
original_glszm_GrayLevelNonUniformityNormalized	2.786e+04
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	3.379e+196
original_glszm_LargeAreaEmphasis	1.542e+35
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.458e+24
original_glszm_SmallAreaLowGrayLevelEmphasis	4.886e+14
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.172e-07
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	3.386e+19
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.188e-01
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	2.298e-10
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	5.784e+07
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00

original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	9.346e+00
original_firstorder_90Percentile	1.862e+00
original_firstorder_Energy	8.841e-01
original_firstorder_Entropy	2.343e+00
original_firstorder_InterquartileRange	1.148e+01
original_firstorder_Kurtosis	9.390e-01
original_firstorder_Maximum	1.943e+00
original_firstorder_Mean	2.625e+00
original_firstorder_MeanAbsoluteDeviation	4.603e+00
original_firstorder_Median	1.498e+00
original_firstorder_Minimum	1.782e+00
original_firstorder_Range	1.562e+00
original_firstorder_RobustMeanAbsoluteDeviation	1.066e+01
original_firstorder_RootMeanSquared	2.636e+00
original_firstorder_Skewness	2.635e+00
original_firstorder_TotalEnergy	8.841e-01
original_firstorder_Uniformity	3.845e+00
original_firstorder_Variance	1.581e+01
original_glcm_Autocorrelation	1.252e+00
original_glcm_ClusterProminence	1.849e+03
original_glcm_ClusterShade	1.559e+02
original_glcm_ClusterTendency	2.569e+01
original_glcm_Contrast	2.024e+01
original_glcm_Correlation	1.209e+01
original_glcm_DifferenceAverage	2.258e+00
original_glcm_DifferenceEntropy	1.499e+00
original_glcm_DifferenceVariance	2.527e+01
original_glcm_Id	1.581e+00
original_glcm_Idm	1.522e+00
original_glcm_Idmn	5.930e+00
original_glcm_Idn	2.282e+00
original_glcm_Imc1	2.967e+00
original_glcm_Imc2	7.617e+00
original_glcm_InverseVariance	6.080e+00
original_glcm_JointAverage	1.774e+00
original_glcm_JointEnergy	4.754e+00
original_glcm_JointEntropy	2.087e+00
original_glcm_MCC	1.700e+01
original_glcm_MaximumProbability	7.437e+00
original_glcm_SumAverage	1.774e+00
original_glcm_SumEntropy	2.875e+00
original_glcm_SumSquares	2.405e+01
original_gldm_DependenceEntropy	1.803e+01
original_gldm_DependenceNonUniformity	5.558e-01
original_gldm_DependenceNonUniformityNormalized	1.226e+01
original_gldm_DependenceVariance	4.543e+00
original_gldm_GrayLevelNonUniformity	3.815e-01
original_gldm_GrayLevelVariance	1.582e+01
original_gldm_HighGrayLevelEmphasis	1.240e+00
original_gldm_LargeDependenceEmphasis	1.597e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	7.610e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.922e+02
original_gldm_LowGrayLevelEmphasis	2.625e+01
original_gldm_SmallDependenceEmphasis	1.797e+00

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original_gldm_SmallDependenceHighGrayLevelEmphasis      6.301e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis       9.068e+00
original_glrlm_GrayLevelNonUniformity                   4.021e-01
original_glrlm_GrayLevelNonUniformityNormalized         3.260e+00
original_glrlm_GrayLevelVariance                        1.525e+01
original_glrlm_HighGrayLevelRunEmphasis                 1.211e+00
original_glrlm_LongRunEmphasis                          2.150e+00
original_glrlm_LongRunHighGrayLevelEmphasis             9.077e-01
original_glrlm_LongRunLowGrayLevelEmphasis              2.805e+02
original_glrlm_LowGrayLevelRunEmphasis                  2.361e+01
original_glrlm_RunEntropy                               8.393e+00
original_glrlm_RunLengthNonUniformity                   6.211e-01
original_glrlm_RunLengthNonUniformityNormalized         1.935e+00
original_glrlm_RunPercentage                            1.586e+00
original_glrlm_RunVariance                              2.885e+00
original_glrlm_ShortRunEmphasis                         1.426e+00
original_glrlm_ShortRunHighGrayLevelEmphasis            1.997e+00
original_glrlm_ShortRunLowGrayLevelEmphasis             1.928e+01
original_glszm_GrayLevelNonUniformity                   8.822e-01
original_glszm_GrayLevelNonUniformityNormalized         2.334e+01
original_glszm_GrayLevelVariance                        4.030e+00
original_glszm_HighGrayLevelZoneEmphasis                1.106e+00
original_glszm_LargeAreaEmphasis                        3.722e-01
original_glszm_LargeAreaHighGrayLevelEmphasis           2.444e-01
original_glszm_LargeAreaLowGrayLevelEmphasis            4.725e+00
original_glszm_LowGrayLevelZoneEmphasis                 1.324e+01
original_glszm_SizeZoneNonUniformity                    9.358e-01
original_glszm_SizeZoneNonUniformityNormalized          7.432e+01
original_glszm_SmallAreaEmphasis                        8.549e+01
original_glszm_SmallAreaHighGrayLevelEmphasis           1.106e+00
original_glszm_SmallAreaLowGrayLevelEmphasis            9.518e+00
original_glszm_ZoneEntropy                              6.083e+00
original_glszm_ZonePercentage                           1.990e+00
original_glszm_ZoneVariance                             3.716e-01
original_ngtdm_Busyness                                 2.934e+00
original_ngtdm_Coarseness                               8.680e+00
original_ngtdm_Complexity                               5.736e+00
original_ngtdm_Contrast                                 1.843e+01
original_ngtdm_Strength                                 7.364e+00
original_shape_Elongation                               5.424e+00
original_shape_Flatness                                 1.801e+00
original_shape_LeastAxisLength                          6.632e-01
original_shape_MajorAxisLength                          1.179e+00
original_shape_Maximum2DDiameterColumn                  1.738e+00
original_shape_Maximum2DDiameterRow                     8.551e-01
original_shape_Maximum2DDiameterSlice                   1.026e+00
original_shape_Maximum3DDiameter                        1.222e+00
original_shape_MeshVolume                               3.197e-01
original_shape_MinorAxisLength                          1.151e+00
original_shape_Sphericity                               2.431e+00
original_shape_SurfaceArea                              1.939e+00
original_shape_SurfaceVolumeRatio                       3.815e+00
original_shape_VoxelVolume                              3.208e-01
                                                           z
original_firstorder_10Percentile                       8.184e+02
original_firstorder_90Percentile                       1.769e+03
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original_firstorder_Energy	-8.258e+02
original_firstorder_Entropy	-2.848e+03
original_firstorder_InterquartileRange	-1.387e+03
original_firstorder_Kurtosis	-9.883e+01
original_firstorder_Maximum	1.661e+02
original_firstorder_Mean	-1.339e+03
original_firstorder_MeanAbsoluteDeviation	-2.162e+03
original_firstorder_Median	-1.996e+03
original_firstorder_Minimum	-4.187e+02
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	2.036e+03
original_firstorder_RootMeanSquared	1.201e+03
original_firstorder_Skewness	8.615e+00
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-8.363e+02
original_firstorder_Variance	3.991e+03
original_glcm_Autocorrelation	-5.140e+04
original_glcm_ClusterProminence	-1.170e+01
original_glcm_ClusterShade	3.702e+00
original_glcm_ClusterTendency	-1.136e+01
original_glcm_Contrast	1.291e+04
original_glcm_Correlation	1.906e+01
original_glcm_DifferenceAverage	-3.219e+04
original_glcm_DifferenceEntropy	3.156e+03
original_glcm_DifferenceVariance	-5.266e+03
original_glcm_Id	-2.405e+05
original_glcm_Idm	2.083e+05
original_glcm_Idmn	9.493e+02
original_glcm_Idn	-2.458e+03
original_glcm_Imc1	-2.536e+02
original_glcm_Imc2	1.490e+02
original_glcm_InverseVariance	-5.879e+03
original_glcm_JointAverage	-3.467e+03
original_glcm_JointEnergy	9.562e+02
original_glcm_JointEntropy	-6.499e+03
original_glcm_MCC	-4.354e+00
original_glcm_MaximumProbability	-2.674e+01
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	-8.561e+02
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	4.378e+02
original_gldm_DependenceNonUniformity	-4.103e+03
original_gldm_DependenceNonUniformityNormalized	2.505e+02
original_gldm_DependenceVariance	-9.867e+02
original_gldm_GrayLevelNonUniformity	-5.556e+03
original_gldm_GrayLevelVariance	-2.543e+03
original_gldm_HighGrayLevelEmphasis	8.479e+04
original_gldm_LargeDependenceEmphasis	3.735e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	-2.874e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	5.012e+01
original_gldm_LowGrayLevelEmphasis	9.235e+02
original_gldm_SmallDependenceEmphasis	2.104e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	-2.669e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	3.094e+02
original_glrlm_GrayLevelNonUniformity	1.040e+04
original_glrlm_GrayLevelNonUniformityNormalized	-1.964e+03

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original_glrlm_GrayLevelVariance                      -8.165e+02
original_glrlm_HighGrayLevelRunEmphasis               -3.159e+04
original_glrlm_LongRunEmphasis                        -9.405e+03
original_glrlm_LongRunHighGrayLevelEmphasis            6.040e+03
original_glrlm_LongRunLowGrayLevelEmphasis             6.306e+01
original_glrlm_LowGrayLevelRunEmphasis                -1.673e+03
original_glrlm_RunEntropy                              3.825e+02
original_glrlm_RunLengthNonUniformity                  9.457e+02
original_glrlm_RunLengthNonUniformityNormalized        3.065e+03
original_glrlm_RunPercentage                          -1.256e+03
original_glrlm_RunVariance                             2.533e+03
original_glrlm_ShortRunEmphasis                       -1.413e+03
original_glrlm_ShortRunHighGrayLevelEmphasis           1.017e+02
original_glrlm_ShortRunLowGrayLevelEmphasis            0.000e+00
original_glszm_GrayLevelNonUniformity                 -2.157e+02
original_glszm_GrayLevelNonUniformityNormalized        4.390e-01
original_glszm_GrayLevelVariance                       0.000e+00
original_glszm_HighGrayLevelZoneEmphasis               4.093e+02
original_glszm_LargeAreaEmphasis                       2.177e+02
original_glszm_LargeAreaHighGrayLevelEmphasis          0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis           0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                0.000e+00
original_glszm_SizeZoneNonUniformity                   0.000e+00
original_glszm_SizeZoneNonUniformityNormalized         0.000e+00
original_glszm_SmallAreaEmphasis                       0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis          5.030e+01
original_glszm_SmallAreaLowGrayLevelEmphasis           3.554e+00
original_glszm_ZoneEntropy                             0.000e+00
original_glszm_ZonePercentage                          0.000e+00
original_glszm_ZoneVariance                            0.000e+00
original_ngtdm_Busyness                               -5.440e+00
original_ngtdm_Coarseness                              0.000e+00
original_ngtdm_Complexity                              7.840e+00
original_ngtdm_Contrast                                0.000e+00
original_ngtdm_Strength                                0.000e+00
original_shape_Elongation                             -3.930e-01
original_shape_Flatness                                0.000e+00
original_shape_LeastAxisLength                         0.000e+00
original_shape_MajorAxisLength                         0.000e+00
original_shape_Maximum2DDiameterColumn                -1.277e+01
original_shape_Maximum2DDiameterRow                    0.000e+00
original_shape_Maximum2DDiameterSlice                  1.742e+01
original_shape_Maximum3DDiameter                       0.000e+00
original_shape_MeshVolume                              0.000e+00
original_shape_MinorAxisLength                         0.000e+00
original_shape_Sphericity                              0.000e+00
original_shape_SurfaceArea                             0.000e+00
original_shape_SurfaceVolumeRatio                      0.000e+00
original_shape_VoxelVolume                             0.000e+00
                                                            p
original_firstorder_10Percentile                       < 2e-16
original_firstorder_90Percentile                       < 2e-16
original_firstorder_Energy                             < 2e-16
original_firstorder_Entropy                            < 2e-16
original_firstorder_InterquartileRange                 < 2e-16
original_firstorder_Kurtosis                           < 2e-16
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original_firstorder_Maximum                               < 2e-16
original_firstorder_Mean                                  < 2e-16
original_firstorder_MeanAbsoluteDeviation                 < 2e-16
original_firstorder_Median                                < 2e-16
original_firstorder_Minimum                               < 2e-16
original_firstorder_Range                                 1.000000
original_firstorder_RobustMeanAbsoluteDeviation           < 2e-16
original_firstorder_RootMeanSquared                       < 2e-16
original_firstorder_Skewness                              < 2e-16
original_firstorder_TotalEnergy                           1.000000
original_firstorder_Uniformity                            < 2e-16
original_firstorder_Variance                              < 2e-16
original_glcm_Autocorrelation                             < 2e-16
original_glcm_ClusterProminence                           < 2e-16
original_glcm_ClusterShade                                0.000214
original_glcm_ClusterTendency                             < 2e-16
original_glcm_Contrast                                    < 2e-16
original_glcm_Correlation                                 < 2e-16
original_glcm_DifferenceAverage                           < 2e-16
original_glcm_DifferenceEntropy                           < 2e-16
original_glcm_DifferenceVariance                          < 2e-16
original_glcm_Id                                          < 2e-16
original_glcm_Idm                                         < 2e-16
original_glcm_Idmn                                        < 2e-16
original_glcm_Idn                                         < 2e-16
original_glcm_Imc1                                        < 2e-16
original_glcm_Imc2                                        < 2e-16
original_glcm_InverseVariance                             < 2e-16
original_glcm_JointAverage                                < 2e-16
original_glcm_JointEnergy                                 < 2e-16
original_glcm_JointEntropy                                < 2e-16
original_glcm_MCC                                         1.33e-05
original_glcm_MaximumProbability                          < 2e-16
original_glcm_SumAverage                                  1.000000
original_glcm_SumEntropy                                  < 2e-16
original_glcm_SumSquares                                  1.000000
original_gldm_DependenceEntropy                           < 2e-16
original_gldm_DependenceNonUniformity                     < 2e-16
original_gldm_DependenceNonUniformityNormalized           < 2e-16
original_gldm_DependenceVariance                          < 2e-16
original_gldm_GrayLevelNonUniformity                      < 2e-16
original_gldm_GrayLevelVariance                           < 2e-16
original_gldm_HighGrayLevelEmphasis                       < 2e-16
original_gldm_LargeDependenceEmphasis                     < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis        < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis         < 2e-16
original_gldm_LowGrayLevelEmphasis                        < 2e-16
original_gldm_SmallDependenceEmphasis                     < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis        < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis         < 2e-16
original_glrlm_GrayLevelNonUniformity                     < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized           < 2e-16
original_glrlm_GrayLevelVariance                          < 2e-16
original_glrlm_HighGrayLevelRunEmphasis                   < 2e-16
original_glrlm_LongRunEmphasis                            < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis               < 2e-16
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original_glrlm_LongRunLowGrayLevelEmphasis              < 2e-16
original_glrlm_LowGrayLevelRunEmphasis                  < 2e-16
original_glrlm_RunEntropy                               < 2e-16
original_glrlm_RunLengthNonUniformity                  < 2e-16
original_glrlm_RunLengthNonUniformityNormalized        < 2e-16
original_glrlm_RunPercentage                           < 2e-16
original_glrlm_RunVariance                             < 2e-16
original_glrlm_ShortRunEmphasis                        < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis           < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis            1.000000
original_glszm_GrayLevelNonUniformity                  < 2e-16
original_glszm_GrayLevelNonUniformityNormalized        0.660947
original_glszm_GrayLevelVariance                       1.000000
original_glszm_HighGrayLevelZoneEmphasis               < 2e-16
original_glszm_LargeAreaEmphasis                       < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis          1.000000
original_glszm_LargeAreaLowGrayLevelEmphasis           1.000000
original_glszm_LowGrayLevelZoneEmphasis                1.000000
original_glszm_SizeZoneNonUniformity                   1.000000
original_glszm_SizeZoneNonUniformityNormalized         1.000000
original_glszm_SmallAreaEmphasis                       1.000000
original_glszm_SmallAreaHighGrayLevelEmphasis          < 2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis           0.000380
original_glszm_ZoneEntropy                             1.000000
original_glszm_ZonePercentage                          1.000000
original_glszm_ZoneVariance                            1.000000
original_ngtdm_Busyness                                5.34e-08
original_ngtdm_Coarseness                              1.000000
original_ngtdm_Complexity                              4.50e-15
original_ngtdm_Contrast                                1.000000
original_ngtdm_Strength                                1.000000
original_shape_Elongation                              0.694491
original_shape_Flatness                                1.000000
original_shape_LeastAxisLength                         1.000000
original_shape_MajorAxisLength                         1.000000
original_shape_Maximum2DDiameterColumn                 < 2e-16
original_shape_Maximum2DDiameterRow                    1.000000
original_shape_Maximum2DDiameterSlice                  < 2e-16
original_shape_Maximum3DDiameter                       1.000000
original_shape_MeshVolume                              1.000000
original_shape_MinorAxisLength                         1.000000
original_shape_Sphericity                              1.000000
original_shape_SurfaceArea                             1.000000
original_shape_SurfaceVolumeRatio                      1.000000
original_shape_VoxelVolume                             1.000000


Likelihood ratio test=189.3  on 107 df, p=1.641e-06
n= 67, number of events= 24


$model_list[[2]]$coxmodels[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)

                                              coef
```

```
original_firstorder_10Percentile                              1.548e+05
original_firstorder_90Percentile                             -2.363e+04
original_firstorder_Energy                                   -3.435e+03
original_firstorder_Entropy                                   3.264e+03
original_firstorder_InterquartileRange                       -2.091e+05
original_firstorder_Kurtosis                                  6.383e+02
original_firstorder_Maximum                                   1.156e+04
original_firstorder_Mean                                     -3.161e+04
original_firstorder_MeanAbsoluteDeviation                     2.521e+05
original_firstorder_Median                                    5.884e+04
original_firstorder_Minimum                                  -9.395e+04
original_firstorder_Range                                     4.755e+02
original_firstorder_RobustMeanAbsoluteDeviation               2.678e+05
original_firstorder_RootMeanSquared                          -1.167e+05
original_firstorder_Skewness                                  2.647e+02
original_firstorder_TotalEnergy                               0.000e+00
original_firstorder_Uniformity                                1.545e+04
original_firstorder_Variance                                 -2.903e+06
original_glcm_Autocorrelation                                -8.751e+04
original_glcm_ClusterProminence                               1.755e+08
original_glcm_ClusterShade                                    2.073e+07
original_glcm_ClusterTendency                                 1.843e+05
original_glcm_Contrast                                       -7.363e+06
original_glcm_Correlation                                     1.592e+03
original_glcm_DifferenceAverage                              -2.320e+05
original_glcm_DifferenceEntropy                              -2.324e+04
original_glcm_DifferenceVariance                              1.014e+07
original_glcm_Id                                              2.908e+04
original_glcm_Idm                                            -1.901e+05
original_glcm_Idmn                                            2.723e+04
original_glcm_Idn                                            -3.551e+04
original_glcm_Imc1                                            1.028e+04
original_glcm_Imc2                                            1.484e+04
original_glcm_InverseVariance                                -2.572e+04
original_glcm_JointAverage                                   -6.497e+04
original_glcm_JointEnergy                                    -1.821e+04
original_glcm_JointEntropy                                   -2.572e+03
original_glcm_MCC                                            -4.662e+00
original_glcm_MaximumProbability                              3.109e+03
original_glcm_SumAverage                                      0.000e+00
original_glcm_SumEntropy                                     -6.783e+04
original_glcm_SumSquares                                      1.432e+06
original_gldm_DependenceEntropy                               2.242e+04
original_gldm_DependenceNonUniformity                        -6.713e+04
original_gldm_DependenceNonUniformityNormalized              3.365e+04
original_gldm_DependenceVariance                             -7.726e+02
original_gldm_GrayLevelNonUniformity                          2.868e+04
original_gldm_GrayLevelVariance                               1.560e+06
original_gldm_HighGrayLevelEmphasis                           1.480e+04
original_gldm_LargeDependenceEmphasis                         6.276e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis           -2.956e+04
original_gldm_LargeDependenceLowGrayLevelEmphasis            -1.019e+03
original_gldm_LowGrayLevelEmphasis                            3.042e+03
original_gldm_SmallDependenceEmphasis                         3.876e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis           -6.291e+04
original_gldm_SmallDependenceLowGrayLevelEmphasis            -1.337e+02
```

```
original_glrlm_GrayLevelNonUniformity                    5.110e+03
original_glrlm_GrayLevelNonUniformityNormalized         -4.414e+03
original_glrlm_GrayLevelVariance                        -9.652e+02
original_glrlm_HighGrayLevelRunEmphasis                  1.076e+05
original_glrlm_LongRunEmphasis                          -1.150e+01
original_glrlm_LongRunHighGrayLevelEmphasis             -2.749e+01
original_glrlm_LongRunLowGrayLevelEmphasis              -6.866e-01
original_glrlm_LowGrayLevelRunEmphasis                   0.000e+00
original_glrlm_RunEntropy                                0.000e+00
original_glrlm_RunLengthNonUniformity                    0.000e+00
original_glrlm_RunLengthNonUniformityNormalized          0.000e+00
original_glrlm_RunPercentage                             7.711e+02
original_glrlm_RunVariance                               1.694e-01
original_glrlm_ShortRunEmphasis                          0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis             0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis              0.000e+00
original_glszm_GrayLevelNonUniformity                    0.000e+00
original_glszm_GrayLevelNonUniformityNormalized          0.000e+00
original_glszm_GrayLevelVariance                         0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                 0.000e+00
original_glszm_LargeAreaEmphasis                         0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis            0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis             2.789e+01
original_glszm_LowGrayLevelZoneEmphasis                  9.346e+02
original_glszm_SizeZoneNonUniformity                     0.000e+00
original_glszm_SizeZoneNonUniformityNormalized           0.000e+00
original_glszm_SmallAreaEmphasis                         0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis            0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis             0.000e+00
original_glszm_ZoneEntropy                               7.141e-01
original_glszm_ZonePercentage                           -1.347e+03
original_glszm_ZoneVariance                              0.000e+00
original_ngtdm_Busyness                                  0.000e+00
original_ngtdm_Coarseness                                0.000e+00
original_ngtdm_Complexity                               -3.865e+02
original_ngtdm_Contrast                                  9.085e+00
original_ngtdm_Strength                                  0.000e+00
original_shape_Elongation                               -6.557e-01
original_shape_Flatness                                  0.000e+00
original_shape_LeastAxisLength                           0.000e+00
original_shape_MajorAxisLength                          -9.138e-01
original_shape_Maximum2DDiameterColumn                   1.835e+02
original_shape_Maximum2DDiameterRow                      0.000e+00
original_shape_Maximum2DDiameterSlice                    1.985e+00
original_shape_Maximum3DDiameter                         0.000e+00
original_shape_MeshVolume                                0.000e+00
original_shape_MinorAxisLength                           0.000e+00
original_shape_Sphericity                                0.000e+00
original_shape_SurfaceArea                               0.000e+00
original_shape_SurfaceVolumeRatio                        0.000e+00
original_shape_VoxelVolume                               0.000e+00
                                                         exp(coef)
original_firstorder_10Percentile                              Inf
original_firstorder_90Percentile                         0.000e+00
original_firstorder_Energy                               0.000e+00
original_firstorder_Entropy                                   Inf
```

original_firstorder_InterquartileRange	0.000e+00
original_firstorder_Kurtosis	1.603e+277
original_firstorder_Maximum	Inf
original_firstorder_Mean	0.000e+00
original_firstorder_MeanAbsoluteDeviation	Inf
original_firstorder_Median	Inf
original_firstorder_Minimum	0.000e+00
original_firstorder_Range	3.069e+206
original_firstorder_RobustMeanAbsoluteDeviation	Inf
original_firstorder_RootMeanSquared	0.000e+00
original_firstorder_Skewness	9.443e+114
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	Inf
original_firstorder_Variance	0.000e+00
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	Inf
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	Inf
original_glcm_DifferenceAverage	0.000e+00
original_glcm_DifferenceEntropy	0.000e+00
original_glcm_DifferenceVariance	Inf
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	Inf
original_glcm_Idn	0.000e+00
original_glcm_Imc1	Inf
original_glcm_Imc2	Inf
original_glcm_InverseVariance	0.000e+00
original_glcm_JointAverage	0.000e+00
original_glcm_JointEnergy	0.000e+00
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	9.451e-03
original_glcm_MaximumProbability	Inf
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	0.000e+00
original_glcm_SumSquares	Inf
original_gldm_DependenceEntropy	Inf
original_gldm_DependenceNonUniformity	0.000e+00
original_gldm_DependenceNonUniformityNormalized	Inf
original_gldm_DependenceVariance	0.000e+00
original_gldm_GrayLevelNonUniformity	Inf
original_gldm_GrayLevelVariance	Inf
original_gldm_HighGrayLevelEmphasis	Inf
original_gldm_LargeDependenceEmphasis	Inf
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000e+00
original_gldm_LowGrayLevelEmphasis	Inf
original_gldm_SmallDependenceEmphasis	Inf
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	9.005e-59
original_glrlm_GrayLevelNonUniformity	Inf
original_glrlm_GrayLevelNonUniformityNormalized	0.000e+00
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	Inf

```
original_glrlm_LongRunEmphasis                       1.014e-05
original_glrlm_LongRunHighGrayLevelEmphasis          1.148e-12
original_glrlm_LongRunLowGrayLevelEmphasis           5.033e-01
original_glrlm_LowGrayLevelRunEmphasis               1.000e+00
original_glrlm_RunEntropy                            1.000e+00
original_glrlm_RunLengthNonUniformity                1.000e+00
original_glrlm_RunLengthNonUniformityNormalized      1.000e+00
original_glrlm_RunPercentage                              Inf
original_glrlm_RunVariance                           1.185e+00
original_glrlm_ShortRunEmphasis                      1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis         1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis          1.000e+00
original_glszm_GrayLevelNonUniformity                1.000e+00
original_glszm_GrayLevelNonUniformityNormalized      1.000e+00
original_glszm_GrayLevelVariance                     1.000e+00
original_glszm_HighGrayLevelZoneEmphasis             1.000e+00
original_glszm_LargeAreaEmphasis                     1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis        1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis         1.293e+12
original_glszm_LowGrayLevelZoneEmphasis                   Inf
original_glszm_SizeZoneNonUniformity                 1.000e+00
original_glszm_SizeZoneNonUniformityNormalized       1.000e+00
original_glszm_SmallAreaEmphasis                     1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis        1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis         1.000e+00
original_glszm_ZoneEntropy                           2.042e+00
original_glszm_ZonePercentage                        0.000e+00
original_glszm_ZoneVariance                          1.000e+00
original_ngtdm_Busyness                              1.000e+00
original_ngtdm_Coarseness                            1.000e+00
original_ngtdm_Complexity                           1.411e-168
original_ngtdm_Contrast                              8.821e+03
original_ngtdm_Strength                              1.000e+00
original_shape_Elongation                            5.191e-01
original_shape_Flatness                              1.000e+00
original_shape_LeastAxisLength                       1.000e+00
original_shape_MajorAxisLength                       4.010e-01
original_shape_Maximum2DDiameterColumn               5.046e+79
original_shape_Maximum2DDiameterRow                  1.000e+00
original_shape_Maximum2DDiameterSlice                7.282e+00
original_shape_Maximum3DDiameter                     1.000e+00
original_shape_MeshVolume                            1.000e+00
original_shape_MinorAxisLength                       1.000e+00
original_shape_Sphericity                            1.000e+00
original_shape_SurfaceArea                           1.000e+00
original_shape_SurfaceVolumeRatio                    1.000e+00
original_shape_VoxelVolume                           1.000e+00
                                                      se(coef)
original_firstorder_10Percentile                     9.637e+03
original_firstorder_90Percentile                     4.451e+03
original_firstorder_Energy                           9.516e+03
original_firstorder_Entropy                          3.861e+03
original_firstorder_InterquartileRange               1.284e+04
original_firstorder_Kurtosis                         4.655e+02
original_firstorder_Maximum                          3.235e+04
original_firstorder_Mean                             4.461e+03
```

original_firstorder_MeanAbsoluteDeviation	1.119e+04
original_firstorder_Median	3.470e+03
original_firstorder_Minimum	1.589e+03
original_firstorder_Range	3.528e+03
original_firstorder_RobustMeanAbsoluteDeviation	1.254e+04
original_firstorder_RootMeanSquared	6.305e+03
original_firstorder_Skewness	1.024e+03
original_firstorder_TotalEnergy	9.516e+03
original_firstorder_Uniformity	2.390e+03
original_firstorder_Variance	6.881e+04
original_glcm_Autocorrelation	1.911e+03
original_glcm_ClusterProminence	1.673e+07
original_glcm_ClusterShade	6.998e+05
original_glcm_ClusterTendency	7.533e+04
original_glcm_Contrast	5.115e+04
original_glcm_Correlation	5.803e+03
original_glcm_DifferenceAverage	5.195e+03
original_glcm_DifferenceEntropy	2.975e+03
original_glcm_DifferenceVariance	6.189e+04
original_glcm_Id	2.995e+03
original_glcm_Idm	3.051e+03
original_glcm_Idmn	1.141e+03
original_glcm_Idn	1.150e+03
original_glcm_Imc1	3.752e+03
original_glcm_Imc2	2.841e+03
original_glcm_InverseVariance	1.836e+03
original_glcm_JointAverage	1.480e+03
original_glcm_JointEnergy	2.210e+03
original_glcm_JointEntropy	3.365e+03
original_glcm_MCC	1.385e+03
original_glcm_MaximumProbability	1.736e+03
original_glcm_SumAverage	1.480e+03
original_glcm_SumEntropy	3.562e+03
original_glcm_SumSquares	6.778e+04
original_gldm_DependenceEntropy	1.424e+03
original_gldm_DependenceNonUniformity	6.689e+03
original_gldm_DependenceNonUniformityNormalized	1.524e+03
original_gldm_DependenceVariance	1.504e+03
original_gldm_GrayLevelNonUniformity	2.558e+03
original_gldm_GrayLevelVariance	6.639e+04
original_gldm_HighGrayLevelEmphasis	1.907e+03
original_gldm_LargeDependenceEmphasis	1.442e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.712e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	9.717e+02
original_gldm_LowGrayLevelEmphasis	1.175e+03
original_gldm_SmallDependenceEmphasis	1.329e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.820e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis	9.472e+02
original_glrlm_GrayLevelNonUniformity	2.913e+03
original_glrlm_GrayLevelNonUniformityNormalized	1.908e+03
original_glrlm_GrayLevelVariance	6.603e+04
original_glrlm_HighGrayLevelRunEmphasis	1.882e+03
original_glrlm_LongRunEmphasis	3.220e+03
original_glrlm_LongRunHighGrayLevelEmphasis	2.093e+03
original_glrlm_LongRunLowGrayLevelEmphasis	1.713e+03
original_glrlm_LowGrayLevelRunEmphasis	1.128e+03

original_glrlm_RunEntropy	1.349e+03
original_glrlm_RunLengthNonUniformity	6.204e+03
original_glrlm_RunLengthNonUniformityNormalized	1.220e+03
original_glrlm_RunPercentage	1.297e+03
original_glrlm_RunVariance	3.879e+03
original_glrlm_ShortRunEmphasis	1.282e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	2.393e+03
original_glrlm_ShortRunLowGrayLevelEmphasis	1.094e+03
original_glszm_GrayLevelNonUniformity	2.093e+03
original_glszm_GrayLevelNonUniformityNormalized	2.889e+03
original_glszm_GrayLevelVariance	1.266e+04
original_glszm_HighGrayLevelZoneEmphasis	1.663e+03
original_glszm_LargeAreaEmphasis	2.687e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	1.865e+04
original_glszm_LargeAreaLowGrayLevelEmphasis	2.135e+03
original_glszm_LowGrayLevelZoneEmphasis	1.079e+03
original_glszm_SizeZoneNonUniformity	7.373e+03
original_glszm_SizeZoneNonUniformityNormalized	1.164e+03
original_glszm_SmallAreaEmphasis	1.062e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	2.427e+03
original_glszm_SmallAreaLowGrayLevelEmphasis	1.516e+03
original_glszm_ZoneEntropy	5.966e+03
original_glszm_ZonePercentage	1.318e+03
original_glszm_ZoneVariance	2.682e+03
original_ngtdm_Busyness	1.084e+03
original_ngtdm_Coarseness	6.835e+02
original_ngtdm_Complexity	8.087e+04
original_ngtdm_Contrast	6.820e+03
original_ngtdm_Strength	6.833e+03
original_shape_Elongation	1.981e+03
original_shape_Flatness	1.789e+03
original_shape_LeastAxisLength	1.683e+03
original_shape_MajorAxisLength	2.400e+03
original_shape_Maximum2DDiameterColumn	1.602e+03
original_shape_Maximum2DDiameterRow	2.755e+03
original_shape_Maximum2DDiameterSlice	2.619e+03
original_shape_Maximum3DDiameter	2.178e+03
original_shape_MeshVolume	3.354e+03
original_shape_MinorAxisLength	2.184e+03
original_shape_Sphericity	1.235e+03
original_shape_SurfaceArea	9.691e+03
original_shape_SurfaceVolumeRatio	1.155e+03
original_shape_VoxelVolume	3.360e+03
	z
original_firstorder_10Percentile	16.061
original_firstorder_90Percentile	-5.310
original_firstorder_Energy	-0.361
original_firstorder_Entropy	0.845
original_firstorder_InterquartileRange	-16.287
original_firstorder_Kurtosis	1.371
original_firstorder_Maximum	0.357
original_firstorder_Mean	-7.087
original_firstorder_MeanAbsoluteDeviation	22.532
original_firstorder_Median	16.955
original_firstorder_Minimum	-59.113
original_firstorder_Range	0.135

```
original_firstorder_RobustMeanAbsoluteDeviation        21.358
original_firstorder_RootMeanSquared                   -18.506
original_firstorder_Skewness                            0.259
original_firstorder_TotalEnergy                         0.000
original_firstorder_Uniformity                          6.465
original_firstorder_Variance                          -42.190
original_glcm_Autocorrelation                         -45.787
original_glcm_ClusterProminence                        10.488
original_glcm_ClusterShade                             29.620
original_glcm_ClusterTendency                           2.446
original_glcm_Contrast                               -143.946
original_glcm_Correlation                               0.274
original_glcm_DifferenceAverage                       -44.667
original_glcm_DifferenceEntropy                        -7.812
original_glcm_DifferenceVariance                      163.791
original_glcm_Id                                        9.711
original_glcm_Idm                                     -62.311
original_glcm_Idmn                                     23.856
original_glcm_Idn                                     -30.877
original_glcm_Imc1                                      2.741
original_glcm_Imc2                                      5.224
original_glcm_InverseVariance                         -14.010
original_glcm_JointAverage                            -43.911
original_glcm_JointEnergy                              -8.239
original_glcm_JointEntropy                             -0.765
original_glcm_MCC                                      -0.003
original_glcm_MaximumProbability                        1.791
original_glcm_SumAverage                                0.000
original_glcm_SumEntropy                              -19.043
original_glcm_SumSquares                               21.122
original_gldm_DependenceEntropy                        15.752
original_gldm_DependenceNonUniformity                 -10.036
original_gldm_DependenceNonUniformityNormalized        22.074
original_gldm_DependenceVariance                       -0.514
original_gldm_GrayLevelNonUniformity                   11.211
original_gldm_GrayLevelVariance                        23.492
original_gldm_HighGrayLevelEmphasis                     7.762
original_gldm_LargeDependenceEmphasis                   4.351
original_gldm_LargeDependenceHighGrayLevelEmphasis    -17.268
original_gldm_LargeDependenceLowGrayLevelEmphasis      -1.049
original_gldm_LowGrayLevelEmphasis                      2.589
original_gldm_SmallDependenceEmphasis                   2.915
original_gldm_SmallDependenceHighGrayLevelEmphasis    -10.809
original_gldm_SmallDependenceLowGrayLevelEmphasis      -0.141
original_glrlm_GrayLevelNonUniformity                   1.754
original_glrlm_GrayLevelNonUniformityNormalized        -2.314
original_glrlm_GrayLevelVariance                       -0.015
original_glrlm_HighGrayLevelRunEmphasis                57.179
original_glrlm_LongRunEmphasis                         -0.004
original_glrlm_LongRunHighGrayLevelEmphasis            -0.013
original_glrlm_LongRunLowGrayLevelEmphasis              0.000
original_glrlm_LowGrayLevelRunEmphasis                  0.000
original_glrlm_RunEntropy                               0.000
original_glrlm_RunLengthNonUniformity                  0.000
original_glrlm_RunLengthNonUniformityNormalized        0.000
original_glrlm_RunPercentage                           0.595
```

original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.013
original_glszm_LowGrayLevelZoneEmphasis	0.866
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	-1.021
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	-0.005
original_ngtdm_Contrast	0.001
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.115
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.001
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	1.10e-07
original_firstorder_Energy	0.71812
original_firstorder_Entropy	0.39785
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	0.17030
original_firstorder_Maximum	0.72073
original_firstorder_Mean	1.37e-12
original_firstorder_MeanAbsoluteDeviation	< 2e-16
original_firstorder_Median	< 2e-16
original_firstorder_Minimum	< 2e-16
original_firstorder_Range	0.89279
original_firstorder_RobustMeanAbsoluteDeviation	< 2e-16
original_firstorder_RootMeanSquared	< 2e-16
original_firstorder_Skewness	0.79602
original_firstorder_TotalEnergy	1.00000

original_firstorder_Uniformity	1.01e-10
original_firstorder_Variance	< 2e-16
original_glcm_Autocorrelation	< 2e-16
original_glcm_ClusterProminence	< 2e-16
original_glcm_ClusterShade	< 2e-16
original_glcm_ClusterTendency	0.01443
original_glcm_Contrast	< 2e-16
original_glcm_Correlation	0.78376
original_glcm_DifferenceAverage	< 2e-16
original_glcm_DifferenceEntropy	5.61e-15
original_glcm_DifferenceVariance	< 2e-16
original_glcm_Id	< 2e-16
original_glcm_Idm	< 2e-16
original_glcm_Idmn	< 2e-16
original_glcm_Idn	< 2e-16
original_glcm_Imc1	0.00612
original_glcm_Imc2	1.75e-07
original_glcm_InverseVariance	< 2e-16
original_glcm_JointAverage	< 2e-16
original_glcm_JointEnergy	< 2e-16
original_glcm_JointEntropy	0.44453
original_glcm_MCC	0.99732
original_glcm_MaximumProbability	0.07324
original_glcm_SumAverage	1.00000
original_glcm_SumEntropy	< 2e-16
original_glcm_SumSquares	< 2e-16
original_gldm_DependenceEntropy	< 2e-16
original_gldm_DependenceNonUniformity	< 2e-16
original_gldm_DependenceNonUniformityNormalized	< 2e-16
original_gldm_DependenceVariance	0.60736
original_gldm_GrayLevelNonUniformity	< 2e-16
original_gldm_GrayLevelVariance	< 2e-16
original_gldm_HighGrayLevelEmphasis	8.39e-15
original_gldm_LargeDependenceEmphasis	1.36e-05
original_gldm_LargeDependenceHighGrayLevelEmphasis	< 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.29435
original_gldm_LowGrayLevelEmphasis	0.00962
original_gldm_SmallDependenceEmphasis	0.00355
original_gldm_SmallDependenceHighGrayLevelEmphasis	< 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.88778
original_glrlm_GrayLevelNonUniformity	0.07941
original_glrlm_GrayLevelNonUniformityNormalized	0.02068
original_glrlm_GrayLevelVariance	0.98834
original_glrlm_HighGrayLevelRunEmphasis	< 2e-16
original_glrlm_LongRunEmphasis	0.99715
original_glrlm_LongRunHighGrayLevelEmphasis	0.98952
original_glrlm_LongRunLowGrayLevelEmphasis	0.99968
original_glrlm_LowGrayLevelRunEmphasis	1.00000
original_glrlm_RunEntropy	1.00000
original_glrlm_RunLengthNonUniformity	1.00000
original_glrlm_RunLengthNonUniformityNormalized	1.00000
original_glrlm_RunPercentage	0.55207
original_glrlm_RunVariance	0.99997
original_glrlm_ShortRunEmphasis	1.00000
original_glrlm_ShortRunHighGrayLevelEmphasis	1.00000
original_glrlm_ShortRunLowGrayLevelEmphasis	1.00000

```
original_glszm_GrayLevelNonUniformity                    1.00000
original_glszm_GrayLevelNonUniformityNormalized          1.00000
original_glszm_GrayLevelVariance                         1.00000
original_glszm_HighGrayLevelZoneEmphasis                 1.00000
original_glszm_LargeAreaEmphasis                         1.00000
original_glszm_LargeAreaHighGrayLevelEmphasis            1.00000
original_glszm_LargeAreaLowGrayLevelEmphasis             0.98958
original_glszm_LowGrayLevelZoneEmphasis                  0.38655
original_glszm_SizeZoneNonUniformity                     1.00000
original_glszm_SizeZoneNonUniformityNormalized           1.00000
original_glszm_SmallAreaEmphasis                         1.00000
original_glszm_SmallAreaHighGrayLevelEmphasis            1.00000
original_glszm_SmallAreaLowGrayLevelEmphasis             1.00000
original_glszm_ZoneEntropy                               0.99990
original_glszm_ZonePercentage                            0.30709
original_glszm_ZoneVariance                              1.00000
original_ngtdm_Busyness                                  1.00000
original_ngtdm_Coarseness                                1.00000
original_ngtdm_Complexity                                0.99619
original_ngtdm_Contrast                                  0.99894
original_ngtdm_Strength                                  1.00000
original_shape_Elongation                                0.99974
original_shape_Flatness                                  1.00000
original_shape_LeastAxisLength                           1.00000
original_shape_MajorAxisLength                           0.99970
original_shape_Maximum2DDiameterColumn                   0.90882
original_shape_Maximum2DDiameterRow                      1.00000
original_shape_Maximum2DDiameterSlice                    0.99940
original_shape_Maximum3DDiameter                         1.00000
original_shape_MeshVolume                                1.00000
original_shape_MinorAxisLength                           1.00000
original_shape_Sphericity                                1.00000
original_shape_SurfaceArea                               1.00000
original_shape_SurfaceVolumeRatio                        1.00000
original_shape_VoxelVolume                               1.00000


Likelihood ratio test=39.11  on 107 df, p=1
n= 53, number of events= 5


$model_list[[2]]$coxmodels[[3]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                    coef
original_firstorder_10Percentile                       0
original_firstorder_90Percentile                       0
original_firstorder_Energy                             0
original_firstorder_Entropy                            0
original_firstorder_InterquartileRange                 0
original_firstorder_Kurtosis                           0
original_firstorder_Maximum                            0
original_firstorder_Mean                               0
original_firstorder_MeanAbsoluteDeviation              0
original_firstorder_Median                             0
```

```
original_firstorder_Minimum                               0
original_firstorder_Range                                 0
original_firstorder_RobustMeanAbsoluteDeviation           0
original_firstorder_RootMeanSquared                       0
original_firstorder_Skewness                              0
original_firstorder_TotalEnergy                           0
original_firstorder_Uniformity                            0
original_firstorder_Variance                              0
original_glcm_Autocorrelation                             0
original_glcm_ClusterProminence                           0
original_glcm_ClusterShade                                0
original_glcm_ClusterTendency                             0
original_glcm_Contrast                                    0
original_glcm_Correlation                                 0
original_glcm_DifferenceAverage                           0
original_glcm_DifferenceEntropy                           0
original_glcm_DifferenceVariance                          0
original_glcm_Id                                          0
original_glcm_Idm                                         0
original_glcm_Idmn                                        0
original_glcm_Idn                                         0
original_glcm_Imc1                                        0
original_glcm_Imc2                                        0
original_glcm_InverseVariance                             0
original_glcm_JointAverage                                0
original_glcm_JointEnergy                                 0
original_glcm_JointEntropy                                0
original_glcm_MCC                                         0
original_glcm_MaximumProbability                          0
original_glcm_SumAverage                                  0
original_glcm_SumEntropy                                  0
original_glcm_SumSquares                                  0
original_gldm_DependenceEntropy                           0
original_gldm_DependenceNonUniformity                     0
original_gldm_DependenceNonUniformityNormalized           0
original_gldm_DependenceVariance                          0
original_gldm_GrayLevelNonUniformity                      0
original_gldm_GrayLevelVariance                           0
original_gldm_HighGrayLevelEmphasis                       0
original_gldm_LargeDependenceEmphasis                     0
original_gldm_LargeDependenceHighGrayLevelEmphasis        0
original_gldm_LargeDependenceLowGrayLevelEmphasis         0
original_gldm_LowGrayLevelEmphasis                        0
original_gldm_SmallDependenceEmphasis                     0
original_gldm_SmallDependenceHighGrayLevelEmphasis        0
original_gldm_SmallDependenceLowGrayLevelEmphasis         0
original_glrlm_GrayLevelNonUniformity                     0
original_glrlm_GrayLevelNonUniformityNormalized           0
original_glrlm_GrayLevelVariance                          0
original_glrlm_HighGrayLevelRunEmphasis                   0
original_glrlm_LongRunEmphasis                            0
original_glrlm_LongRunHighGrayLevelEmphasis               0
original_glrlm_LongRunLowGrayLevelEmphasis                0
original_glrlm_LowGrayLevelRunEmphasis                    0
original_glrlm_RunEntropy                                 0
original_glrlm_RunLengthNonUniformity                     0
```

original_glrlm_RunLengthNonUniformityNormalized	0
original_glrlm_RunPercentage	0
original_glrlm_RunVariance	0
original_glrlm_ShortRunEmphasis	0
original_glrlm_ShortRunHighGrayLevelEmphasis	0
original_glrlm_ShortRunLowGrayLevelEmphasis	0
original_glszm_GrayLevelNonUniformity	0
original_glszm_GrayLevelNonUniformityNormalized	0
original_glszm_GrayLevelVariance	0
original_glszm_HighGrayLevelZoneEmphasis	0
original_glszm_LargeAreaEmphasis	0
original_glszm_LargeAreaHighGrayLevelEmphasis	0
original_glszm_LargeAreaLowGrayLevelEmphasis	0
original_glszm_LowGrayLevelZoneEmphasis	0
original_glszm_SizeZoneNonUniformity	0
original_glszm_SizeZoneNonUniformityNormalized	0
original_glszm_SmallAreaEmphasis	0
original_glszm_SmallAreaHighGrayLevelEmphasis	0
original_glszm_SmallAreaLowGrayLevelEmphasis	0
original_glszm_ZoneEntropy	0
original_glszm_ZonePercentage	0
original_glszm_ZoneVariance	0
original_ngtdm_Busyness	0
original_ngtdm_Coarseness	0
original_ngtdm_Complexity	0
original_ngtdm_Contrast	0
original_ngtdm_Strength	0
original_shape_Elongation	0
original_shape_Flatness	0
original_shape_LeastAxisLength	0
original_shape_MajorAxisLength	0
original_shape_Maximum2DDiameterColumn	0
original_shape_Maximum2DDiameterRow	0
original_shape_Maximum2DDiameterSlice	0
original_shape_Maximum3DDiameter	0
original_shape_MeshVolume	0
original_shape_MinorAxisLength	0
original_shape_Sphericity	0
original_shape_SurfaceArea	0
original_shape_SurfaceVolumeRatio	0
original_shape_VoxelVolume	0

	exp(coef)
original_firstorder_10Percentile	1
original_firstorder_90Percentile	1
original_firstorder_Energy	1
original_firstorder_Entropy	1
original_firstorder_InterquartileRange	1
original_firstorder_Kurtosis	1
original_firstorder_Maximum	1
original_firstorder_Mean	1
original_firstorder_MeanAbsoluteDeviation	1
original_firstorder_Median	1
original_firstorder_Minimum	1
original_firstorder_Range	1
original_firstorder_RobustMeanAbsoluteDeviation	1
original_firstorder_RootMeanSquared	1

original_firstorder_Skewness	1
original_firstorder_TotalEnergy	1
original_firstorder_Uniformity	1
original_firstorder_Variance	1
original_glcm_Autocorrelation	1
original_glcm_ClusterProminence	1
original_glcm_ClusterShade	1
original_glcm_ClusterTendency	1
original_glcm_Contrast	1
original_glcm_Correlation	1
original_glcm_DifferenceAverage	1
original_glcm_DifferenceEntropy	1
original_glcm_DifferenceVariance	1
original_glcm_Id	1
original_glcm_Idm	1
original_glcm_Idmn	1
original_glcm_Idn	1
original_glcm_Imc1	1
original_glcm_Imc2	1
original_glcm_InverseVariance	1
original_glcm_JointAverage	1
original_glcm_JointEnergy	1
original_glcm_JointEntropy	1
original_glcm_MCC	1
original_glcm_MaximumProbability	1
original_glcm_SumAverage	1
original_glcm_SumEntropy	1
original_glcm_SumSquares	1
original_gldm_DependenceEntropy	1
original_gldm_DependenceNonUniformity	1
original_gldm_DependenceNonUniformityNormalized	1
original_gldm_DependenceVariance	1
original_gldm_GrayLevelNonUniformity	1
original_gldm_GrayLevelVariance	1
original_gldm_HighGrayLevelEmphasis	1
original_gldm_LargeDependenceEmphasis	1
original_gldm_LargeDependenceHighGrayLevelEmphasis	1
original_gldm_LargeDependenceLowGrayLevelEmphasis	1
original_gldm_LowGrayLevelEmphasis	1
original_gldm_SmallDependenceEmphasis	1
original_gldm_SmallDependenceHighGrayLevelEmphasis	1
original_gldm_SmallDependenceLowGrayLevelEmphasis	1
original_glrlm_GrayLevelNonUniformity	1
original_glrlm_GrayLevelNonUniformityNormalized	1
original_glrlm_GrayLevelVariance	1
original_glrlm_HighGrayLevelRunEmphasis	1
original_glrlm_LongRunEmphasis	1
original_glrlm_LongRunHighGrayLevelEmphasis	1
original_glrlm_LongRunLowGrayLevelEmphasis	1
original_glrlm_LowGrayLevelRunEmphasis	1
original_glrlm_RunEntropy	1
original_glrlm_RunLengthNonUniformity	1
original_glrlm_RunLengthNonUniformityNormalized	1
original_glrlm_RunPercentage	1
original_glrlm_RunVariance	1
original_glrlm_ShortRunEmphasis	1

original_glrlm_ShortRunHighGrayLevelEmphasis	1
original_glrlm_ShortRunLowGrayLevelEmphasis	1
original_glszm_GrayLevelNonUniformity	1
original_glszm_GrayLevelNonUniformityNormalized	1
original_glszm_GrayLevelVariance	1
original_glszm_HighGrayLevelZoneEmphasis	1
original_glszm_LargeAreaEmphasis	1
original_glszm_LargeAreaHighGrayLevelEmphasis	1
original_glszm_LargeAreaLowGrayLevelEmphasis	1
original_glszm_LowGrayLevelZoneEmphasis	1
original_glszm_SizeZoneNonUniformity	1
original_glszm_SizeZoneNonUniformityNormalized	1
original_glszm_SmallAreaEmphasis	1
original_glszm_SmallAreaHighGrayLevelEmphasis	1
original_glszm_SmallAreaLowGrayLevelEmphasis	1
original_glszm_ZoneEntropy	1
original_glszm_ZonePercentage	1
original_glszm_ZoneVariance	1
original_ngtdm_Busyness	1
original_ngtdm_Coarseness	1
original_ngtdm_Complexity	1
original_ngtdm_Contrast	1
original_ngtdm_Strength	1
original_shape_Elongation	1
original_shape_Flatness	1
original_shape_LeastAxisLength	1
original_shape_MajorAxisLength	1
original_shape_Maximum2DDiameterColumn	1
original_shape_Maximum2DDiameterRow	1
original_shape_Maximum2DDiameterSlice	1
original_shape_Maximum3DDiameter	1
original_shape_MeshVolume	1
original_shape_MinorAxisLength	1
original_shape_Sphericity	1
original_shape_SurfaceArea	1
original_shape_SurfaceVolumeRatio	1
original_shape_VoxelVolume	1
	se(coef)
original_firstorder_10Percentile	0
original_firstorder_90Percentile	0
original_firstorder_Energy	0
original_firstorder_Entropy	0
original_firstorder_InterquartileRange	0
original_firstorder_Kurtosis	0
original_firstorder_Maximum	0
original_firstorder_Mean	0
original_firstorder_MeanAbsoluteDeviation	0
original_firstorder_Median	0
original_firstorder_Minimum	0
original_firstorder_Range	0
original_firstorder_RobustMeanAbsoluteDeviation	0
original_firstorder_RootMeanSquared	0
original_firstorder_Skewness	0
original_firstorder_TotalEnergy	0
original_firstorder_Uniformity	0
original_firstorder_Variance	0

original_glcm_Autocorrelation	0
original_glcm_ClusterProminence	0
original_glcm_ClusterShade	0
original_glcm_ClusterTendency	0
original_glcm_Contrast	0
original_glcm_Correlation	0
original_glcm_DifferenceAverage	0
original_glcm_DifferenceEntropy	0
original_glcm_DifferenceVariance	0
original_glcm_Id	0
original_glcm_Idm	0
original_glcm_Idmn	0
original_glcm_Idn	0
original_glcm_Imc1	0
original_glcm_Imc2	0
original_glcm_InverseVariance	0
original_glcm_JointAverage	0
original_glcm_JointEnergy	0
original_glcm_JointEntropy	0
original_glcm_MCC	0
original_glcm_MaximumProbability	0
original_glcm_SumAverage	0
original_glcm_SumEntropy	0
original_glcm_SumSquares	0
original_gldm_DependenceEntropy	0
original_gldm_DependenceNonUniformity	0
original_gldm_DependenceNonUniformityNormalized	0
original_gldm_DependenceVariance	0
original_gldm_GrayLevelNonUniformity	0
original_gldm_GrayLevelVariance	0
original_gldm_HighGrayLevelEmphasis	0
original_gldm_LargeDependenceEmphasis	0
original_gldm_LargeDependenceHighGrayLevelEmphasis	0
original_gldm_LargeDependenceLowGrayLevelEmphasis	0
original_gldm_LowGrayLevelEmphasis	0
original_gldm_SmallDependenceEmphasis	0
original_gldm_SmallDependenceHighGrayLevelEmphasis	0
original_gldm_SmallDependenceLowGrayLevelEmphasis	0
original_glrlm_GrayLevelNonUniformity	0
original_glrlm_GrayLevelNonUniformityNormalized	0
original_glrlm_GrayLevelVariance	0
original_glrlm_HighGrayLevelRunEmphasis	0
original_glrlm_LongRunEmphasis	0
original_glrlm_LongRunHighGrayLevelEmphasis	0
original_glrlm_LongRunLowGrayLevelEmphasis	0
original_glrlm_LowGrayLevelRunEmphasis	0
original_glrlm_RunEntropy	0
original_glrlm_RunLengthNonUniformity	0
original_glrlm_RunLengthNonUniformityNormalized	0
original_glrlm_RunPercentage	0
original_glrlm_RunVariance	0
original_glrlm_ShortRunEmphasis	0
original_glrlm_ShortRunHighGrayLevelEmphasis	0
original_glrlm_ShortRunLowGrayLevelEmphasis	0
original_glszm_GrayLevelNonUniformity	0
original_glszm_GrayLevelNonUniformityNormalized	0

```
original_glszm_GrayLevelVariance                      0
original_glszm_HighGrayLevelZoneEmphasis              0
original_glszm_LargeAreaEmphasis                      0
original_glszm_LargeAreaHighGrayLevelEmphasis         0
original_glszm_LargeAreaLowGrayLevelEmphasis          0
original_glszm_LowGrayLevelZoneEmphasis               0
original_glszm_SizeZoneNonUniformity                  0
original_glszm_SizeZoneNonUniformityNormalized        0
original_glszm_SmallAreaEmphasis                      0
original_glszm_SmallAreaHighGrayLevelEmphasis         0
original_glszm_SmallAreaLowGrayLevelEmphasis          0
original_glszm_ZoneEntropy                            0
original_glszm_ZonePercentage                         0
original_glszm_ZoneVariance                           0
original_ngtdm_Busyness                               0
original_ngtdm_Coarseness                             0
original_ngtdm_Complexity                             0
original_ngtdm_Contrast                               0
original_ngtdm_Strength                               0
original_shape_Elongation                             0
original_shape_Flatness                               0
original_shape_LeastAxisLength                        0
original_shape_MajorAxisLength                        0
original_shape_Maximum2DDiameterColumn                0
original_shape_Maximum2DDiameterRow                   0
original_shape_Maximum2DDiameterSlice                 0
original_shape_Maximum3DDiameter                      0
original_shape_MeshVolume                             0
original_shape_MinorAxisLength                        0
original_shape_Sphericity                             0
original_shape_SurfaceArea                            0
original_shape_SurfaceVolumeRatio                     0
original_shape_VoxelVolume                            0
                                                      z
original_firstorder_10Percentile                    NaN
original_firstorder_90Percentile                    NaN
original_firstorder_Energy                          NaN
original_firstorder_Entropy                         NaN
original_firstorder_InterquartileRange              NaN
original_firstorder_Kurtosis                        NaN
original_firstorder_Maximum                         NaN
original_firstorder_Mean                            NaN
original_firstorder_MeanAbsoluteDeviation           NaN
original_firstorder_Median                          NaN
original_firstorder_Minimum                         NaN
original_firstorder_Range                           NaN
original_firstorder_RobustMeanAbsoluteDeviation     NaN
original_firstorder_RootMeanSquared                 NaN
original_firstorder_Skewness                        NaN
original_firstorder_TotalEnergy                     NaN
original_firstorder_Uniformity                      NaN
original_firstorder_Variance                        NaN
original_glcm_Autocorrelation                       NaN
original_glcm_ClusterProminence                     NaN
original_glcm_ClusterShade                          NaN
original_glcm_ClusterTendency                       NaN
```

original_glcm_Contrast	NaN
original_glcm_Correlation	NaN
original_glcm_DifferenceAverage	NaN
original_glcm_DifferenceEntropy	NaN
original_glcm_DifferenceVariance	NaN
original_glcm_Id	NaN
original_glcm_Idm	NaN
original_glcm_Idmn	NaN
original_glcm_Idn	NaN
original_glcm_Imc1	NaN
original_glcm_Imc2	NaN
original_glcm_InverseVariance	NaN
original_glcm_JointAverage	NaN
original_glcm_JointEnergy	NaN
original_glcm_JointEntropy	NaN
original_glcm_MCC	NaN
original_glcm_MaximumProbability	NaN
original_glcm_SumAverage	NaN
original_glcm_SumEntropy	NaN
original_glcm_SumSquares	NaN
original_gldm_DependenceEntropy	NaN
original_gldm_DependenceNonUniformity	NaN
original_gldm_DependenceNonUniformityNormalized	NaN
original_gldm_DependenceVariance	NaN
original_gldm_GrayLevelNonUniformity	NaN
original_gldm_GrayLevelVariance	NaN
original_gldm_HighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceEmphasis	NaN
original_gldm_LargeDependenceHighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceLowGrayLevelEmphasis	NaN
original_gldm_LowGrayLevelEmphasis	NaN
original_gldm_SmallDependenceEmphasis	NaN
original_gldm_SmallDependenceHighGrayLevelEmphasis	NaN
original_gldm_SmallDependenceLowGrayLevelEmphasis	NaN
original_glrlm_GrayLevelNonUniformity	NaN
original_glrlm_GrayLevelNonUniformityNormalized	NaN
original_glrlm_GrayLevelVariance	NaN
original_glrlm_HighGrayLevelRunEmphasis	NaN
original_glrlm_LongRunEmphasis	NaN
original_glrlm_LongRunHighGrayLevelEmphasis	NaN
original_glrlm_LongRunLowGrayLevelEmphasis	NaN
original_glrlm_LowGrayLevelRunEmphasis	NaN
original_glrlm_RunEntropy	NaN
original_glrlm_RunLengthNonUniformity	NaN
original_glrlm_RunLengthNonUniformityNormalized	NaN
original_glrlm_RunPercentage	NaN
original_glrlm_RunVariance	NaN
original_glrlm_ShortRunEmphasis	NaN
original_glrlm_ShortRunHighGrayLevelEmphasis	NaN
original_glrlm_ShortRunLowGrayLevelEmphasis	NaN
original_glszm_GrayLevelNonUniformity	NaN
original_glszm_GrayLevelNonUniformityNormalized	NaN
original_glszm_GrayLevelVariance	NaN
original_glszm_HighGrayLevelZoneEmphasis	NaN
original_glszm_LargeAreaEmphasis	NaN
original_glszm_LargeAreaHighGrayLevelEmphasis	NaN

original_glszm_LargeAreaLowGrayLevelEmphasis	NaN
original_glszm_LowGrayLevelZoneEmphasis	NaN
original_glszm_SizeZoneNonUniformity	NaN
original_glszm_SizeZoneNonUniformityNormalized	NaN
original_glszm_SmallAreaEmphasis	NaN
original_glszm_SmallAreaHighGrayLevelEmphasis	NaN
original_glszm_SmallAreaLowGrayLevelEmphasis	NaN
original_glszm_ZoneEntropy	NaN
original_glszm_ZonePercentage	NaN
original_glszm_ZoneVariance	NaN
original_ngtdm_Busyness	NaN
original_ngtdm_Coarseness	NaN
original_ngtdm_Complexity	NaN
original_ngtdm_Contrast	NaN
original_ngtdm_Strength	NaN
original_shape_Elongation	NaN
original_shape_Flatness	NaN
original_shape_LeastAxisLength	NaN
original_shape_MajorAxisLength	NaN
original_shape_Maximum2DDiameterColumn	NaN
original_shape_Maximum2DDiameterRow	NaN
original_shape_Maximum2DDiameterSlice	NaN
original_shape_Maximum3DDiameter	NaN
original_shape_MeshVolume	NaN
original_shape_MinorAxisLength	NaN
original_shape_Sphericity	NaN
original_shape_SurfaceArea	NaN
original_shape_SurfaceVolumeRatio	NaN
original_shape_VoxelVolume	NaN
	p
original_firstorder_10Percentile	NaN
original_firstorder_90Percentile	NaN
original_firstorder_Energy	NaN
original_firstorder_Entropy	NaN
original_firstorder_InterquartileRange	NaN
original_firstorder_Kurtosis	NaN
original_firstorder_Maximum	NaN
original_firstorder_Mean	NaN
original_firstorder_MeanAbsoluteDeviation	NaN
original_firstorder_Median	NaN
original_firstorder_Minimum	NaN
original_firstorder_Range	NaN
original_firstorder_RobustMeanAbsoluteDeviation	NaN
original_firstorder_RootMeanSquared	NaN
original_firstorder_Skewness	NaN
original_firstorder_TotalEnergy	NaN
original_firstorder_Uniformity	NaN
original_firstorder_Variance	NaN
original_glcm_Autocorrelation	NaN
original_glcm_ClusterProminence	NaN
original_glcm_ClusterShade	NaN
original_glcm_ClusterTendency	NaN
original_glcm_Contrast	NaN
original_glcm_Correlation	NaN
original_glcm_DifferenceAverage	NaN
original_glcm_DifferenceEntropy	NaN

```
original_glcm_DifferenceVariance                        NaN
original_glcm_Id                                        NaN
original_glcm_Idm                                       NaN
original_glcm_Idmn                                      NaN
original_glcm_Idn                                       NaN
original_glcm_Imc1                                      NaN
original_glcm_Imc2                                      NaN
original_glcm_InverseVariance                           NaN
original_glcm_JointAverage                              NaN
original_glcm_JointEnergy                               NaN
original_glcm_JointEntropy                              NaN
original_glcm_MCC                                       NaN
original_glcm_MaximumProbability                        NaN
original_glcm_SumAverage                                NaN
original_glcm_SumEntropy                                NaN
original_glcm_SumSquares                                NaN
original_gldm_DependenceEntropy                         NaN
original_gldm_DependenceNonUniformity                   NaN
original_gldm_DependenceNonUniformityNormalized         NaN
original_gldm_DependenceVariance                        NaN
original_gldm_GrayLevelNonUniformity                    NaN
original_gldm_GrayLevelVariance                         NaN
original_gldm_HighGrayLevelEmphasis                     NaN
original_gldm_LargeDependenceEmphasis                   NaN
original_gldm_LargeDependenceHighGrayLevelEmphasis NaN
original_gldm_LargeDependenceLowGrayLevelEmphasis    NaN
original_gldm_LowGrayLevelEmphasis                      NaN
original_gldm_SmallDependenceEmphasis                   NaN
original_gldm_SmallDependenceHighGrayLevelEmphasis NaN
original_gldm_SmallDependenceLowGrayLevelEmphasis    NaN
original_glrlm_GrayLevelNonUniformity                   NaN
original_glrlm_GrayLevelNonUniformityNormalized         NaN
original_glrlm_GrayLevelVariance                        NaN
original_glrlm_HighGrayLevelRunEmphasis                 NaN
original_glrlm_LongRunEmphasis                          NaN
original_glrlm_LongRunHighGrayLevelEmphasis             NaN
original_glrlm_LongRunLowGrayLevelEmphasis              NaN
original_glrlm_LowGrayLevelRunEmphasis                  NaN
original_glrlm_RunEntropy                               NaN
original_glrlm_RunLengthNonUniformity                   NaN
original_glrlm_RunLengthNonUniformityNormalized         NaN
original_glrlm_RunPercentage                            NaN
original_glrlm_RunVariance                              NaN
original_glrlm_ShortRunEmphasis                         NaN
original_glrlm_ShortRunHighGrayLevelEmphasis            NaN
original_glrlm_ShortRunLowGrayLevelEmphasis             NaN
original_glszm_GrayLevelNonUniformity                   NaN
original_glszm_GrayLevelNonUniformityNormalized         NaN
original_glszm_GrayLevelVariance                        NaN
original_glszm_HighGrayLevelZoneEmphasis                NaN
original_glszm_LargeAreaEmphasis                        NaN
original_glszm_LargeAreaHighGrayLevelEmphasis           NaN
original_glszm_LargeAreaLowGrayLevelEmphasis            NaN
original_glszm_LowGrayLevelZoneEmphasis                 NaN
original_glszm_SizeZoneNonUniformity                    NaN
original_glszm_SizeZoneNonUniformityNormalized          NaN
```

```
original_glszm_SmallAreaEmphasis                        NaN
original_glszm_SmallAreaHighGrayLevelEmphasis           NaN
original_glszm_SmallAreaLowGrayLevelEmphasis            NaN
original_glszm_ZoneEntropy                              NaN
original_glszm_ZonePercentage                           NaN
original_glszm_ZoneVariance                             NaN
original_ngtdm_Busyness                                 NaN
original_ngtdm_Coarseness                               NaN
original_ngtdm_Complexity                               NaN
original_ngtdm_Contrast                                 NaN
original_ngtdm_Strength                                 NaN
original_shape_Elongation                               NaN
original_shape_Flatness                                 NaN
original_shape_LeastAxisLength                          NaN
original_shape_MajorAxisLength                          NaN
original_shape_Maximum2DDiameterColumn                  NaN
original_shape_Maximum2DDiameterRow                     NaN
original_shape_Maximum2DDiameterSlice                   NaN
original_shape_Maximum3DDiameter                        NaN
original_shape_MeshVolume                               NaN
original_shape_MinorAxisLength                          NaN
original_shape_Sphericity                               NaN
original_shape_SurfaceArea                              NaN
original_shape_SurfaceVolumeRatio                       NaN
original_shape_VoxelVolume                              NaN


Likelihood ratio test=0  on 107 df, p=1
n= 97, number of events= 0


$model_list[[2]]$coxmodels[[4]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                       coef
original_firstorder_10Percentile                    2.646e+02
original_firstorder_90Percentile                   -1.439e+02
original_firstorder_Energy                         -3.944e+02
original_firstorder_Entropy                        -3.323e+02
original_firstorder_InterquartileRange             -3.467e+02
original_firstorder_Kurtosis                        1.951e+00
original_firstorder_Maximum                        -2.680e+03
original_firstorder_Mean                            4.601e+02
original_firstorder_MeanAbsoluteDeviation          -4.375e+02
original_firstorder_Median                         -3.431e+02
original_firstorder_Minimum                         1.699e+03
original_firstorder_Range                           3.719e+03
original_firstorder_RobustMeanAbsoluteDeviation     3.797e+02
original_firstorder_RootMeanSquared                 7.465e+01
original_firstorder_Skewness                        6.492e+00
original_firstorder_TotalEnergy                     0.000e+00
original_firstorder_Uniformity                      6.979e+01
original_firstorder_Variance                        3.905e+04
original_glcm_Autocorrelation                      -1.081e+04
original_glcm_ClusterProminence                    -1.910e+03
```

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original_glcm_ClusterShade                                    2.105e+03
original_glcm_ClusterTendency                                -4.939e+03
original_glcm_Contrast                                       -2.693e+03
original_glcm_Correlation                                     8.372e+01
original_glcm_DifferenceAverage                               8.282e+02
original_glcm_DifferenceEntropy                              -2.156e+02
original_glcm_DifferenceVariance                             -2.035e+03
original_glcm_Id                                              2.561e+03
original_glcm_Idm                                            -2.564e+03
original_glcm_Idmn                                           -1.597e+02
original_glcm_Idn                                             1.330e+01
original_glcm_Imc1                                            1.383e+02
original_glcm_Imc2                                            1.071e+01
original_glcm_InverseVariance                                 7.502e+01
original_glcm_JointAverage                                    1.003e+03
original_glcm_JointEnergy                                    -1.735e+02
original_glcm_JointEntropy                                   -1.110e+03
original_glcm_MCC                                            -2.972e+01
original_glcm_MaximumProbability                              5.246e+01
original_glcm_SumAverage                                      0.000e+00
original_glcm_SumEntropy                                      1.151e+02
original_glcm_SumSquares                                      6.493e+03
original_gldm_DependenceEntropy                               8.625e+02
original_gldm_DependenceNonUniformity                         2.634e+03
original_gldm_DependenceNonUniformityNormalized              7.594e+02
original_gldm_DependenceVariance                              2.086e+02
original_gldm_GrayLevelNonUniformity                          4.786e+02
original_gldm_GrayLevelVariance                              -3.261e+04
original_gldm_HighGrayLevelEmphasis                           2.187e+04
original_gldm_LargeDependenceEmphasis                        -4.688e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis            2.271e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis            1.871e+03
original_gldm_LowGrayLevelEmphasis                          -1.531e+03
original_gldm_SmallDependenceEmphasis                        -7.739e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis          -2.987e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis            6.286e+01
original_glrlm_GrayLevelNonUniformity                       -1.519e+03
original_glrlm_GrayLevelNonUniformityNormalized             -3.595e+02
original_glrlm_GrayLevelVariance                            -2.903e+03
original_glrlm_HighGrayLevelRunEmphasis                     -1.162e+04
original_glrlm_LongRunEmphasis                              -1.071e+02
original_glrlm_LongRunHighGrayLevelEmphasis                 -2.020e+02
original_glrlm_LongRunLowGrayLevelEmphasis                   4.359e+02
original_glrlm_LowGrayLevelRunEmphasis                       4.359e+02
original_glrlm_RunEntropy                                    0.000e+00
original_glrlm_RunLengthNonUniformity                      -6.625e+02
original_glrlm_RunLengthNonUniformityNormalized             1.735e+02
original_glrlm_RunPercentage                                1.274e+02
original_glrlm_RunVariance                                   0.000e+00
original_glrlm_ShortRunEmphasis                             0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis                0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis                 0.000e+00
original_glszm_GrayLevelNonUniformity                       0.000e+00
original_glszm_GrayLevelNonUniformityNormalized             0.000e+00
original_glszm_GrayLevelVariance                            0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                    0.000e+00
```

original_glszm_LargeAreaEmphasis	0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	-3.603e+01
original_glszm_LowGrayLevelZoneEmphasis	0.000e+00
original_glszm_SizeZoneNonUniformity	0.000e+00
original_glszm_SizeZoneNonUniformityNormalized	0.000e+00
original_glszm_SmallAreaEmphasis	0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_ZoneEntropy	0.000e+00
original_glszm_ZonePercentage	0.000e+00
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	0.000e+00
original_ngtdm_Coarseness	0.000e+00
original_ngtdm_Complexity	3.528e+00
original_ngtdm_Contrast	0.000e+00
original_ngtdm_Strength	-1.614e+01
original_shape_Elongation	1.032e+00
original_shape_Flatness	5.798e-02
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	6.502e-02
original_shape_Maximum2DDiameterSlice	0.000e+00
original_shape_Maximum3DDiameter	-6.597e-01
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	1.438e-02
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	8.434e+114
original_firstorder_90Percentile	3.354e-63
original_firstorder_Energy	5.278e-172
original_firstorder_Entropy	4.626e-145
original_firstorder_InterquartileRange	2.593e-151
original_firstorder_Kurtosis	7.035e+00
original_firstorder_Maximum	0.000e+00
original_firstorder_Mean	6.597e+199
original_firstorder_MeanAbsoluteDeviation	1.002e-190
original_firstorder_Median	9.454e-150
original_firstorder_Minimum	Inf
original_firstorder_Range	Inf
original_firstorder_RobustMeanAbsoluteDeviation	8.337e+164
original_firstorder_RootMeanSquared	2.620e+32
original_firstorder_Skewness	6.602e+02
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	2.030e+30
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	0.000e+00
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	2.285e+36

original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	2.305e-94
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	4.582e-70
original_glcm_Idn	5.986e+05
original_glcm_Imc1	1.120e+60
original_glcm_Imc2	4.470e+04
original_glcm_InverseVariance	3.803e+32
original_glcm_JointAverage	Inf
original_glcm_JointEnergy	4.591e-76
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	1.235e-13
original_glcm_MaximumProbability	6.040e+22
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	9.495e+49
original_glcm_SumSquares	Inf
original_gldm_DependenceEntropy	Inf
original_gldm_DependenceNonUniformity	Inf
original_gldm_DependenceNonUniformityNormalized	Inf
original_gldm_DependenceVariance	3.829e+90
original_gldm_GrayLevelNonUniformity	7.076e+207
original_gldm_GrayLevelVariance	0.000e+00
original_gldm_HighGrayLevelEmphasis	Inf
original_gldm_LargeDependenceEmphasis	2.508e-204
original_gldm_LargeDependenceHighGrayLevelEmphasis	4.191e+98
original_gldm_LargeDependenceLowGrayLevelEmphasis	Inf
original_gldm_LowGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceEmphasis	2.452e-34
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.947e-130
original_gldm_SmallDependenceLowGrayLevelEmphasis	2.003e+27
original_glrlm_GrayLevelNonUniformity	0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	7.292e-157
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	3.204e-47
original_glrlm_LongRunHighGrayLevelEmphasis	1.878e-88
original_glrlm_LongRunLowGrayLevelEmphasis	1.964e+189
original_glrlm_LowGrayLevelRunEmphasis	2.050e+189
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.932e-288
original_glrlm_RunLengthNonUniformityNormalized	2.184e+75
original_glrlm_RunPercentage	2.059e+55
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	2.252e-16
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00

original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	3.404e+01
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	9.791e-08
original_shape_Elongation	2.806e+00
original_shape_Flatness	1.060e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.067e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	5.170e-01
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.014e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	5.438e+03
original_firstorder_90Percentile	3.631e+03
original_firstorder_Energy	3.697e+04
original_firstorder_Entropy	2.133e+03
original_firstorder_InterquartileRange	9.453e+03
original_firstorder_Kurtosis	1.699e+04
original_firstorder_Maximum	6.151e+03
original_firstorder_Mean	9.407e+03
original_firstorder_MeanAbsoluteDeviation	1.166e+04
original_firstorder_Median	1.164e+04
original_firstorder_Minimum	5.712e+03
original_firstorder_Range	5.173e+03
original_firstorder_RobustMeanAbsoluteDeviation	7.130e+03
original_firstorder_RootMeanSquared	1.029e+04
original_firstorder_Skewness	3.654e+03
original_firstorder_TotalEnergy	3.697e+04
original_firstorder_Uniformity	2.336e+03
original_firstorder_Variance	8.765e+03
original_glcm_Autocorrelation	4.876e+03
original_glcm_ClusterProminence	8.438e+03
original_glcm_ClusterShade	8.655e+03
original_glcm_ClusterTendency	9.352e+03
original_glcm_Contrast	8.185e+03
original_glcm_Correlation	2.198e+03
original_glcm_DifferenceAverage	7.696e+03
original_glcm_DifferenceEntropy	3.157e+03
original_glcm_DifferenceVariance	7.995e+03
original_glcm_Id	2.225e+03

original_glcm_Idm	2.044e+03
original_glcm_Idmn	2.418e+03
original_glcm_Idn	2.501e+04
original_glcm_Imc1	5.776e+03
original_glcm_Imc2	2.732e+03
original_glcm_InverseVariance	1.136e+04
original_glcm_JointAverage	6.475e+03
original_glcm_JointEnergy	2.654e+03
original_glcm_JointEntropy	1.784e+03
original_glcm_MCC	1.369e+03
original_glcm_MaximumProbability	2.242e+03
original_glcm_SumAverage	6.475e+03
original_glcm_SumEntropy	2.007e+03
original_glcm_SumSquares	9.051e+03
original_gldm_DependenceEntropy	2.955e+03
original_gldm_DependenceNonUniformity	6.164e+04
original_gldm_DependenceNonUniformityNormalized	1.132e+04
original_gldm_DependenceVariance	4.724e+03
original_gldm_GrayLevelNonUniformity	7.984e+03
original_gldm_GrayLevelVariance	8.769e+03
original_gldm_HighGrayLevelEmphasis	4.751e+03
original_gldm_LargeDependenceEmphasis	3.304e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	6.061e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	4.246e+04
original_gldm_LowGrayLevelEmphasis	2.293e+04
original_gldm_SmallDependenceEmphasis	1.340e+04
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.615e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.375e+04
original_glrlm_GrayLevelNonUniformity	1.510e+04
original_glrlm_GrayLevelNonUniformityNormalized	3.057e+03
original_glrlm_GrayLevelVariance	7.703e+03
original_glrlm_HighGrayLevelRunEmphasis	4.387e+03
original_glrlm_LongRunEmphasis	3.920e+03
original_glrlm_LongRunHighGrayLevelEmphasis	5.844e+03
original_glrlm_LongRunLowGrayLevelEmphasis	4.925e+04
original_glrlm_LowGrayLevelRunEmphasis	2.422e+04
original_glrlm_RunEntropy	5.582e+03
original_glrlm_RunLengthNonUniformity	1.972e+04
original_glrlm_RunLengthNonUniformityNormalized	4.709e+03
original_glrlm_RunPercentage	3.514e+03
original_glrlm_RunVariance	4.270e+03
original_glrlm_ShortRunEmphasis	3.890e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	3.332e+03
original_glrlm_ShortRunLowGrayLevelEmphasis	2.089e+04
original_glszm_GrayLevelNonUniformity	2.516e+04
original_glszm_GrayLevelNonUniformityNormalized	1.616e+04
original_glszm_GrayLevelVariance	5.633e+03
original_glszm_HighGrayLevelZoneEmphasis	2.388e+03
original_glszm_LargeAreaEmphasis	1.573e+04
original_glszm_LargeAreaHighGrayLevelEmphasis	2.197e+04
original_glszm_LargeAreaLowGrayLevelEmphasis	9.525e+04
original_glszm_LowGrayLevelZoneEmphasis	5.572e+04
original_glszm_SizeZoneNonUniformity	5.113e+03
original_glszm_SizeZoneNonUniformityNormalized	8.573e+02
original_glszm_SmallAreaEmphasis	9.873e+02
original_glszm_SmallAreaHighGrayLevelEmphasis	5.335e+03

original_glszm_SmallAreaLowGrayLevelEmphasis	4.294e+04
original_glszm_ZoneEntropy	2.229e+03
original_glszm_ZonePercentage	1.287e+04
original_glszm_ZoneVariance	1.568e+04
original_ngtdm_Busyness	1.801e+04
original_ngtdm_Coarseness	2.235e+04
original_ngtdm_Complexity	8.982e+03
original_ngtdm_Contrast	8.190e+03
original_ngtdm_Strength	8.881e+03
original_shape_Elongation	2.773e+03
original_shape_Flatness	2.273e+03
original_shape_LeastAxisLength	5.218e+03
original_shape_MajorAxisLength	2.679e+04
original_shape_Maximum2DDiameterColumn	1.731e+04
original_shape_Maximum2DDiameterRow	2.580e+04
original_shape_Maximum2DDiameterSlice	3.532e+03
original_shape_Maximum3DDiameter	1.221e+04
original_shape_MeshVolume	2.297e+04
original_shape_MinorAxisLength	9.451e+03
original_shape_Sphericity	5.465e+03
original_shape_SurfaceArea	3.307e+04
original_shape_SurfaceVolumeRatio	1.780e+04
original_shape_VoxelVolume	2.310e+04

	z
original_firstorder_10Percentile	0.049
original_firstorder_90Percentile	-0.040
original_firstorder_Energy	-0.011
original_firstorder_Entropy	-0.156
original_firstorder_InterquartileRange	-0.037
original_firstorder_Kurtosis	0.000
original_firstorder_Maximum	-0.436
original_firstorder_Mean	0.049
original_firstorder_MeanAbsoluteDeviation	-0.038
original_firstorder_Median	-0.029
original_firstorder_Minimum	0.297
original_firstorder_Range	0.719
original_firstorder_RobustMeanAbsoluteDeviation	0.053
original_firstorder_RootMeanSquared	0.007
original_firstorder_Skewness	0.002
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	0.030
original_firstorder_Variance	4.456
original_glcm_Autocorrelation	-2.218
original_glcm_ClusterProminence	-0.226
original_glcm_ClusterShade	0.243
original_glcm_ClusterTendency	-0.528
original_glcm_Contrast	-0.329
original_glcm_Correlation	0.038
original_glcm_DifferenceAverage	0.108
original_glcm_DifferenceEntropy	-0.068
original_glcm_DifferenceVariance	-0.254
original_glcm_Id	1.151
original_glcm_Idm	-1.255
original_glcm_Idmn	-0.066
original_glcm_Idn	0.001
original_glcm_Imc1	0.024

original_glcm_Imc2	0.004
original_glcm_InverseVariance	0.007
original_glcm_JointAverage	0.155
original_glcm_JointEnergy	-0.065
original_glcm_JointEntropy	-0.622
original_glcm_MCC	-0.022
original_glcm_MaximumProbability	0.023
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	0.057
original_glcm_SumSquares	0.717
original_gldm_DependenceEntropy	0.292
original_gldm_DependenceNonUniformity	0.043
original_gldm_DependenceNonUniformityNormalized	0.067
original_gldm_DependenceVariance	0.044
original_gldm_GrayLevelNonUniformity	0.060
original_gldm_GrayLevelVariance	-3.718
original_gldm_HighGrayLevelEmphasis	4.603
original_gldm_LargeDependenceEmphasis	-0.142
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.037
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.044
original_gldm_LowGrayLevelEmphasis	-0.067
original_gldm_SmallDependenceEmphasis	-0.006
original_gldm_SmallDependenceHighGrayLevelEmphasis	-0.053
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.005
original_glrlm_GrayLevelNonUniformity	-0.101
original_glrlm_GrayLevelNonUniformityNormalized	-0.118
original_glrlm_GrayLevelVariance	-0.377
original_glrlm_HighGrayLevelRunEmphasis	-2.648
original_glrlm_LongRunEmphasis	-0.027
original_glrlm_LongRunHighGrayLevelEmphasis	-0.035
original_glrlm_LongRunLowGrayLevelEmphasis	0.009
original_glrlm_LowGrayLevelRunEmphasis	0.018
original_glrlm_RunEntropy	0.000
original_glrlm_RunLengthNonUniformity	-0.034
original_glrlm_RunLengthNonUniformityNormalized	0.037
original_glrlm_RunPercentage	0.036
original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000

original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	-0.002
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

	p
original_firstorder_10Percentile	0.96119
original_firstorder_90Percentile	0.96840
original_firstorder_Energy	0.99149
original_firstorder_Entropy	0.87618
original_firstorder_InterquartileRange	0.97074
original_firstorder_Kurtosis	0.99991
original_firstorder_Maximum	0.66306
original_firstorder_Mean	0.96099
original_firstorder_MeanAbsoluteDeviation	0.97006
original_firstorder_Median	0.97648
original_firstorder_Minimum	0.76617
original_firstorder_Range	0.47223
original_firstorder_RobustMeanAbsoluteDeviation	0.95752
original_firstorder_RootMeanSquared	0.99421
original_firstorder_Skewness	0.99858
original_firstorder_TotalEnergy	1.00000
original_firstorder_Uniformity	0.97617
original_firstorder_Variance	8.37e-06
original_glcm_Autocorrelation	0.02657
original_glcm_ClusterProminence	0.82090
original_glcm_ClusterShade	0.80781
original_glcm_ClusterTendency	0.59742
original_glcm_Contrast	0.74215
original_glcm_Correlation	0.96962
original_glcm_DifferenceAverage	0.91430
original_glcm_DifferenceEntropy	0.94556
original_glcm_DifferenceVariance	0.79912
original_glcm_Id	0.24978
original_glcm_Idm	0.20961
original_glcm_Idmn	0.94735
original_glcm_Idn	0.99958
original_glcm_Imc1	0.98090
original_glcm_Imc2	0.99687
original_glcm_InverseVariance	0.99473
original_glcm_JointAverage	0.87689
original_glcm_JointEnergy	0.94789

original_glcm_JointEntropy	0.53364
original_glcm_MCC	0.98268
original_glcm_MaximumProbability	0.98134
original_glcm_SumAverage	1.00000
original_glcm_SumEntropy	0.95428
original_glcm_SumSquares	0.47318
original_gldm_DependenceEntropy	0.77041
original_gldm_DependenceNonUniformity	0.96592
original_gldm_DependenceNonUniformityNormalized	0.94653
original_gldm_DependenceVariance	0.96478
original_gldm_GrayLevelNonUniformity	0.95220
original_gldm_GrayLevelVariance	0.00020
original_gldm_HighGrayLevelEmphasis	4.17e-06
original_gldm_LargeDependenceEmphasis	0.88716
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.97011
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.96485
original_gldm_LowGrayLevelEmphasis	0.94678
original_gldm_SmallDependenceEmphasis	0.99539
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.95758
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.99635
original_glrlm_GrayLevelNonUniformity	0.91984
original_glrlm_GrayLevelNonUniformityNormalized	0.90639
original_glrlm_GrayLevelVariance	0.70625
original_glrlm_HighGrayLevelRunEmphasis	0.00809
original_glrlm_LongRunEmphasis	0.97821
original_glrlm_LongRunHighGrayLevelEmphasis	0.97243
original_glrlm_LongRunLowGrayLevelEmphasis	0.99294
original_glrlm_LowGrayLevelRunEmphasis	0.98564
original_glrlm_RunEntropy	1.00000
original_glrlm_RunLengthNonUniformity	0.97321
original_glrlm_RunLengthNonUniformityNormalized	0.97061
original_glrlm_RunPercentage	0.97109
original_glrlm_RunVariance	1.00000
original_glrlm_ShortRunEmphasis	1.00000
original_glrlm_ShortRunHighGrayLevelEmphasis	1.00000
original_glrlm_ShortRunLowGrayLevelEmphasis	1.00000
original_glszm_GrayLevelNonUniformity	1.00000
original_glszm_GrayLevelNonUniformityNormalized	1.00000
original_glszm_GrayLevelVariance	1.00000
original_glszm_HighGrayLevelZoneEmphasis	1.00000
original_glszm_LargeAreaEmphasis	1.00000
original_glszm_LargeAreaHighGrayLevelEmphasis	1.00000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.99970
original_glszm_LowGrayLevelZoneEmphasis	1.00000
original_glszm_SizeZoneNonUniformity	1.00000
original_glszm_SizeZoneNonUniformityNormalized	1.00000
original_glszm_SmallAreaEmphasis	1.00000
original_glszm_SmallAreaHighGrayLevelEmphasis	1.00000
original_glszm_SmallAreaLowGrayLevelEmphasis	1.00000
original_glszm_ZoneEntropy	1.00000
original_glszm_ZonePercentage	1.00000
original_glszm_ZoneVariance	1.00000
original_ngtdm_Busyness	1.00000
original_ngtdm_Coarseness	1.00000
original_ngtdm_Complexity	0.99969
original_ngtdm_Contrast	1.00000

```
original_ngtdm_Strength                                 0.99855
original_shape_Elongation                               0.99970
original_shape_Flatness                                 0.99998
original_shape_LeastAxisLength                          1.00000
original_shape_MajorAxisLength                          1.00000
original_shape_Maximum2DDiameterColumn                  1.00000
original_shape_Maximum2DDiameterRow                     1.00000
original_shape_Maximum2DDiameterSlice                   1.00000
original_shape_Maximum3DDiameter                        0.99996
original_shape_MeshVolume                               1.00000
original_shape_MinorAxisLength                          1.00000
original_shape_Sphericity                               1.00000
original_shape_SurfaceArea                              1.00000
original_shape_SurfaceVolumeRatio                       1.00000
original_shape_VoxelVolume                              1.00000


Likelihood ratio test=32.27  on 107 df, p=1
n= 58, number of events= 4


$model_list[[2]]$coxmodels[[5]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                         coef
original_firstorder_10Percentile                     9.391e+01
original_firstorder_90Percentile                     3.088e+02
original_firstorder_Energy                          -4.785e+01
original_firstorder_Entropy                          4.155e+02
original_firstorder_InterquartileRange               2.085e+03
original_firstorder_Kurtosis                        -3.736e+01
original_firstorder_Maximum                          5.457e+03
original_firstorder_Mean                            -1.871e+03
original_firstorder_MeanAbsoluteDeviation           -1.873e+03
original_firstorder_Median                           9.763e+02
original_firstorder_Minimum                         -3.161e+03
original_firstorder_Range                           -7.171e+03
original_firstorder_RobustMeanAbsoluteDeviation     -1.948e+03
original_firstorder_RootMeanSquared                  4.213e+02
original_firstorder_Skewness                        -9.687e+00
original_firstorder_TotalEnergy                      0.000e+00
original_firstorder_Uniformity                       1.388e+02
original_firstorder_Variance                        -2.066e+03
original_glcm_Autocorrelation                        5.590e+02
original_glcm_ClusterProminence                     -5.175e+05
original_glcm_ClusterShade                          -3.719e+04
original_glcm_ClusterTendency                        1.675e+04
original_glcm_Contrast                              -6.694e+03
original_glcm_Correlation                           -2.211e+02
original_glcm_DifferenceAverage                      8.956e+00
original_glcm_DifferenceEntropy                     -8.222e+01
original_glcm_DifferenceVariance                    -4.178e+03
original_glcm_Id                                     1.964e+01
original_glcm_Idm                                    0.000e+00
original_glcm_Idmn                                  -9.624e+00
```

original_glcm_Idn	0.000e+00
original_glcm_Imc1	5.062e-02
original_glcm_Imc2	-4.292e-01
original_glcm_InverseVariance	1.703e+00
original_glcm_JointAverage	1.348e+01
original_glcm_JointEnergy	-4.268e+01
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	-1.668e-01
original_glcm_MaximumProbability	0.000e+00
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	0.000e+00
original_glcm_SumSquares	-8.880e+01
original_gldm_DependenceEntropy	0.000e+00
original_gldm_DependenceNonUniformity	0.000e+00
original_gldm_DependenceNonUniformityNormalized	0.000e+00
original_gldm_DependenceVariance	0.000e+00
original_gldm_GrayLevelNonUniformity	1.614e+01
original_gldm_GrayLevelVariance	3.099e+02
original_gldm_HighGrayLevelEmphasis	-1.052e+02
original_gldm_LargeDependenceEmphasis	0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000e+00
original_gldm_LowGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceEmphasis	0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000e+00
original_glrlm_GrayLevelNonUniformity	0.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	0.000e+00
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	-3.325e+02
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	1.498e-01
original_glrlm_LongRunLowGrayLevelEmphasis	0.000e+00
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	0.000e+00
original_glrlm_RunLengthNonUniformity	0.000e+00
original_glrlm_RunLengthNonUniformityNormalized	0.000e+00
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	0.000e+00
original_glrlm_ShortRunEmphasis	0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	0.000e+00
original_glszm_GrayLevelNonUniformityNormalized	0.000e+00
original_glszm_GrayLevelVariance	0.000e+00
original_glszm_HighGrayLevelZoneEmphasis	0.000e+00
original_glszm_LargeAreaEmphasis	0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.187e-01
original_glszm_LowGrayLevelZoneEmphasis	0.000e+00
original_glszm_SizeZoneNonUniformity	5.968e-01
original_glszm_SizeZoneNonUniformityNormalized	0.000e+00
original_glszm_SmallAreaEmphasis	0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_ZoneEntropy	0.000e+00

original_glszm_ZonePercentage	0.000e+00
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	0.000e+00
original_ngtdm_Coarseness	0.000e+00
original_ngtdm_Complexity	0.000e+00
original_ngtdm_Contrast	0.000e+00
original_ngtdm_Strength	0.000e+00
original_shape_Elongation	0.000e+00
original_shape_Flatness	0.000e+00
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	0.000e+00
original_shape_Maximum2DDiameterSlice	4.247e-02
original_shape_Maximum3DDiameter	0.000e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	2.881e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	6.091e+40
original_firstorder_90Percentile	1.301e+134
original_firstorder_Energy	1.655e-21
original_firstorder_Entropy	2.837e+180
original_firstorder_InterquartileRange	Inf
original_firstorder_Kurtosis	5.969e-17
original_firstorder_Maximum	Inf
original_firstorder_Mean	0.000e+00
original_firstorder_MeanAbsoluteDeviation	0.000e+00
original_firstorder_Median	Inf
original_firstorder_Minimum	0.000e+00
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	0.000e+00
original_firstorder_RootMeanSquared	9.607e+182
original_firstorder_Skewness	6.208e-05
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	1.929e+60
original_firstorder_Variance	0.000e+00
original_glcm_Autocorrelation	6.109e+242
original_glcm_ClusterProminence	0.000e+00
original_glcm_ClusterShade	0.000e+00
original_glcm_ClusterTendency	Inf
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	9.427e-97
original_glcm_DifferenceAverage	7.756e+03
original_glcm_DifferenceEntropy	1.951e-36
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	3.369e+08
original_glcm_Idm	1.000e+00
original_glcm_Idmn	6.612e-05
original_glcm_Idn	1.000e+00
original_glcm_Imc1	1.052e+00
original_glcm_Imc2	6.510e-01
original_glcm_InverseVariance	5.489e+00

original_glcm_JointAverage	7.184e+05
original_glcm_JointEnergy	2.910e-19
original_glcm_JointEntropy	1.000e+00
original_glcm_MCC	8.464e-01
original_glcm_MaximumProbability	1.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	1.000e+00
original_glcm_SumSquares	2.708e-39
original_gldm_DependenceEntropy	1.000e+00
original_gldm_DependenceNonUniformity	1.000e+00
original_gldm_DependenceNonUniformityNormalized	1.000e+00
original_gldm_DependenceVariance	1.000e+00
original_gldm_GrayLevelNonUniformity	1.025e+07
original_gldm_GrayLevelVariance	3.975e+134
original_gldm_HighGrayLevelEmphasis	2.155e-46
original_gldm_LargeDependenceEmphasis	1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.000e+00
original_gldm_LowGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceEmphasis	1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.000e+00
original_glrlm_GrayLevelNonUniformity	1.000e+00
original_glrlm_GrayLevelNonUniformityNormalized	1.000e+00
original_glrlm_GrayLevelVariance	1.000e+00
original_glrlm_HighGrayLevelRunEmphasis	3.816e-145
original_glrlm_LongRunEmphasis	1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	1.162e+00
original_glrlm_LongRunLowGrayLevelEmphasis	1.000e+00
original_glrlm_LowGrayLevelRunEmphasis	1.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.126e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.816e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.000e+00

original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.000e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.043e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.783e+01
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	1.128e+06
original_firstorder_90Percentile	5.432e+05
original_firstorder_Energy	4.781e+06
original_firstorder_Entropy	6.508e+05
original_firstorder_InterquartileRange	1.726e+06
original_firstorder_Kurtosis	4.549e+05
original_firstorder_Maximum	3.474e+06
original_firstorder_Mean	5.078e+05
original_firstorder_MeanAbsoluteDeviation	1.768e+06
original_firstorder_Median	3.955e+05
original_firstorder_Minimum	1.010e+06
original_firstorder_Range	2.213e+06
original_firstorder_RobustMeanAbsoluteDeviation	1.769e+06
original_firstorder_RootMeanSquared	8.215e+05
original_firstorder_Skewness	6.018e+05
original_firstorder_TotalEnergy	4.781e+06
original_firstorder_Uniformity	4.867e+05
original_firstorder_Variance	1.077e+07
original_glcm_Autocorrelation	1.064e+06
original_glcm_ClusterProminence	1.467e+09
original_glcm_ClusterShade	9.321e+07
original_glcm_ClusterTendency	1.365e+07
original_glcm_Contrast	1.148e+07
original_glcm_Correlation	3.854e+05
original_glcm_DifferenceAverage	1.079e+06
original_glcm_DifferenceEntropy	6.956e+05
original_glcm_DifferenceVariance	1.441e+07
original_glcm_Id	5.844e+05
original_glcm_Idm	5.829e+05
original_glcm_Idmn	4.196e+05
original_glcm_Idn	4.360e+05
original_glcm_Imc1	3.937e+05
original_glcm_Imc2	2.560e+05
original_glcm_InverseVariance	4.889e+05
original_glcm_JointAverage	9.777e+05
original_glcm_JointEnergy	5.693e+05
original_glcm_JointEntropy	6.333e+05
original_glcm_MCC	3.274e+05

original_glcm_MaximumProbability	5.182e+05
original_glcm_SumAverage	9.777e+05
original_glcm_SumEntropy	5.949e+05
original_glcm_SumSquares	1.316e+07
original_gldm_DependenceEntropy	6.473e+05
original_gldm_DependenceNonUniformity	4.585e+06
original_gldm_DependenceNonUniformityNormalized	4.985e+05
original_gldm_DependenceVariance	4.075e+05
original_gldm_GrayLevelNonUniformity	1.573e+06
original_gldm_GrayLevelVariance	1.068e+07
original_gldm_HighGrayLevelEmphasis	1.061e+06
original_gldm_LargeDependenceEmphasis	4.004e+05
original_gldm_LargeDependenceHighGrayLevelEmphasis	7.626e+05
original_gldm_LargeDependenceLowGrayLevelEmphasis	2.291e+06
original_gldm_LowGrayLevelEmphasis	2.593e+06
original_gldm_SmallDependenceEmphasis	3.507e+05
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.373e+06
original_gldm_SmallDependenceLowGrayLevelEmphasis	4.839e+05
original_glrlm_GrayLevelNonUniformity	2.340e+06
original_glrlm_GrayLevelNonUniformityNormalized	6.027e+05
original_glrlm_GrayLevelVariance	1.101e+07
original_glrlm_HighGrayLevelRunEmphasis	1.046e+06
original_glrlm_LongRunEmphasis	5.561e+05
original_glrlm_LongRunHighGrayLevelEmphasis	8.395e+05
original_glrlm_LongRunLowGrayLevelEmphasis	3.668e+06
original_glrlm_LowGrayLevelRunEmphasis	2.514e+06
original_glrlm_RunEntropy	5.965e+05
original_glrlm_RunLengthNonUniformity	4.622e+06
original_glrlm_RunLengthNonUniformityNormalized	3.926e+05
original_glrlm_RunPercentage	3.878e+05
original_glrlm_RunVariance	6.301e+05
original_glrlm_ShortRunEmphasis	3.941e+05
original_glrlm_ShortRunHighGrayLevelEmphasis	1.166e+06
original_glrlm_ShortRunLowGrayLevelEmphasis	1.961e+06
original_glszm_GrayLevelNonUniformity	2.758e+06
original_glszm_GrayLevelNonUniformityNormalized	7.557e+05
original_glszm_GrayLevelVariance	7.749e+06
original_glszm_HighGrayLevelZoneEmphasis	9.533e+05
original_glszm_LargeAreaEmphasis	1.247e+06
original_glszm_LargeAreaHighGrayLevelEmphasis	2.378e+06
original_glszm_LargeAreaLowGrayLevelEmphasis	3.612e+06
original_glszm_LowGrayLevelZoneEmphasis	1.874e+06
original_glszm_SizeZoneNonUniformity	5.346e+06
original_glszm_SizeZoneNonUniformityNormalized	4.183e+05
original_glszm_SmallAreaEmphasis	4.355e+05
original_glszm_SmallAreaHighGrayLevelEmphasis	8.895e+05
original_glszm_SmallAreaLowGrayLevelEmphasis	1.356e+06
original_glszm_ZoneEntropy	7.711e+05
original_glszm_ZonePercentage	3.244e+05
original_glszm_ZoneVariance	1.254e+06
original_ngtdm_Busyness	1.835e+06
original_ngtdm_Coarseness	3.443e+05
original_ngtdm_Complexity	1.631e+07
original_ngtdm_Contrast	1.811e+06
original_ngtdm_Strength	1.507e+06
original_shape_Elongation	4.476e+05

```
original_shape_Flatness                             3.901e+05
original_shape_LeastAxisLength                       8.035e+05
original_shape_MajorAxisLength                       1.753e+06
original_shape_Maximum2DDiameterColumn              1.467e+06
original_shape_Maximum2DDiameterRow                 1.190e+06
original_shape_Maximum2DDiameterSlice               9.540e+05
original_shape_Maximum3DDiameter                    1.764e+06
original_shape_MeshVolume                            2.080e+06
original_shape_MinorAxisLength                       9.794e+05
original_shape_Sphericity                            4.634e+05
original_shape_SurfaceArea                           6.195e+06
original_shape_SurfaceVolumeRatio                    4.053e+05
original_shape_VoxelVolume                           2.092e+06
                                                        z
original_firstorder_10Percentile                     0.000
original_firstorder_90Percentile                     0.001
original_firstorder_Energy                           0.000
original_firstorder_Entropy                          0.001
original_firstorder_InterquartileRange               0.001
original_firstorder_Kurtosis                         0.000
original_firstorder_Maximum                          0.002
original_firstorder_Mean                            -0.004
original_firstorder_MeanAbsoluteDeviation           -0.001
original_firstorder_Median                           0.002
original_firstorder_Minimum                         -0.003
original_firstorder_Range                           -0.003
original_firstorder_RobustMeanAbsoluteDeviation     -0.001
original_firstorder_RootMeanSquared                  0.001
original_firstorder_Skewness                         0.000
original_firstorder_TotalEnergy                      0.000
original_firstorder_Uniformity                       0.000
original_firstorder_Variance                         0.000
original_glcm_Autocorrelation                        0.001
original_glcm_ClusterProminence                      0.000
original_glcm_ClusterShade                           0.000
original_glcm_ClusterTendency                        0.001
original_glcm_Contrast                              -0.001
original_glcm_Correlation                           -0.001
original_glcm_DifferenceAverage                      0.000
original_glcm_DifferenceEntropy                      0.000
original_glcm_DifferenceVariance                     0.000
original_glcm_Id                                     0.000
original_glcm_Idm                                    0.000
original_glcm_Idmn                                   0.000
original_glcm_Idn                                    0.000
original_glcm_Imc1                                   0.000
original_glcm_Imc2                                   0.000
original_glcm_InverseVariance                        0.000
original_glcm_JointAverage                           0.000
original_glcm_JointEnergy                            0.000
original_glcm_JointEntropy                           0.000
original_glcm_MCC                                    0.000
original_glcm_MaximumProbability                     0.000
original_glcm_SumAverage                             0.000
original_glcm_SumEntropy                             0.000
original_glcm_SumSquares                             0.000
```

original_gldm_DependenceEntropy	0.000
original_gldm_DependenceNonUniformity	0.000
original_gldm_DependenceNonUniformityNormalized	0.000
original_gldm_DependenceVariance	0.000
original_gldm_GrayLevelNonUniformity	0.000
original_gldm_GrayLevelVariance	0.000
original_gldm_HighGrayLevelEmphasis	0.000
original_gldm_LargeDependenceEmphasis	0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000
original_gldm_LowGrayLevelEmphasis	0.000
original_gldm_SmallDependenceEmphasis	0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000
original_glrlm_GrayLevelNonUniformity	0.000
original_glrlm_GrayLevelNonUniformityNormalized	0.000
original_glrlm_GrayLevelVariance	0.000
original_glrlm_HighGrayLevelRunEmphasis	0.000
original_glrlm_LongRunEmphasis	0.000
original_glrlm_LongRunHighGrayLevelEmphasis	0.000
original_glrlm_LongRunLowGrayLevelEmphasis	0.000
original_glrlm_LowGrayLevelRunEmphasis	0.000
original_glrlm_RunEntropy	0.000
original_glrlm_RunLengthNonUniformity	0.000
original_glrlm_RunLengthNonUniformityNormalized	0.000
original_glrlm_RunPercentage	0.000
original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000

original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	1.000
original_firstorder_90Percentile	1.000
original_firstorder_Energy	1.000
original_firstorder_Entropy	0.999
original_firstorder_InterquartileRange	0.999
original_firstorder_Kurtosis	1.000
original_firstorder_Maximum	0.999
original_firstorder_Mean	0.997
original_firstorder_MeanAbsoluteDeviation	0.999
original_firstorder_Median	0.998
original_firstorder_Minimum	0.998
original_firstorder_Range	0.997
original_firstorder_RobustMeanAbsoluteDeviation	0.999
original_firstorder_RootMeanSquared	1.000
original_firstorder_Skewness	1.000
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	1.000
original_firstorder_Variance	1.000
original_glcm_Autocorrelation	1.000
original_glcm_ClusterProminence	1.000
original_glcm_ClusterShade	1.000
original_glcm_ClusterTendency	0.999
original_glcm_Contrast	1.000
original_glcm_Correlation	1.000
original_glcm_DifferenceAverage	1.000
original_glcm_DifferenceEntropy	1.000
original_glcm_DifferenceVariance	1.000
original_glcm_Id	1.000
original_glcm_Idm	1.000
original_glcm_Idmn	1.000
original_glcm_Idn	1.000
original_glcm_Imc1	1.000
original_glcm_Imc2	1.000
original_glcm_InverseVariance	1.000
original_glcm_JointAverage	1.000
original_glcm_JointEnergy	1.000
original_glcm_JointEntropy	1.000
original_glcm_MCC	1.000
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	1.000
original_glcm_SumSquares	1.000
original_gldm_DependenceEntropy	1.000
original_gldm_DependenceNonUniformity	1.000
original_gldm_DependenceNonUniformityNormalized	1.000
original_gldm_DependenceVariance	1.000

```
original_gldm_GrayLevelNonUniformity                     1.000
original_gldm_GrayLevelVariance                          1.000
original_gldm_HighGrayLevelEmphasis                      1.000
original_gldm_LargeDependenceEmphasis                    1.000
original_gldm_LargeDependenceHighGrayLevelEmphasis 1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis  1.000
original_gldm_LowGrayLevelEmphasis                       1.000
original_gldm_SmallDependenceEmphasis                    1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis 1.000
original_gldm_SmallDependenceLowGrayLevelEmphasis  1.000
original_glrlm_GrayLevelNonUniformity                    1.000
original_glrlm_GrayLevelNonUniformityNormalized    1.000
original_glrlm_GrayLevelVariance                         1.000
original_glrlm_HighGrayLevelRunEmphasis                  1.000
original_glrlm_LongRunEmphasis                           1.000
original_glrlm_LongRunHighGrayLevelEmphasis              1.000
original_glrlm_LongRunLowGrayLevelEmphasis               1.000
original_glrlm_LowGrayLevelRunEmphasis                   1.000
original_glrlm_RunEntropy                                1.000
original_glrlm_RunLengthNonUniformity                    1.000
original_glrlm_RunLengthNonUniformityNormalized    1.000
original_glrlm_RunPercentage                             1.000
original_glrlm_RunVariance                               1.000
original_glrlm_ShortRunEmphasis                          1.000
original_glrlm_ShortRunHighGrayLevelEmphasis             1.000
original_glrlm_ShortRunLowGrayLevelEmphasis              1.000
original_glszm_GrayLevelNonUniformity                    1.000
original_glszm_GrayLevelNonUniformityNormalized    1.000
original_glszm_GrayLevelVariance                         1.000
original_glszm_HighGrayLevelZoneEmphasis                 1.000
original_glszm_LargeAreaEmphasis                         1.000
original_glszm_LargeAreaHighGrayLevelEmphasis            1.000
original_glszm_LargeAreaLowGrayLevelEmphasis             1.000
original_glszm_LowGrayLevelZoneEmphasis                  1.000
original_glszm_SizeZoneNonUniformity                     1.000
original_glszm_SizeZoneNonUniformityNormalized     1.000
original_glszm_SmallAreaEmphasis                         1.000
original_glszm_SmallAreaHighGrayLevelEmphasis            1.000
original_glszm_SmallAreaLowGrayLevelEmphasis             1.000
original_glszm_ZoneEntropy                               1.000
original_glszm_ZonePercentage                            1.000
original_glszm_ZoneVariance                              1.000
original_ngtdm_Busyness                                  1.000
original_ngtdm_Coarseness                                1.000
original_ngtdm_Complexity                                1.000
original_ngtdm_Contrast                                  1.000
original_ngtdm_Strength                                  1.000
original_shape_Elongation                                1.000
original_shape_Flatness                                  1.000
original_shape_LeastAxisLength                           1.000
original_shape_MajorAxisLength                           1.000
original_shape_Maximum2DDiameterColumn                   1.000
original_shape_Maximum2DDiameterRow                      1.000
original_shape_Maximum2DDiameterSlice                    1.000
original_shape_Maximum3DDiameter                         1.000
original_shape_MeshVolume                                1.000
```

```
original_shape_MinorAxisLength                          1.000
original_shape_Sphericity                               1.000
original_shape_SurfaceArea                              1.000
original_shape_SurfaceVolumeRatio                       1.000
original_shape_VoxelVolume                              1.000


Likelihood ratio test=6.27  on 107 df, p=1
n= 25, number of events= 1


$model_list[[2]]$coxmodels[[6]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                         coef
original_firstorder_10Percentile                      6.019e+03
original_firstorder_90Percentile                     -3.910e+03
original_firstorder_Energy                            1.070e+03
original_firstorder_Entropy                           5.637e+02
original_firstorder_InterquartileRange               -2.213e+04
original_firstorder_Kurtosis                          9.706e+01
original_firstorder_Maximum                           9.634e+01
original_firstorder_Mean                              3.740e+03
original_firstorder_MeanAbsoluteDeviation             2.608e+02
original_firstorder_Median                           -2.584e+03
original_firstorder_Minimum                           1.058e+03
original_firstorder_Range                             0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation       2.875e+04
original_firstorder_RootMeanSquared                   9.857e+01
original_firstorder_Skewness                          2.328e+02
original_firstorder_TotalEnergy                       0.000e+00
original_firstorder_Uniformity                       -2.054e+03
original_firstorder_Variance                          8.906e+04
original_glcm_Autocorrelation                         3.800e+04
original_glcm_ClusterProminence                      -6.010e+05
original_glcm_ClusterShade                           -6.609e+04
original_glcm_ClusterTendency                         1.697e+04
original_glcm_Contrast                               -3.334e+05
original_glcm_Correlation                             2.248e+02
original_glcm_DifferenceAverage                       2.808e+04
original_glcm_DifferenceEntropy                      -3.404e+03
original_glcm_DifferenceVariance                      2.873e+05
original_glcm_Id                                      3.876e+04
original_glcm_Idm                                    -3.035e+04
original_glcm_Idmn                                    1.873e+03
original_glcm_Idn                                    -1.160e+03
original_glcm_Imc1                                    4.841e+02
original_glcm_Imc2                                    2.484e+02
original_glcm_InverseVariance                         4.157e+03
original_glcm_JointAverage                           -3.787e+02
original_glcm_JointEnergy                             8.312e+02
original_glcm_JointEntropy                           -4.448e+03
original_glcm_MCC                                     -3.761e+01
original_glcm_MaximumProbability                      6.332e+02
original_glcm_SumAverage                              0.000e+00
```

```
original_glcm_SumEntropy                                  2.709e+03
original_glcm_SumSquares                                  0.000e+00
original_gldm_DependenceEntropy                           6.023e+02
original_gldm_DependenceNonUniformity                    -1.038e+03
original_gldm_DependenceNonUniformityNormalized           5.275e+02
original_gldm_DependenceVariance                          3.715e+02
original_gldm_GrayLevelNonUniformity                     -2.113e+02
original_gldm_GrayLevelVariance                          -7.792e+04
original_gldm_HighGrayLevelEmphasis                      -1.090e+04
original_gldm_LargeDependenceEmphasis                    -3.639e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis       -1.725e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis        -3.213e+02
original_gldm_LowGrayLevelEmphasis                       -1.331e+04
original_gldm_SmallDependenceEmphasis                     1.793e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis       -3.396e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis        -5.282e+02
original_glrlm_GrayLevelNonUniformity                     4.709e+02
original_glrlm_GrayLevelNonUniformityNormalized           1.149e+03
original_glrlm_GrayLevelVariance                         -2.020e+04
original_glrlm_HighGrayLevelRunEmphasis                  -2.560e+04
original_glrlm_LongRunEmphasis                            1.164e+03
original_glrlm_LongRunHighGrayLevelEmphasis               4.087e+02
original_glrlm_LongRunLowGrayLevelEmphasis               -1.043e+03
original_glrlm_LowGrayLevelRunEmphasis                    1.403e+04
original_glrlm_RunEntropy                                -6.775e+01
original_glrlm_RunLengthNonUniformity                     5.114e+02
original_glrlm_RunLengthNonUniformityNormalized           1.450e+01
original_glrlm_RunPercentage                              0.000e+00
original_glrlm_RunVariance                               -9.098e+02
original_glrlm_ShortRunEmphasis                          -5.656e+01
original_glrlm_ShortRunHighGrayLevelEmphasis              0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis               0.000e+00
original_glszm_GrayLevelNonUniformity                    -3.143e+02
original_glszm_GrayLevelNonUniformityNormalized          -3.789e+01
original_glszm_GrayLevelVariance                          0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                  3.843e+01
original_glszm_LargeAreaEmphasis                          0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis             0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis             -1.455e+00
original_glszm_LowGrayLevelZoneEmphasis                   0.000e+00
original_glszm_SizeZoneNonUniformity                      0.000e+00
original_glszm_SizeZoneNonUniformityNormalized            1.492e+00
original_glszm_SmallAreaEmphasis                          0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis             0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis             -4.801e+01
original_glszm_ZoneEntropy                                0.000e+00
original_glszm_ZonePercentage                             0.000e+00
original_glszm_ZoneVariance                               0.000e+00
original_ngtdm_Busyness                                   0.000e+00
original_ngtdm_Coarseness                                 0.000e+00
original_ngtdm_Complexity                                 0.000e+00
original_ngtdm_Contrast                                   1.267e+02
original_ngtdm_Strength                                   0.000e+00
original_shape_Elongation                                 0.000e+00
original_shape_Flatness                                   0.000e+00
original_shape_LeastAxisLength                           -4.376e+00
```

original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	0.000e+00
original_shape_Maximum2DDiameterSlice	-6.949e+01
original_shape_Maximum3DDiameter	0.000e+00
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	Inf
original_firstorder_90Percentile	0.000e+00
original_firstorder_Energy	Inf
original_firstorder_Entropy	6.373e+244
original_firstorder_InterquartileRange	0.000e+00
original_firstorder_Kurtosis	1.416e+42
original_firstorder_Maximum	6.925e+41
original_firstorder_Mean	Inf
original_firstorder_MeanAbsoluteDeviation	1.792e+113
original_firstorder_Median	0.000e+00
original_firstorder_Minimum	Inf
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	Inf
original_firstorder_RootMeanSquared	6.430e+42
original_firstorder_Skewness	1.232e+101
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	0.000e+00
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	Inf
original_glcm_ClusterProminence	0.000e+00
original_glcm_ClusterShade	0.000e+00
original_glcm_ClusterTendency	Inf
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	4.315e+97
original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	0.000e+00
original_glcm_DifferenceVariance	Inf
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	Inf
original_glcm_Idn	0.000e+00
original_glcm_Imc1	1.809e+210
original_glcm_Imc2	7.397e+107
original_glcm_InverseVariance	Inf
original_glcm_JointAverage	3.539e-165
original_glcm_JointEnergy	Inf
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	4.619e-17
original_glcm_MaximumProbability	9.435e+274
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	Inf
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	3.841e+261
original_gldm_DependenceNonUniformity	0.000e+00

original_gldm_DependenceNonUniformityNormalized	1.285e+229
original_gldm_DependenceVariance	2.129e+161
original_gldm_GrayLevelNonUniformity	1.660e-92
original_gldm_GrayLevelVariance	0.000e+00
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	9.407e-159
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.212e-75
original_gldm_LargeDependenceLowGrayLevelEmphasis	3.032e-140
original_gldm_LowGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceEmphasis	7.422e+77
original_gldm_SmallDependenceHighGrayLevelEmphasis	3.150e-148
original_gldm_SmallDependenceLowGrayLevelEmphasis	4.200e-230
original_glrlm_GrayLevelNonUniformity	3.144e+204
original_glrlm_GrayLevelNonUniformityNormalized	Inf
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	Inf
original_glrlm_LongRunHighGrayLevelEmphasis	3.037e+177
original_glrlm_LongRunLowGrayLevelEmphasis	0.000e+00
original_glrlm_LowGrayLevelRunEmphasis	Inf
original_glrlm_RunEntropy	3.778e-30
original_glrlm_RunLengthNonUniformity	1.215e+222
original_glrlm_RunLengthNonUniformityNormalized	1.982e+06
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	0.000e+00
original_glrlm_ShortRunEmphasis	2.742e-25
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	3.077e-137
original_glszm_GrayLevelNonUniformityNormalized	3.500e-17
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	4.888e+16
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	2.335e-01
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	4.447e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.412e-21
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.086e+55
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.000e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.258e-02
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	6.617e-31

original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	1.616e+03
original_firstorder_90Percentile	1.382e+03
original_firstorder_Energy	4.140e+03
original_firstorder_Entropy	5.875e+02
original_firstorder_InterquartileRange	2.291e+03
original_firstorder_Kurtosis	7.717e+02
original_firstorder_Maximum	1.014e+03
original_firstorder_Mean	1.040e+03
original_firstorder_MeanAbsoluteDeviation	1.419e+03
original_firstorder_Median	9.660e+02
original_firstorder_Minimum	3.089e+02
original_firstorder_Range	4.579e+02
original_firstorder_RobustMeanAbsoluteDeviation	2.170e+03
original_firstorder_RootMeanSquared	1.870e+03
original_firstorder_Skewness	6.636e+02
original_firstorder_TotalEnergy	4.140e+03
original_firstorder_Uniformity	4.355e+02
original_firstorder_Variance	4.950e+03
original_glcm_Autocorrelation	3.443e+02
original_glcm_ClusterProminence	1.520e+05
original_glcm_ClusterShade	1.842e+04
original_glcm_ClusterTendency	6.274e+03
original_glcm_Contrast	8.379e+03
original_glcm_Correlation	6.804e+02
original_glcm_DifferenceAverage	9.819e+02
original_glcm_DifferenceEntropy	6.301e+02
original_glcm_DifferenceVariance	9.500e+03
original_glcm_Id	6.253e+02
original_glcm_Idm	6.385e+02
original_glcm_Idmn	6.700e+02
original_glcm_Idn	5.042e+02
original_glcm_Imc1	9.616e+02
original_glcm_Imc2	7.095e+02
original_glcm_InverseVariance	6.542e+02
original_glcm_JointAverage	3.056e+02
original_glcm_JointEnergy	3.936e+02
original_glcm_JointEntropy	5.663e+02
original_glcm_MCC	6.737e+02
original_glcm_MaximumProbability	4.253e+02
original_glcm_SumAverage	3.056e+02
original_glcm_SumEntropy	5.516e+02
original_glcm_SumSquares	6.692e+03
original_gldm_DependenceEntropy	6.884e+02
original_gldm_DependenceNonUniformity	6.791e+02
original_gldm_DependenceNonUniformityNormalized	1.599e+03
original_gldm_DependenceVariance	1.497e+03
original_gldm_GrayLevelNonUniformity	8.761e+02
original_gldm_GrayLevelVariance	4.931e+03

original_gldm_HighGrayLevelEmphasis	3.444e+02
original_gldm_LargeDependenceEmphasis	1.190e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.511e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	2.278e+03
original_gldm_LowGrayLevelEmphasis	5.304e+02
original_gldm_SmallDependenceEmphasis	5.341e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis	4.214e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	3.320e+02
original_glrlm_GrayLevelNonUniformity	6.219e+02
original_glrlm_GrayLevelNonUniformityNormalized	4.430e+02
original_glrlm_GrayLevelVariance	4.101e+03
original_glrlm_HighGrayLevelRunEmphasis	3.414e+02
original_glrlm_LongRunEmphasis	7.978e+02
original_glrlm_LongRunHighGrayLevelEmphasis	6.617e+02
original_glrlm_LongRunLowGrayLevelEmphasis	6.607e+02
original_glrlm_LowGrayLevelRunEmphasis	4.982e+02
original_glrlm_RunEntropy	7.765e+02
original_glrlm_RunLengthNonUniformity	4.840e+02
original_glrlm_RunLengthNonUniformityNormalized	1.176e+03
original_glrlm_RunPercentage	1.053e+03
original_glrlm_RunVariance	8.169e+02
original_glrlm_ShortRunEmphasis	1.080e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	3.034e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	4.407e+02
original_glszm_GrayLevelNonUniformity	3.090e+02
original_glszm_GrayLevelNonUniformityNormalized	5.737e+02
original_glszm_GrayLevelVariance	1.386e+03
original_glszm_HighGrayLevelZoneEmphasis	3.204e+02
original_glszm_LargeAreaEmphasis	9.329e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	1.579e+03
original_glszm_LargeAreaLowGrayLevelEmphasis	3.394e+03
original_glszm_LowGrayLevelZoneEmphasis	3.934e+02
original_glszm_SizeZoneNonUniformity	8.446e+02
original_glszm_SizeZoneNonUniformityNormalized	1.571e+03
original_glszm_SmallAreaEmphasis	1.527e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	4.082e+02
original_glszm_SmallAreaLowGrayLevelEmphasis	3.043e+02
original_glszm_ZoneEntropy	4.284e+02
original_glszm_ZonePercentage	5.047e+02
original_glszm_ZoneVariance	9.351e+02
original_ngtdm_Busyness	1.981e+03
original_ngtdm_Coarseness	5.136e+02
original_ngtdm_Complexity	2.140e+03
original_ngtdm_Contrast	5.730e+03
original_ngtdm_Strength	1.631e+03
original_shape_Elongation	8.131e+02
original_shape_Flatness	1.445e+03
original_shape_LeastAxisLength	6.003e+02
original_shape_MajorAxisLength	4.309e+02
original_shape_Maximum2DDiameterColumn	4.485e+02
original_shape_Maximum2DDiameterRow	1.307e+03
original_shape_Maximum2DDiameterSlice	4.960e+02
original_shape_Maximum3DDiameter	5.668e+02
original_shape_MeshVolume	9.042e+02
original_shape_MinorAxisLength	7.015e+02
original_shape_Sphericity	1.293e+03

```
original_shape_SurfaceArea                               4.057e+02
original_shape_SurfaceVolumeRatio                        1.303e+03
original_shape_VoxelVolume                               8.775e+02
                                                              z
original_firstorder_10Percentile                         3.725
original_firstorder_90Percentile                        -2.829
original_firstorder_Energy                               0.258
original_firstorder_Entropy                              0.959
original_firstorder_InterquartileRange                  -9.659
original_firstorder_Kurtosis                             0.126
original_firstorder_Maximum                              0.095
original_firstorder_Mean                                 3.597
original_firstorder_MeanAbsoluteDeviation                0.184
original_firstorder_Median                              -2.675
original_firstorder_Minimum                              3.426
original_firstorder_Range                                0.000
original_firstorder_RobustMeanAbsoluteDeviation         13.249
original_firstorder_RootMeanSquared                      0.053
original_firstorder_Skewness                             0.351
original_firstorder_TotalEnergy                          0.000
original_firstorder_Uniformity                          -4.717
original_firstorder_Variance                            17.993
original_glcm_Autocorrelation                          110.372
original_glcm_ClusterProminence                         -3.953
original_glcm_ClusterShade                              -3.588
original_glcm_ClusterTendency                            2.704
original_glcm_Contrast                                 -39.790
original_glcm_Correlation                                0.330
original_glcm_DifferenceAverage                         28.593
original_glcm_DifferenceEntropy                         -5.403
original_glcm_DifferenceVariance                        30.238
original_glcm_Id                                        61.989
original_glcm_Idm                                      -47.538
original_glcm_Idmn                                       2.795
original_glcm_Idn                                       -2.301
original_glcm_Imc1                                       0.503
original_glcm_Imc2                                       0.350
original_glcm_InverseVariance                            6.354
original_glcm_JointAverage                              -1.239
original_glcm_JointEnergy                                2.112
original_glcm_JointEntropy                              -7.855
original_glcm_MCC                                       -0.056
original_glcm_MaximumProbability                         1.489
original_glcm_SumAverage                                 0.000
original_glcm_SumEntropy                                 4.911
original_glcm_SumSquares                                 0.000
original_gldm_DependenceEntropy                          0.875
original_gldm_DependenceNonUniformity                   -1.529
original_gldm_DependenceNonUniformityNormalized          0.330
original_gldm_DependenceVariance                         0.248
original_gldm_GrayLevelNonUniformity                    -0.241
original_gldm_GrayLevelVariance                        -15.802
original_gldm_HighGrayLevelEmphasis                    -31.640
original_gldm_LargeDependenceEmphasis                   -0.306
original_gldm_LargeDependenceHighGrayLevelEmphasis      -0.114
original_gldm_LargeDependenceLowGrayLevelEmphasis       -0.141
```

```
original_gldm_LowGrayLevelEmphasis                    -25.099
original_gldm_SmallDependenceEmphasis                   0.336
original_gldm_SmallDependenceHighGrayLevelEmphasis     -0.806
original_gldm_SmallDependenceLowGrayLevelEmphasis      -1.591
original_glrlm_GrayLevelNonUniformity                   0.757
original_glrlm_GrayLevelNonUniformityNormalized         2.594
original_glrlm_GrayLevelVariance                       -4.926
original_glrlm_HighGrayLevelRunEmphasis               -74.980
original_glrlm_LongRunEmphasis                          1.459
original_glrlm_LongRunHighGrayLevelEmphasis             0.618
original_glrlm_LongRunLowGrayLevelEmphasis             -1.578
original_glrlm_LowGrayLevelRunEmphasis                 28.168
original_glrlm_RunEntropy                              -0.087
original_glrlm_RunLengthNonUniformity                   1.057
original_glrlm_RunLengthNonUniformityNormalized         0.012
original_glrlm_RunPercentage                            0.000
original_glrlm_RunVariance                             -1.114
original_glrlm_ShortRunEmphasis                        -0.052
original_glrlm_ShortRunHighGrayLevelEmphasis            0.000
original_glrlm_ShortRunLowGrayLevelEmphasis             0.000
original_glszm_GrayLevelNonUniformity                  -1.017
original_glszm_GrayLevelNonUniformityNormalized        -0.066
original_glszm_GrayLevelVariance                        0.000
original_glszm_HighGrayLevelZoneEmphasis                0.120
original_glszm_LargeAreaEmphasis                        0.000
original_glszm_LargeAreaHighGrayLevelEmphasis           0.000
original_glszm_LargeAreaLowGrayLevelEmphasis            0.000
original_glszm_LowGrayLevelZoneEmphasis                 0.000
original_glszm_SizeZoneNonUniformity                    0.000
original_glszm_SizeZoneNonUniformityNormalized          0.001
original_glszm_SmallAreaEmphasis                        0.000
original_glszm_SmallAreaHighGrayLevelEmphasis           0.000
original_glszm_SmallAreaLowGrayLevelEmphasis           -0.158
original_glszm_ZoneEntropy                              0.000
original_glszm_ZonePercentage                           0.000
original_glszm_ZoneVariance                             0.000
original_ngtdm_Busyness                                 0.000
original_ngtdm_Coarseness                               0.000
original_ngtdm_Complexity                               0.000
original_ngtdm_Contrast                                 0.022
original_ngtdm_Strength                                 0.000
original_shape_Elongation                               0.000
original_shape_Flatness                                 0.000
original_shape_LeastAxisLength                         -0.007
original_shape_MajorAxisLength                          0.000
original_shape_Maximum2DDiameterColumn                  0.000
original_shape_Maximum2DDiameterRow                     0.000
original_shape_Maximum2DDiameterSlice                  -0.140
original_shape_Maximum3DDiameter                        0.000
original_shape_MeshVolume                               0.000
original_shape_MinorAxisLength                          0.000
original_shape_Sphericity                               0.000
original_shape_SurfaceArea                              0.000
original_shape_SurfaceVolumeRatio                       0.000
original_shape_VoxelVolume                              0.000
                                                          p
```

original_firstorder_10Percentile	0.000195
original_firstorder_90Percentile	0.004664
original_firstorder_Energy	0.796098
original_firstorder_Entropy	0.337341
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	0.899918
original_firstorder_Maximum	0.924334
original_firstorder_Mean	0.000322
original_firstorder_MeanAbsoluteDeviation	0.854172
original_firstorder_Median	0.007464
original_firstorder_Minimum	0.000613
original_firstorder_Range	1.000000
original_firstorder_RobustMeanAbsoluteDeviation	< 2e-16
original_firstorder_RootMeanSquared	0.957954
original_firstorder_Skewness	0.725771
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	2.39e-06
original_firstorder_Variance	< 2e-16
original_glcm_Autocorrelation	< 2e-16
original_glcm_ClusterProminence	7.73e-05
original_glcm_ClusterShade	0.000334
original_glcm_ClusterTendency	0.006846
original_glcm_Contrast	< 2e-16
original_glcm_Correlation	0.741105
original_glcm_DifferenceAverage	< 2e-16
original_glcm_DifferenceEntropy	6.55e-08
original_glcm_DifferenceVariance	< 2e-16
original_glcm_Id	< 2e-16
original_glcm_Idm	< 2e-16
original_glcm_Idmn	0.005193
original_glcm_Idn	0.021407
original_glcm_Imc1	0.614626
original_glcm_Imc2	0.726293
original_glcm_InverseVariance	2.10e-10
original_glcm_JointAverage	0.215328
original_glcm_JointEnergy	0.034719
original_glcm_JointEntropy	4.00e-15
original_glcm_MCC	0.955476
original_glcm_MaximumProbability	0.136534
original_glcm_SumAverage	1.000000
original_glcm_SumEntropy	9.05e-07
original_glcm_SumSquares	1.000000
original_gldm_DependenceEntropy	0.381572
original_gldm_DependenceNonUniformity	0.126207
original_gldm_DependenceNonUniformityNormalized	0.741411
original_gldm_DependenceVariance	0.804059
original_gldm_GrayLevelNonUniformity	0.809377
original_gldm_GrayLevelVariance	< 2e-16
original_gldm_HighGrayLevelEmphasis	< 2e-16
original_gldm_LargeDependenceEmphasis	0.759808
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.909088
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.887828
original_gldm_LowGrayLevelEmphasis	< 2e-16
original_gldm_SmallDependenceEmphasis	0.737099
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.420218
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.111657

```
original_glrlm_GrayLevelNonUniformity               0.448928
original_glrlm_GrayLevelNonUniformityNormalized     0.009473
original_glrlm_GrayLevelVariance                    8.37e-07
original_glrlm_HighGrayLevelRunEmphasis              < 2e-16
original_glrlm_LongRunEmphasis                      0.144604
original_glrlm_LongRunHighGrayLevelEmphasis         0.536845
original_glrlm_LongRunLowGrayLevelEmphasis          0.114519
original_glrlm_LowGrayLevelRunEmphasis               < 2e-16
original_glrlm_RunEntropy                           0.930477
original_glrlm_RunLengthNonUniformity               0.290705
original_glrlm_RunLengthNonUniformityNormalized     0.990164
original_glrlm_RunPercentage                        1.000000
original_glrlm_RunVariance                          0.265381
original_glrlm_ShortRunEmphasis                     0.958237
original_glrlm_ShortRunHighGrayLevelEmphasis        1.000000
original_glrlm_ShortRunLowGrayLevelEmphasis         1.000000
original_glszm_GrayLevelNonUniformity               0.309113
original_glszm_GrayLevelNonUniformityNormalized     0.947338
original_glszm_GrayLevelVariance                    1.000000
original_glszm_HighGrayLevelZoneEmphasis            0.904519
original_glszm_LargeAreaEmphasis                    1.000000
original_glszm_LargeAreaHighGrayLevelEmphasis       1.000000
original_glszm_LargeAreaLowGrayLevelEmphasis        0.999658
original_glszm_LowGrayLevelZoneEmphasis             1.000000
original_glszm_SizeZoneNonUniformity                1.000000
original_glszm_SizeZoneNonUniformityNormalized      0.999242
original_glszm_SmallAreaEmphasis                    1.000000
original_glszm_SmallAreaHighGrayLevelEmphasis       1.000000
original_glszm_SmallAreaLowGrayLevelEmphasis        0.874634
original_glszm_ZoneEntropy                          1.000000
original_glszm_ZonePercentage                       1.000000
original_glszm_ZoneVariance                         1.000000
original_ngtdm_Busyness                             1.000000
original_ngtdm_Coarseness                           1.000000
original_ngtdm_Complexity                           1.000000
original_ngtdm_Contrast                             0.982356
original_ngtdm_Strength                             1.000000
original_shape_Elongation                           1.000000
original_shape_Flatness                             1.000000
original_shape_LeastAxisLength                      0.994185
original_shape_MajorAxisLength                      1.000000
original_shape_Maximum2DDiameterColumn              1.000000
original_shape_Maximum2DDiameterRow                 1.000000
original_shape_Maximum2DDiameterSlice               0.888588
original_shape_Maximum3DDiameter                    1.000000
original_shape_MeshVolume                           1.000000
original_shape_MinorAxisLength                      1.000000
original_shape_Sphericity                           1.000000
original_shape_SurfaceArea                          1.000000
original_shape_SurfaceVolumeRatio                   1.000000
original_shape_VoxelVolume                          1.000000

Likelihood ratio test=48.72  on 107 df, p=1
n= 61, number of events= 6
```

```
$model_list[[2]]$clusters
[1] 3.521561 0.837715 0.081699 0.651810 0.508052 0.887100


$model_list[[3]]
$model_list[[3]]$vimp10
            original_glrlm_LowGrayLevelRunEmphasis
                                       0.008140342
       original_glrlm_ShortRunLowGrayLevelEmphasis
                                       0.005710860
                 original_shape_Maximum3DDiameter
                                       0.005016722
       original_glrlm_LongRunHighGrayLevelEmphasis
                                       0.004322585
                      original_firstorder_Maximum
                                       0.003943964
            original_glszm_GrayLevelNonUniformity
                                       0.003723102
                             original_glcm_Idmn
                                       0.003502240
    original_glszm_LargeAreaHighGrayLevelEmphasis
                                       0.003502240
              original_gldm_LowGrayLevelEmphasis
                                       0.003470688
original_gldm_LargeDependenceHighGrayLevelEmphasis
                                       0.003312930
                       original_firstorder_Range
                                       0.003123620
               original_glcm_Autocorrelation
                                       0.003123620
                             original_glcm_Imc2
                                       0.002934309
             original_gldm_HighGrayLevelEmphasis
                                       0.002681896
              original_glrlm_GrayLevelVariance
                                       0.002366378


$model_list[[3]]$treemodel
n= 361

node), split, n, deviance, yval
      * denotes terminal node

 1) root 361 279.682600 1.00000000
   2) original_shape_Maximum3DDiameter< -0.006713401 227  93.883810 0.46020150
     4) original_glrlm_LowGrayLevelRunEmphasis>=-0.3448694 201  66.550690 0.34387950
       8) original_glrlm_LowGrayLevelRunEmphasis< 0.1348958 162  29.543490 0.16865680
        16) original_glrlm_ShortRunLowGrayLevelEmphasis>=-0.173973 67   1.810336 0.09483208 *
        17) original_glrlm_ShortRunLowGrayLevelEmphasis< -0.173973 95  26.226740 0.28224980 *
       9) original_glrlm_LowGrayLevelRunEmphasis>=0.1348958 39  27.477830 1.10008400 *
     5) original_glrlm_LowGrayLevelRunEmphasis< -0.3448694 26  21.546720 1.32906000 *
   3) original_shape_Maximum3DDiameter>=-0.006713401 134 159.085400 2.01084900
     6) original_glrlm_LowGrayLevelRunEmphasis>=-0.3640482 80  74.611230 1.30510500
      12) original_glrlm_ShortRunLowGrayLevelEmphasis< -0.2425721 54  40.931580 0.96620650 *
      13) original_glrlm_ShortRunLowGrayLevelEmphasis>=-0.2425721 26  31.521380 1.89864900 *
     7) original_glrlm_LowGrayLevelRunEmphasis< -0.3640482 54  77.406370 3.03808200 *
```

```
$model_list[[3]]$coxmodels
$model_list[[3]]$coxmodels[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	-7.783e+03
original_firstorder_90Percentile	2.900e+03
original_firstorder_Energy	-3.044e+02
original_firstorder_Entropy	-9.635e+03
original_firstorder_InterquartileRange	1.025e+03
original_firstorder_Kurtosis	-6.503e+02
original_firstorder_Maximum	-2.775e+02
original_firstorder_Mean	3.919e+03
original_firstorder_MeanAbsoluteDeviation	-8.079e+03
original_firstorder_Median	-7.044e+02
original_firstorder_Minimum	-6.629e+03
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	-1.534e+03
original_firstorder_RootMeanSquared	-2.250e+03
original_firstorder_Skewness	3.723e+02
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-4.662e+02
original_firstorder_Variance	-3.233e+05
original_glcm_Autocorrelation	-2.870e+04
original_glcm_ClusterProminence	7.083e+04
original_glcm_ClusterShade	-1.246e+04
original_glcm_ClusterTendency	-2.613e+04
original_glcm_Contrast	-1.782e+05
original_glcm_Correlation	-1.778e+02
original_glcm_DifferenceAverage	7.160e+04
original_glcm_DifferenceEntropy	2.598e+03
original_glcm_DifferenceVariance	5.503e+04
original_glcm_Id	3.571e+05
original_glcm_Idm	-2.958e+05
original_glcm_Idmn	1.717e+02
original_glcm_Idn	1.700e+02
original_glcm_Imc1	-2.846e+03
original_glcm_Imc2	-2.392e+03
original_glcm_InverseVariance	3.268e+04
original_glcm_JointAverage	5.159e+03
original_glcm_JointEnergy	7.339e+02
original_glcm_JointEntropy	6.291e+03
original_glcm_MCC	4.623e+02
original_glcm_MaximumProbability	-7.893e+02
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	4.013e+03
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	-2.509e+03
original_gldm_DependenceNonUniformity	-6.239e+01
original_gldm_DependenceNonUniformityNormalized	-2.356e+03
original_gldm_DependenceVariance	-1.341e+01
original_gldm_GrayLevelNonUniformity	-4.099e+02

```
original_gldm_GrayLevelVariance                              3.558e+05
original_gldm_HighGrayLevelEmphasis                          1.860e+04
original_gldm_LargeDependenceEmphasis                       -7.731e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis           3.887e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis            8.229e+04
original_gldm_LowGrayLevelEmphasis                          -5.889e+04
original_gldm_SmallDependenceEmphasis                       -5.838e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis           4.885e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis            4.759e+03
original_glrlm_GrayLevelNonUniformity                        5.794e+02
original_glrlm_GrayLevelNonUniformityNormalized              1.934e+02
original_glrlm_GrayLevelVariance                             0.000e+00
original_glrlm_HighGrayLevelRunEmphasis                      0.000e+00
original_glrlm_LongRunEmphasis                               0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis                  0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis                   0.000e+00
original_glrlm_LowGrayLevelRunEmphasis                       0.000e+00
original_glrlm_RunEntropy                                    0.000e+00
original_glrlm_RunLengthNonUniformity                        0.000e+00
original_glrlm_RunLengthNonUniformityNormalized              0.000e+00
original_glrlm_RunPercentage                                 0.000e+00
original_glrlm_RunVariance                                   0.000e+00
original_glrlm_ShortRunEmphasis                              0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis                 0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis                  0.000e+00
original_glszm_GrayLevelNonUniformity                        0.000e+00
original_glszm_GrayLevelNonUniformityNormalized             -3.362e+01
original_glszm_GrayLevelVariance                            -1.963e+00
original_glszm_HighGrayLevelZoneEmphasis                     0.000e+00
original_glszm_LargeAreaEmphasis                             0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis                0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis                 0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                      0.000e+00
original_glszm_SizeZoneNonUniformity                         0.000e+00
original_glszm_SizeZoneNonUniformityNormalized              -1.392e+02
original_glszm_SmallAreaEmphasis                             0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis                0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis                 0.000e+00
original_glszm_ZoneEntropy                                   0.000e+00
original_glszm_ZonePercentage                                0.000e+00
original_glszm_ZoneVariance                                  0.000e+00
original_ngtdm_Busyness                                      0.000e+00
original_ngtdm_Coarseness                                    0.000e+00
original_ngtdm_Complexity                                    0.000e+00
original_ngtdm_Contrast                                      0.000e+00
original_ngtdm_Strength                                      0.000e+00
original_shape_Elongation                                    2.525e+00
original_shape_Flatness                                      0.000e+00
original_shape_LeastAxisLength                               0.000e+00
original_shape_MajorAxisLength                              -1.207e+02
original_shape_Maximum2DDiameterColumn                       6.563e+00
original_shape_Maximum2DDiameterRow                          0.000e+00
original_shape_Maximum2DDiameterSlice                        0.000e+00
original_shape_Maximum3DDiameter                             0.000e+00
original_shape_MeshVolume                                    0.000e+00
original_shape_MinorAxisLength                              -1.996e+01
```

original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	0.000e+00
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	0.000e+00
original_firstorder_90Percentile	Inf
original_firstorder_Energy	6.145e-133
original_firstorder_Entropy	0.000e+00
original_firstorder_InterquartileRange	Inf
original_firstorder_Kurtosis	3.718e-283
original_firstorder_Maximum	2.925e-121
original_firstorder_Mean	Inf
original_firstorder_MeanAbsoluteDeviation	0.000e+00
original_firstorder_Median	1.271e-306
original_firstorder_Minimum	0.000e+00
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	0.000e+00
original_firstorder_RootMeanSquared	0.000e+00
original_firstorder_Skewness	4.865e+161
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	3.516e-203
original_firstorder_Variance	0.000e+00
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	0.000e+00
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	5.890e-78
original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	Inf
original_glcm_DifferenceVariance	Inf
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	3.539e+74
original_glcm_Idn	6.744e+73
original_glcm_Imc1	0.000e+00
original_glcm_Imc2	0.000e+00
original_glcm_InverseVariance	Inf
original_glcm_JointAverage	Inf
original_glcm_JointEnergy	Inf
original_glcm_JointEntropy	Inf
original_glcm_MCC	6.211e+200
original_glcm_MaximumProbability	0.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	Inf
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	0.000e+00
original_gldm_DependenceNonUniformity	8.044e-28
original_gldm_DependenceNonUniformityNormalized	0.000e+00
original_gldm_DependenceVariance	1.505e-06
original_gldm_GrayLevelNonUniformity	9.155e-179
original_gldm_GrayLevelVariance	Inf
original_gldm_HighGrayLevelEmphasis	Inf
original_gldm_LargeDependenceEmphasis	0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	Inf

```
original_gldm_LargeDependenceLowGrayLevelEmphasis              Inf
original_gldm_LowGrayLevelEmphasis                        0.000e+00
original_gldm_SmallDependenceEmphasis                     2.948e-254
original_gldm_SmallDependenceHighGrayLevelEmphasis       1.373e+212
original_gldm_SmallDependenceLowGrayLevelEmphasis             Inf
original_glrlm_GrayLevelNonUniformity                     4.229e+251
original_glrlm_GrayLevelNonUniformityNormalized           9.674e+83
original_glrlm_GrayLevelVariance                          1.000e+00
original_glrlm_HighGrayLevelRunEmphasis                   1.000e+00
original_glrlm_LongRunEmphasis                            1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis               1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis                1.000e+00
original_glrlm_LowGrayLevelRunEmphasis                    1.000e+00
original_glrlm_RunEntropy                                 1.000e+00
original_glrlm_RunLengthNonUniformity                     1.000e+00
original_glrlm_RunLengthNonUniformityNormalized           1.000e+00
original_glrlm_RunPercentage                              1.000e+00
original_glrlm_RunVariance                                1.000e+00
original_glrlm_ShortRunEmphasis                           1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis              1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis               1.000e+00
original_glszm_GrayLevelNonUniformity                     1.000e+00
original_glszm_GrayLevelNonUniformityNormalized           2.503e-15
original_glszm_GrayLevelVariance                          1.404e-01
original_glszm_HighGrayLevelZoneEmphasis                  1.000e+00
original_glszm_LargeAreaEmphasis                          1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis             1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis              1.000e+00
original_glszm_LowGrayLevelZoneEmphasis                   1.000e+00
original_glszm_SizeZoneNonUniformity                      1.000e+00
original_glszm_SizeZoneNonUniformityNormalized            3.406e-61
original_glszm_SmallAreaEmphasis                          1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis             1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis              1.000e+00
original_glszm_ZoneEntropy                                1.000e+00
original_glszm_ZonePercentage                             1.000e+00
original_glszm_ZoneVariance                               1.000e+00
original_ngtdm_Busyness                                   1.000e+00
original_ngtdm_Coarseness                                 1.000e+00
original_ngtdm_Complexity                                 1.000e+00
original_ngtdm_Contrast                                   1.000e+00
original_ngtdm_Strength                                   1.000e+00
original_shape_Elongation                                 1.249e+01
original_shape_Flatness                                   1.000e+00
original_shape_LeastAxisLength                            1.000e+00
original_shape_MajorAxisLength                            3.770e-53
original_shape_Maximum2DDiameterColumn                    7.087e+02
original_shape_Maximum2DDiameterRow                       1.000e+00
original_shape_Maximum2DDiameterSlice                     1.000e+00
original_shape_Maximum3DDiameter                          1.000e+00
original_shape_MeshVolume                                 1.000e+00
original_shape_MinorAxisLength                            2.145e-09
original_shape_Sphericity                                 1.000e+00
original_shape_SurfaceArea                                1.000e+00
original_shape_SurfaceVolumeRatio                         1.000e+00
original_shape_VoxelVolume                                1.000e+00
```

	se(coef)
original_firstorder_10Percentile	1.425e+00
original_firstorder_90Percentile	1.029e+00
original_firstorder_Energy	8.732e-01
original_firstorder_Entropy	1.462e+00
original_firstorder_InterquartileRange	7.659e+00
original_firstorder_Kurtosis	9.285e-01
original_firstorder_Maximum	1.106e+00
original_firstorder_Mean	1.066e+00
original_firstorder_MeanAbsoluteDeviation	3.737e+00
original_firstorder_Median	7.089e-01
original_firstorder_Minimum	1.775e+00
original_firstorder_Range	1.196e+00
original_firstorder_RobustMeanAbsoluteDeviation	5.432e+00
original_firstorder_RootMeanSquared	2.506e+00
original_firstorder_Skewness	1.242e+00
original_firstorder_TotalEnergy	8.732e-01
original_firstorder_Uniformity	2.105e+00
original_firstorder_Variance	1.103e+01
original_glcm_Autocorrelation	1.193e+00
original_glcm_ClusterProminence	1.432e+02
original_glcm_ClusterShade	1.601e+02
original_glcm_ClusterTendency	8.776e+00
original_glcm_Contrast	1.615e+01
original_glcm_Correlation	1.274e+00
original_glcm_DifferenceAverage	2.141e+00
original_glcm_DifferenceEntropy	1.487e+00
original_glcm_DifferenceVariance	1.861e+01
original_glcm_Id	1.531e+00
original_glcm_Idm	1.489e+00
original_glcm_Idmn	3.744e+00
original_glcm_Idn	1.955e+00
original_glcm_Imc1	7.540e-01
original_glcm_Imc2	1.006e+00
original_glcm_InverseVariance	2.604e+00
original_glcm_JointAverage	1.693e+00
original_glcm_JointEnergy	3.521e+00
original_glcm_JointEntropy	1.596e+00
original_glcm_MCC	1.542e+00
original_glcm_MaximumProbability	6.079e+00
original_glcm_SumAverage	1.693e+00
original_glcm_SumEntropy	1.403e+00
original_glcm_SumSquares	1.140e+01
original_gldm_DependenceEntropy	1.156e+00
original_gldm_DependenceNonUniformity	3.427e-01
original_gldm_DependenceNonUniformityNormalized	8.525e-01
original_gldm_DependenceVariance	4.986e-01
original_gldm_GrayLevelNonUniformity	3.768e-01
original_gldm_GrayLevelVariance	1.107e+01
original_gldm_HighGrayLevelEmphasis	1.185e+00
original_gldm_LargeDependenceEmphasis	5.734e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.844e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.728e+01
original_gldm_LowGrayLevelEmphasis	1.997e+01
original_gldm_SmallDependenceEmphasis	8.994e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	9.503e-01

```
original_gldm_SmallDependenceLowGrayLevelEmphasis        6.794e+00
original_glrlm_GrayLevelNonUniformity                    3.228e-01
original_glrlm_GrayLevelNonUniformityNormalized          3.174e+00
original_glrlm_GrayLevelVariance                         1.485e+01
original_glrlm_HighGrayLevelRunEmphasis                  1.175e+00
original_glrlm_LongRunEmphasis                           1.300e+00
original_glrlm_LongRunHighGrayLevelEmphasis              6.417e-01
original_glrlm_LongRunLowGrayLevelEmphasis               9.954e+01
original_glrlm_LowGrayLevelRunEmphasis                   1.925e+01
original_glrlm_RunEntropy                                9.057e-01
original_glrlm_RunLengthNonUniformity                    2.633e-01
original_glrlm_RunLengthNonUniformityNormalized          5.940e-01
original_glrlm_RunPercentage                             5.748e-01
original_glrlm_RunVariance                               1.756e+00
original_glrlm_ShortRunEmphasis                          6.070e-01
original_glrlm_ShortRunHighGrayLevelEmphasis             1.559e+00
original_glrlm_ShortRunLowGrayLevelEmphasis              1.421e+01
original_glszm_GrayLevelNonUniformity                    2.115e-01
original_glszm_GrayLevelNonUniformityNormalized          2.694e+00
original_glszm_GrayLevelVariance                         3.535e+00
original_glszm_HighGrayLevelZoneEmphasis                 1.036e+00
original_glszm_LargeAreaEmphasis                         3.586e-01
original_glszm_LargeAreaHighGrayLevelEmphasis            2.361e-01
original_glszm_LargeAreaLowGrayLevelEmphasis             4.536e+00
original_glszm_LowGrayLevelZoneEmphasis                  1.318e+01
original_glszm_SizeZoneNonUniformity                     4.507e-01
original_glszm_SizeZoneNonUniformityNormalized           1.088e+00
original_glszm_SmallAreaEmphasis                         1.190e+00
original_glszm_SmallAreaHighGrayLevelEmphasis            1.094e+00
original_glszm_SmallAreaLowGrayLevelEmphasis             9.463e+00
original_glszm_ZoneEntropy                               2.490e+00
original_glszm_ZonePercentage                            9.993e-01
original_glszm_ZoneVariance                              3.581e-01
original_ngtdm_Busyness                                  2.932e+00
original_ngtdm_Coarseness                                8.661e+00
original_ngtdm_Complexity                                5.660e+00
original_ngtdm_Contrast                                  1.779e+01
original_ngtdm_Strength                                  7.250e+00
original_shape_Elongation                                1.098e+00
original_shape_Flatness                                  1.018e+00
original_shape_LeastAxisLength                           4.340e-01
original_shape_MajorAxisLength                           8.803e-01
original_shape_Maximum2DDiameterColumn                   8.311e-01
original_shape_Maximum2DDiameterRow                      5.975e-01
original_shape_Maximum2DDiameterSlice                    5.699e-01
original_shape_Maximum3DDiameter                         5.221e-01
original_shape_MeshVolume                                3.117e-01
original_shape_MinorAxisLength                           5.665e-01
original_shape_Sphericity                                7.890e-01
original_shape_SurfaceArea                               2.231e-01
original_shape_SurfaceVolumeRatio                        6.231e-01
original_shape_VoxelVolume                               3.118e-01
                                                               z
original_firstorder_10Percentile                        -5.461e+03
original_firstorder_90Percentile                         2.817e+03
original_firstorder_Energy                              -3.486e+02
```

original_firstorder_Entropy	-6.589e+03
original_firstorder_InterquartileRange	1.339e+02
original_firstorder_Kurtosis	-7.004e+02
original_firstorder_Maximum	-2.510e+02
original_firstorder_Mean	3.676e+03
original_firstorder_MeanAbsoluteDeviation	-2.162e+03
original_firstorder_Median	-9.936e+02
original_firstorder_Minimum	-3.735e+03
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	-2.824e+02
original_firstorder_RootMeanSquared	-8.979e+02
original_firstorder_Skewness	2.998e+02
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-2.214e+02
original_firstorder_Variance	-2.932e+04
original_glcm_Autocorrelation	-2.407e+04
original_glcm_ClusterProminence	4.948e+02
original_glcm_ClusterShade	-7.782e+01
original_glcm_ClusterTendency	-2.977e+03
original_glcm_Contrast	-1.104e+04
original_glcm_Correlation	-1.396e+02
original_glcm_DifferenceAverage	3.345e+04
original_glcm_DifferenceEntropy	1.747e+03
original_glcm_DifferenceVariance	2.957e+03
original_glcm_Id	2.333e+05
original_glcm_Idm	-1.986e+05
original_glcm_Idmn	4.584e+01
original_glcm_Idn	8.697e+01
original_glcm_Imc1	-3.775e+03
original_glcm_Imc2	-2.379e+03
original_glcm_InverseVariance	1.255e+04
original_glcm_JointAverage	3.047e+03
original_glcm_JointEnergy	2.085e+02
original_glcm_JointEntropy	3.941e+03
original_glcm_MCC	2.998e+02
original_glcm_MaximumProbability	-1.298e+02
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	2.860e+03
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	-2.171e+03
original_gldm_DependenceNonUniformity	-1.820e+02
original_gldm_DependenceNonUniformityNormalized	-2.764e+03
original_gldm_DependenceVariance	-2.689e+01
original_gldm_GrayLevelNonUniformity	-1.088e+03
original_gldm_GrayLevelVariance	3.215e+04
original_gldm_HighGrayLevelEmphasis	1.569e+04
original_gldm_LargeDependenceEmphasis	-1.348e+04
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.011e+04
original_gldm_LargeDependenceLowGrayLevelEmphasis	4.762e+03
original_gldm_LowGrayLevelEmphasis	-2.949e+03
original_gldm_SmallDependenceEmphasis	-6.490e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.140e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	7.004e+02
original_glrlm_GrayLevelNonUniformity	1.795e+03
original_glrlm_GrayLevelNonUniformityNormalized	6.093e+01
original_glrlm_GrayLevelVariance	0.000e+00

```
original_glrlm_HighGrayLevelRunEmphasis            0.000e+00
original_glrlm_LongRunEmphasis                     0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis        0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis         0.000e+00
original_glrlm_LowGrayLevelRunEmphasis             0.000e+00
original_glrlm_RunEntropy                          0.000e+00
original_glrlm_RunLengthNonUniformity              0.000e+00
original_glrlm_RunLengthNonUniformityNormalized    0.000e+00
original_glrlm_RunPercentage                       0.000e+00
original_glrlm_RunVariance                         0.000e+00
original_glrlm_ShortRunEmphasis                    0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis       0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis        0.000e+00
original_glszm_GrayLevelNonUniformity              0.000e+00
original_glszm_GrayLevelNonUniformityNormalized   -1.248e+01
original_glszm_GrayLevelVariance                  -5.550e-01
original_glszm_HighGrayLevelZoneEmphasis           0.000e+00
original_glszm_LargeAreaEmphasis                   0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis      0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis       0.000e+00
original_glszm_LowGrayLevelZoneEmphasis            0.000e+00
original_glszm_SizeZoneNonUniformity               0.000e+00
original_glszm_SizeZoneNonUniformityNormalized    -1.279e+02
original_glszm_SmallAreaEmphasis                   0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis      0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis       0.000e+00
original_glszm_ZoneEntropy                         0.000e+00
original_glszm_ZonePercentage                      0.000e+00
original_glszm_ZoneVariance                        0.000e+00
original_ngtdm_Busyness                            0.000e+00
original_ngtdm_Coarseness                          0.000e+00
original_ngtdm_Complexity                          0.000e+00
original_ngtdm_Contrast                            0.000e+00
original_ngtdm_Strength                            0.000e+00
original_shape_Elongation                          2.298e+00
original_shape_Flatness                            0.000e+00
original_shape_LeastAxisLength                     0.000e+00
original_shape_MajorAxisLength                    -1.371e+02
original_shape_Maximum2DDiameterColumn             7.897e+00
original_shape_Maximum2DDiameterRow                0.000e+00
original_shape_Maximum2DDiameterSlice              0.000e+00
original_shape_Maximum3DDiameter                   0.000e+00
original_shape_MeshVolume                          0.000e+00
original_shape_MinorAxisLength                    -3.523e+01
original_shape_Sphericity                          0.000e+00
original_shape_SurfaceArea                         0.000e+00
original_shape_SurfaceVolumeRatio                  0.000e+00
original_shape_VoxelVolume                         0.000e+00
                                                           p
original_firstorder_10Percentile                    < 2e-16
original_firstorder_90Percentile                    < 2e-16
original_firstorder_Energy                          < 2e-16
original_firstorder_Entropy                         < 2e-16
original_firstorder_InterquartileRange              < 2e-16
original_firstorder_Kurtosis                        < 2e-16
original_firstorder_Maximum                         < 2e-16
```

```
original_firstorder_Mean                                    < 2e-16
original_firstorder_MeanAbsoluteDeviation                   < 2e-16
original_firstorder_Median                                  < 2e-16
original_firstorder_Minimum                                 < 2e-16
original_firstorder_Range                                     1.0000
original_firstorder_RobustMeanAbsoluteDeviation             < 2e-16
original_firstorder_RootMeanSquared                         < 2e-16
original_firstorder_Skewness                                < 2e-16
original_firstorder_TotalEnergy                               1.0000
original_firstorder_Uniformity                              < 2e-16
original_firstorder_Variance                                < 2e-16
original_glcm_Autocorrelation                               < 2e-16
original_glcm_ClusterProminence                             < 2e-16
original_glcm_ClusterShade                                  < 2e-16
original_glcm_ClusterTendency                               < 2e-16
original_glcm_Contrast                                      < 2e-16
original_glcm_Correlation                                   < 2e-16
original_glcm_DifferenceAverage                             < 2e-16
original_glcm_DifferenceEntropy                             < 2e-16
original_glcm_DifferenceVariance                            < 2e-16
original_glcm_Id                                            < 2e-16
original_glcm_Idm                                           < 2e-16
original_glcm_Idmn                                          < 2e-16
original_glcm_Idn                                           < 2e-16
original_glcm_Imc1                                          < 2e-16
original_glcm_Imc2                                          < 2e-16
original_glcm_InverseVariance                               < 2e-16
original_glcm_JointAverage                                  < 2e-16
original_glcm_JointEnergy                                   < 2e-16
original_glcm_JointEntropy                                  < 2e-16
original_glcm_MCC                                           < 2e-16
original_glcm_MaximumProbability                            < 2e-16
original_glcm_SumAverage                                      1.0000
original_glcm_SumEntropy                                    < 2e-16
original_glcm_SumSquares                                      1.0000
original_gldm_DependenceEntropy                             < 2e-16
original_gldm_DependenceNonUniformity                       < 2e-16
original_gldm_DependenceNonUniformityNormalized             < 2e-16
original_gldm_DependenceVariance                            < 2e-16
original_gldm_GrayLevelNonUniformity                        < 2e-16
original_gldm_GrayLevelVariance                             < 2e-16
original_gldm_HighGrayLevelEmphasis                         < 2e-16
original_gldm_LargeDependenceEmphasis                       < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis          < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis           < 2e-16
original_gldm_LowGrayLevelEmphasis                          < 2e-16
original_gldm_SmallDependenceEmphasis                       < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis          < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis           < 2e-16
original_glrlm_GrayLevelNonUniformity                       < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized             < 2e-16
original_glrlm_GrayLevelVariance                             1.0000
original_glrlm_HighGrayLevelRunEmphasis                      1.0000
original_glrlm_LongRunEmphasis                               1.0000
original_glrlm_LongRunHighGrayLevelEmphasis                  1.0000
original_glrlm_LongRunLowGrayLevelEmphasis                   1.0000
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original_glrlm_LowGrayLevelRunEmphasis              1.0000
original_glrlm_RunEntropy                           1.0000
original_glrlm_RunLengthNonUniformity               1.0000
original_glrlm_RunLengthNonUniformityNormalized     1.0000
original_glrlm_RunPercentage                        1.0000
original_glrlm_RunVariance                          1.0000
original_glrlm_ShortRunEmphasis                     1.0000
original_glrlm_ShortRunHighGrayLevelEmphasis        1.0000
original_glrlm_ShortRunLowGrayLevelEmphasis         1.0000
original_glszm_GrayLevelNonUniformity               1.0000
original_glszm_GrayLevelNonUniformityNormalized   < 2e-16
original_glszm_GrayLevelVariance                    0.5786
original_glszm_HighGrayLevelZoneEmphasis            1.0000
original_glszm_LargeAreaEmphasis                    1.0000
original_glszm_LargeAreaHighGrayLevelEmphasis       1.0000
original_glszm_LargeAreaLowGrayLevelEmphasis        1.0000
original_glszm_LowGrayLevelZoneEmphasis             1.0000
original_glszm_SizeZoneNonUniformity                1.0000
original_glszm_SizeZoneNonUniformityNormalized    < 2e-16
original_glszm_SmallAreaEmphasis                    1.0000
original_glszm_SmallAreaHighGrayLevelEmphasis       1.0000
original_glszm_SmallAreaLowGrayLevelEmphasis        1.0000
original_glszm_ZoneEntropy                          1.0000
original_glszm_ZonePercentage                       1.0000
original_glszm_ZoneVariance                         1.0000
original_ngtdm_Busyness                             1.0000
original_ngtdm_Coarseness                           1.0000
original_ngtdm_Complexity                           1.0000
original_ngtdm_Contrast                             1.0000
original_ngtdm_Strength                             1.0000
original_shape_Elongation                           0.0215
original_shape_Flatness                             1.0000
original_shape_LeastAxisLength                      1.0000
original_shape_MajorAxisLength                    < 2e-16
original_shape_Maximum2DDiameterColumn            2.86e-15
original_shape_Maximum2DDiameterRow                 1.0000
original_shape_Maximum2DDiameterSlice               1.0000
original_shape_Maximum3DDiameter                    1.0000
original_shape_MeshVolume                           1.0000
original_shape_MinorAxisLength                    < 2e-16
original_shape_Sphericity                           1.0000
original_shape_SurfaceArea                          1.0000
original_shape_SurfaceVolumeRatio                   1.0000
original_shape_VoxelVolume                          1.0000


Likelihood ratio test=147.8  on 107 df, p=0.005531
n= 54, number of events= 20


$model_list[[3]]$coxmodels[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                  -6.493e+03
```

```
original_firstorder_90Percentile                              1.903e+03
original_firstorder_Energy                                   -1.106e+04
original_firstorder_Entropy                                   2.522e+03
original_firstorder_InterquartileRange                        3.746e+04
original_firstorder_Kurtosis                                 -2.357e+02
original_firstorder_Maximum                                  -4.537e+02
original_firstorder_Mean                                      5.741e+03
original_firstorder_MeanAbsoluteDeviation                     5.375e+04
original_firstorder_Median                                   -5.501e+03
original_firstorder_Minimum                                   3.153e+03
original_firstorder_Range                                     0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation              -7.680e+04
original_firstorder_RootMeanSquared                           5.751e+03
original_firstorder_Skewness                                  3.381e+02
original_firstorder_TotalEnergy                               0.000e+00
original_firstorder_Uniformity                                2.115e+03
original_firstorder_Variance                                 -3.295e+05
original_glcm_Autocorrelation                                -9.557e+03
original_glcm_ClusterProminence                               6.655e+04
original_glcm_ClusterShade                                    8.984e+04
original_glcm_ClusterTendency                                 2.039e+05
original_glcm_Contrast                                       -1.823e+05
original_glcm_Correlation                                    -2.496e+03
original_glcm_DifferenceAverage                               2.590e+05
original_glcm_DifferenceEntropy                               7.533e+02
original_glcm_DifferenceVariance                              5.815e+04
original_glcm_Id                                              1.929e+06
original_glcm_Idm                                            -1.666e+06
original_glcm_Idmn                                           -1.105e+03
original_glcm_Idn                                             1.213e+03
original_glcm_Imc1                                           -2.462e+03
original_glcm_Imc2                                           -2.622e+01
original_glcm_InverseVariance                                 1.703e+05
original_glcm_JointAverage                                    8.571e+03
original_glcm_JointEnergy                                    -4.036e+02
original_glcm_JointEntropy                                   -3.872e+04
original_glcm_MCC                                             4.179e+01
original_glcm_MaximumProbability                            -8.161e+02
original_glcm_SumAverage                                      0.000e+00
original_glcm_SumEntropy                                      2.461e+04
original_glcm_SumSquares                                      0.000e+00
original_gldm_DependenceEntropy                               4.479e+02
original_gldm_DependenceNonUniformity                       -2.586e+02
original_gldm_DependenceNonUniformityNormalized              0.000e+00
original_gldm_DependenceVariance                              0.000e+00
original_gldm_GrayLevelNonUniformity                        -1.469e+01
original_gldm_GrayLevelVariance                               0.000e+00
original_gldm_HighGrayLevelEmphasis                          0.000e+00
original_gldm_LargeDependenceEmphasis                        0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis           0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis            8.308e+00
original_gldm_LowGrayLevelEmphasis                           0.000e+00
original_gldm_SmallDependenceEmphasis                        0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis           0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis            4.861e+00
original_glrlm_GrayLevelNonUniformity                        1.165e+02
```

original_glrlm_GrayLevelNonUniformityNormalized	-1.056e+03
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	0.000e+00
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	0.000e+00
original_glrlm_RunLengthNonUniformity	0.000e+00
original_glrlm_RunLengthNonUniformityNormalized	0.000e+00
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	0.000e+00
original_glrlm_ShortRunEmphasis	0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	1.394e+03
original_glszm_GrayLevelNonUniformityNormalized	0.000e+00
original_glszm_GrayLevelVariance	0.000e+00
original_glszm_HighGrayLevelZoneEmphasis	0.000e+00
original_glszm_LargeAreaEmphasis	0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_LowGrayLevelZoneEmphasis	0.000e+00
original_glszm_SizeZoneNonUniformity	7.927e+02
original_glszm_SizeZoneNonUniformityNormalized	0.000e+00
original_glszm_SmallAreaEmphasis	0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_ZoneEntropy	0.000e+00
original_glszm_ZonePercentage	0.000e+00
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	0.000e+00
original_ngtdm_Coarseness	1.767e+01
original_ngtdm_Complexity	0.000e+00
original_ngtdm_Contrast	0.000e+00
original_ngtdm_Strength	0.000e+00
original_shape_Elongation	0.000e+00
original_shape_Flatness	0.000e+00
original_shape_LeastAxisLength	0.000e+00
original_shape_MajorAxisLength	0.000e+00
original_shape_Maximum2DDiameterColumn	0.000e+00
original_shape_Maximum2DDiameterRow	0.000e+00
original_shape_Maximum2DDiameterSlice	0.000e+00
original_shape_Maximum3DDiameter	-2.167e+01
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	0.000e+00
original_shape_Sphericity	0.000e+00
original_shape_SurfaceArea	1.066e+01
original_shape_SurfaceVolumeRatio	0.000e+00
original_shape_VoxelVolume	0.000e+00
	exp(coef)
original_firstorder_10Percentile	0.000e+00
original_firstorder_90Percentile	Inf
original_firstorder_Energy	0.000e+00
original_firstorder_Entropy	Inf
original_firstorder_InterquartileRange	Inf

original_firstorder_Kurtosis	4.260e-103
original_firstorder_Maximum	8.782e-198
original_firstorder_Mean	Inf
original_firstorder_MeanAbsoluteDeviation	Inf
original_firstorder_Median	0.000e+00
original_firstorder_Minimum	Inf
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	0.000e+00
original_firstorder_RootMeanSquared	Inf
original_firstorder_Skewness	7.142e+146
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	Inf
original_firstorder_Variance	0.000e+00
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	Inf
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	0.000e+00
original_glcm_DifferenceAverage	Inf
original_glcm_DifferenceEntropy	Inf
original_glcm_DifferenceVariance	Inf
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	0.000e+00
original_glcm_Idn	Inf
original_glcm_Imc1	0.000e+00
original_glcm_Imc2	4.081e-12
original_glcm_InverseVariance	Inf
original_glcm_JointAverage	Inf
original_glcm_JointEnergy	5.258e-176
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	1.404e+18
original_glcm_MaximumProbability	0.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	Inf
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	3.232e+194
original_gldm_DependenceNonUniformity	5.078e-113
original_gldm_DependenceNonUniformityNormalized	1.000e+00
original_gldm_DependenceVariance	1.000e+00
original_gldm_GrayLevelNonUniformity	4.167e-07
original_gldm_GrayLevelVariance	1.000e+00
original_gldm_HighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceEmphasis	1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	4.057e+03
original_gldm_LowGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceEmphasis	1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.291e+02
original_glrlm_GrayLevelNonUniformity	4.004e+50
original_glrlm_GrayLevelNonUniformityNormalized	0.000e+00
original_glrlm_GrayLevelVariance	1.000e+00
original_glrlm_HighGrayLevelRunEmphasis	1.000e+00
original_glrlm_LongRunEmphasis	1.000e+00

original_glrlm_LongRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	1.000e+00
original_glrlm_LowGrayLevelRunEmphasis	1.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	Inf
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	Inf
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	1.000e+00
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	4.716e+07
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.000e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	3.864e-10
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	4.271e+04
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	3.447e+01
original_firstorder_90Percentile	3.595e+01
original_firstorder_Energy	1.897e+02
original_firstorder_Entropy	4.989e+01
original_firstorder_InterquartileRange	2.889e+01
original_firstorder_Kurtosis	1.713e+01
original_firstorder_Maximum	3.105e+01
original_firstorder_Mean	3.456e+01
original_firstorder_MeanAbsoluteDeviation	3.792e+01

original_firstorder_Median	2.747e+01
original_firstorder_Minimum	6.374e+01
original_firstorder_Range	3.876e+01
original_firstorder_RobustMeanAbsoluteDeviation	2.924e+01
original_firstorder_RootMeanSquared	2.982e+01
original_firstorder_Skewness	1.542e+01
original_firstorder_TotalEnergy	1.897e+02
original_firstorder_Uniformity	4.079e+01
original_firstorder_Variance	2.758e+01
original_glcm_Autocorrelation	1.030e+02
original_glcm_ClusterProminence	2.546e+01
original_glcm_ClusterShade	2.628e+01
original_glcm_ClusterTendency	2.827e+01
original_glcm_Contrast	2.566e+01
original_glcm_Correlation	7.258e+01
original_glcm_DifferenceAverage	3.852e+01
original_glcm_DifferenceEntropy	4.595e+01
original_glcm_DifferenceVariance	2.558e+01
original_glcm_Id	4.555e+01
original_glcm_Idm	4.601e+01
original_glcm_Idmn	2.648e+01
original_glcm_Idn	2.574e+01
original_glcm_Imc1	5.979e+01
original_glcm_Imc2	4.583e+01
original_glcm_InverseVariance	4.057e+01
original_glcm_JointAverage	5.698e+01
original_glcm_JointEnergy	3.774e+01
original_glcm_JointEntropy	4.891e+01
original_glcm_MCC	2.469e+01
original_glcm_MaximumProbability	3.677e+01
original_glcm_SumAverage	5.698e+01
original_glcm_SumEntropy	4.881e+01
original_glcm_SumSquares	2.736e+01
original_gldm_DependenceEntropy	3.216e+01
original_gldm_DependenceNonUniformity	2.170e+02
original_gldm_DependenceNonUniformityNormalized	3.719e+01
original_gldm_DependenceVariance	3.604e+01
original_gldm_GrayLevelNonUniformity	7.819e+01
original_gldm_GrayLevelVariance	2.759e+01
original_gldm_HighGrayLevelEmphasis	9.856e+01
original_gldm_LargeDependenceEmphasis	3.146e+01
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.447e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis	3.486e+01
original_gldm_LowGrayLevelEmphasis	1.923e+01
original_gldm_SmallDependenceEmphasis	3.403e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis	3.864e+01
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.804e+01
original_glrlm_GrayLevelNonUniformity	9.251e+01
original_glrlm_GrayLevelNonUniformityNormalized	3.395e+01
original_glrlm_GrayLevelVariance	2.836e+01
original_glrlm_HighGrayLevelRunEmphasis	9.717e+01
original_glrlm_LongRunEmphasis	5.256e+01
original_glrlm_LongRunHighGrayLevelEmphasis	1.774e+02
original_glrlm_LongRunLowGrayLevelEmphasis	2.931e+01
original_glrlm_LowGrayLevelRunEmphasis	1.895e+01
original_glrlm_RunEntropy	2.982e+01

original_glrlm_RunLengthNonUniformity	2.152e+02
original_glrlm_RunLengthNonUniformityNormalized	3.045e+01
original_glrlm_RunPercentage	3.049e+01
original_glrlm_RunVariance	6.166e+01
original_glrlm_ShortRunEmphasis	3.094e+01
original_glrlm_ShortRunHighGrayLevelEmphasis	8.998e+01
original_glrlm_ShortRunLowGrayLevelEmphasis	1.693e+01
original_glszm_GrayLevelNonUniformity	6.402e+01
original_glszm_GrayLevelNonUniformityNormalized	5.765e+01
original_glszm_GrayLevelVariance	3.735e+01
original_glszm_HighGrayLevelZoneEmphasis	8.641e+01
original_glszm_LargeAreaEmphasis	5.885e+01
original_glszm_LargeAreaHighGrayLevelEmphasis	3.763e+02
original_glszm_LargeAreaLowGrayLevelEmphasis	3.196e+01
original_glszm_LowGrayLevelZoneEmphasis	1.940e+01
original_glszm_SizeZoneNonUniformity	2.335e+02
original_glszm_SizeZoneNonUniformityNormalized	3.391e+01
original_glszm_SmallAreaEmphasis	2.985e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	7.927e+01
original_glszm_SmallAreaLowGrayLevelEmphasis	2.443e+01
original_glszm_ZoneEntropy	9.218e+01
original_glszm_ZonePercentage	3.302e+01
original_glszm_ZoneVariance	5.928e+01
original_ngtdm_Busyness	4.384e+01
original_ngtdm_Coarseness	1.879e+01
original_ngtdm_Complexity	2.879e+01
original_ngtdm_Contrast	2.654e+01
original_ngtdm_Strength	2.860e+01
original_shape_Elongation	4.330e+01
original_shape_Flatness	3.702e+01
original_shape_LeastAxisLength	4.543e+01
original_shape_MajorAxisLength	9.750e+01
original_shape_Maximum2DDiameterColumn	5.335e+01
original_shape_Maximum2DDiameterRow	9.429e+01
original_shape_Maximum2DDiameterSlice	7.890e+01
original_shape_Maximum3DDiameter	7.463e+01
original_shape_MeshVolume	1.029e+02
original_shape_MinorAxisLength	6.851e+01
original_shape_Sphericity	4.158e+01
original_shape_SurfaceArea	3.408e+02
original_shape_SurfaceVolumeRatio	2.951e+01
original_shape_VoxelVolume	1.034e+02

	z
original_firstorder_10Percentile	-188.405
original_firstorder_90Percentile	52.932
original_firstorder_Energy	-58.313
original_firstorder_Entropy	50.541
original_firstorder_InterquartileRange	1296.925
original_firstorder_Kurtosis	-13.758
original_firstorder_Maximum	-14.611
original_firstorder_Mean	166.092
original_firstorder_MeanAbsoluteDeviation	1417.669
original_firstorder_Median	-200.269
original_firstorder_Minimum	49.466
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	-2626.772

```
original_firstorder_RootMeanSquared              192.830
original_firstorder_Skewness                      21.932
original_firstorder_TotalEnergy                    0.000
original_firstorder_Uniformity                    51.860
original_firstorder_Variance                  -11946.105
original_glcm_Autocorrelation                    -92.750
original_glcm_ClusterProminence                 2613.780
original_glcm_ClusterShade                      3418.289
original_glcm_ClusterTendency                   7211.507
original_glcm_Contrast                         -7105.556
original_glcm_Correlation                        -34.391
original_glcm_DifferenceAverage                 6724.443
original_glcm_DifferenceEntropy                   16.394
original_glcm_DifferenceVariance                2272.977
original_glcm_Id                               42346.460
original_glcm_Idm                             -36217.291
original_glcm_Idmn                               -41.723
original_glcm_Idn                                 47.128
original_glcm_Imc1                               -41.181
original_glcm_Imc2                                -0.572
original_glcm_InverseVariance                   4199.135
original_glcm_JointAverage                       150.426
original_glcm_JointEnergy                        -10.694
original_glcm_JointEntropy                      -791.716
original_glcm_MCC                                  1.692
original_glcm_MaximumProbability                 -22.193
original_glcm_SumAverage                           0.000
original_glcm_SumEntropy                         504.278
original_glcm_SumSquares                           0.000
original_gldm_DependenceEntropy                   13.927
original_gldm_DependenceNonUniformity             -1.191
original_gldm_DependenceNonUniformityNormalized    0.000
original_gldm_DependenceVariance                   0.000
original_gldm_GrayLevelNonUniformity              -0.188
original_gldm_GrayLevelVariance                    0.000
original_gldm_HighGrayLevelEmphasis                0.000
original_gldm_LargeDependenceEmphasis              0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis 0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis  0.238
original_gldm_LowGrayLevelEmphasis                 0.000
original_gldm_SmallDependenceEmphasis              0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis 0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis  0.269
original_glrlm_GrayLevelNonUniformity              1.260
original_glrlm_GrayLevelNonUniformityNormalized  -31.109
original_glrlm_GrayLevelVariance                   0.000
original_glrlm_HighGrayLevelRunEmphasis            0.000
original_glrlm_LongRunEmphasis                     0.000
original_glrlm_LongRunHighGrayLevelEmphasis        0.000
original_glrlm_LongRunLowGrayLevelEmphasis         0.000
original_glrlm_LowGrayLevelRunEmphasis             0.000
original_glrlm_RunEntropy                          0.000
original_glrlm_RunLengthNonUniformity              0.000
original_glrlm_RunLengthNonUniformityNormalized    0.000
original_glrlm_RunPercentage                       0.000
original_glrlm_RunVariance                         0.000
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original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	21.771
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	3.394
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.940
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	-0.290
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.031
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	< 2e-16
original_firstorder_Energy	< 2e-16
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	< 2e-16
original_firstorder_Maximum	< 2e-16
original_firstorder_Mean	< 2e-16
original_firstorder_MeanAbsoluteDeviation	< 2e-16
original_firstorder_Median	< 2e-16
original_firstorder_Minimum	< 2e-16
original_firstorder_Range	1.000000
original_firstorder_RobustMeanAbsoluteDeviation	< 2e-16
original_firstorder_RootMeanSquared	< 2e-16
original_firstorder_Skewness	< 2e-16
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	< 2e-16

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original_firstorder_Variance                                    < 2e-16
original_glcm_Autocorrelation                                   < 2e-16
original_glcm_ClusterProminence                                 < 2e-16
original_glcm_ClusterShade                                      < 2e-16
original_glcm_ClusterTendency                                   < 2e-16
original_glcm_Contrast                                          < 2e-16
original_glcm_Correlation                                       < 2e-16
original_glcm_DifferenceAverage                                 < 2e-16
original_glcm_DifferenceEntropy                                 < 2e-16
original_glcm_DifferenceVariance                                < 2e-16
original_glcm_Id                                                < 2e-16
original_glcm_Idm                                               < 2e-16
original_glcm_Idmn                                              < 2e-16
original_glcm_Idn                                               < 2e-16
original_glcm_Imc1                                              < 2e-16
original_glcm_Imc2                                              0.567186
original_glcm_InverseVariance                                   < 2e-16
original_glcm_JointAverage                                      < 2e-16
original_glcm_JointEnergy                                       < 2e-16
original_glcm_JointEntropy                                      < 2e-16
original_glcm_MCC                                               0.090583
original_glcm_MaximumProbability                                < 2e-16
original_glcm_SumAverage                                        1.000000
original_glcm_SumEntropy                                        < 2e-16
original_glcm_SumSquares                                        1.000000
original_gldm_DependenceEntropy                                 < 2e-16
original_gldm_DependenceNonUniformity                           0.233497
original_gldm_DependenceNonUniformityNormalized                 1.000000
original_gldm_DependenceVariance                                1.000000
original_gldm_GrayLevelNonUniformity                            0.850970
original_gldm_GrayLevelVariance                                 1.000000
original_gldm_HighGrayLevelEmphasis                             1.000000
original_gldm_LargeDependenceEmphasis                           1.000000
original_gldm_LargeDependenceHighGrayLevelEmphasis 1.000000
original_gldm_LargeDependenceLowGrayLevelEmphasis  0.811644
original_gldm_LowGrayLevelEmphasis                              1.000000
original_gldm_SmallDependenceEmphasis                           1.000000
original_gldm_SmallDependenceHighGrayLevelEmphasis 1.000000
original_gldm_SmallDependenceLowGrayLevelEmphasis  0.787610
original_glrlm_GrayLevelNonUniformity                           0.207839
original_glrlm_GrayLevelNonUniformityNormalized                 < 2e-16
original_glrlm_GrayLevelVariance                                1.000000
original_glrlm_HighGrayLevelRunEmphasis                         1.000000
original_glrlm_LongRunEmphasis                                  1.000000
original_glrlm_LongRunHighGrayLevelEmphasis                     1.000000
original_glrlm_LongRunLowGrayLevelEmphasis                      1.000000
original_glrlm_LowGrayLevelRunEmphasis                          1.000000
original_glrlm_RunEntropy                                       1.000000
original_glrlm_RunLengthNonUniformity                           1.000000
original_glrlm_RunLengthNonUniformityNormalized                 1.000000
original_glrlm_RunPercentage                                    1.000000
original_glrlm_RunVariance                                      1.000000
original_glrlm_ShortRunEmphasis                                 1.000000
original_glrlm_ShortRunHighGrayLevelEmphasis                    1.000000
original_glrlm_ShortRunLowGrayLevelEmphasis                     1.000000
original_glszm_GrayLevelNonUniformity                           < 2e-16
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original_glszm_GrayLevelNonUniformityNormalized         1.000000
original_glszm_GrayLevelVariance                        1.000000
original_glszm_HighGrayLevelZoneEmphasis                1.000000
original_glszm_LargeAreaEmphasis                        1.000000
original_glszm_LargeAreaHighGrayLevelEmphasis           1.000000
original_glszm_LargeAreaLowGrayLevelEmphasis            1.000000
original_glszm_LowGrayLevelZoneEmphasis                 1.000000
original_glszm_SizeZoneNonUniformity                    0.000688
original_glszm_SizeZoneNonUniformityNormalized          1.000000
original_glszm_SmallAreaEmphasis                        1.000000
original_glszm_SmallAreaHighGrayLevelEmphasis           1.000000
original_glszm_SmallAreaLowGrayLevelEmphasis            1.000000
original_glszm_ZoneEntropy                              1.000000
original_glszm_ZonePercentage                           1.000000
original_glszm_ZoneVariance                             1.000000
original_ngtdm_Busyness                                 1.000000
original_ngtdm_Coarseness                               0.347049
original_ngtdm_Complexity                               1.000000
original_ngtdm_Contrast                                 1.000000
original_ngtdm_Strength                                 1.000000
original_shape_Elongation                               1.000000
original_shape_Flatness                                 1.000000
original_shape_LeastAxisLength                          1.000000
original_shape_MajorAxisLength                          1.000000
original_shape_Maximum2DDiameterColumn                  1.000000
original_shape_Maximum2DDiameterRow                     1.000000
original_shape_Maximum2DDiameterSlice                   1.000000
original_shape_Maximum3DDiameter                        0.771504
original_shape_MeshVolume                               1.000000
original_shape_MinorAxisLength                          1.000000
original_shape_Sphericity                               1.000000
original_shape_SurfaceArea                              0.975044
original_shape_SurfaceVolumeRatio                       1.000000
original_shape_VoxelVolume                              1.000000


Likelihood ratio test=42.85  on 107 df, p=1
n= 39, number of events= 6


$model_list[[3]]$coxmodels[[3]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                          coef
original_firstorder_10Percentile                            0
original_firstorder_90Percentile                            0
original_firstorder_Energy                                  0
original_firstorder_Entropy                                 0
original_firstorder_InterquartileRange                      0
original_firstorder_Kurtosis                                0
original_firstorder_Maximum                                 0
original_firstorder_Mean                                    0
original_firstorder_MeanAbsoluteDeviation                   0
original_firstorder_Median                                  0
original_firstorder_Minimum                                 0
```

```
original_firstorder_Range                                    0
original_firstorder_RobustMeanAbsoluteDeviation              0
original_firstorder_RootMeanSquared                          0
original_firstorder_Skewness                                 0
original_firstorder_TotalEnergy                              0
original_firstorder_Uniformity                               0
original_firstorder_Variance                                 0
original_glcm_Autocorrelation                                0
original_glcm_ClusterProminence                              0
original_glcm_ClusterShade                                   0
original_glcm_ClusterTendency                                0
original_glcm_Contrast                                       0
original_glcm_Correlation                                    0
original_glcm_DifferenceAverage                              0
original_glcm_DifferenceEntropy                              0
original_glcm_DifferenceVariance                             0
original_glcm_Id                                             0
original_glcm_Idm                                            0
original_glcm_Idmn                                           0
original_glcm_Idn                                            0
original_glcm_Imc1                                           0
original_glcm_Imc2                                           0
original_glcm_InverseVariance                                0
original_glcm_JointAverage                                   0
original_glcm_JointEnergy                                    0
original_glcm_JointEntropy                                   0
original_glcm_MCC                                            0
original_glcm_MaximumProbability                             0
original_glcm_SumAverage                                     0
original_glcm_SumEntropy                                     0
original_glcm_SumSquares                                     0
original_gldm_DependenceEntropy                              0
original_gldm_DependenceNonUniformity                        0
original_gldm_DependenceNonUniformityNormalized              0
original_gldm_DependenceVariance                             0
original_gldm_GrayLevelNonUniformity                         0
original_gldm_GrayLevelVariance                              0
original_gldm_HighGrayLevelEmphasis                          0
original_gldm_LargeDependenceEmphasis                        0
original_gldm_LargeDependenceHighGrayLevelEmphasis           0
original_gldm_LargeDependenceLowGrayLevelEmphasis            0
original_gldm_LowGrayLevelEmphasis                           0
original_gldm_SmallDependenceEmphasis                        0
original_gldm_SmallDependenceHighGrayLevelEmphasis           0
original_gldm_SmallDependenceLowGrayLevelEmphasis            0
original_glrlm_GrayLevelNonUniformity                        0
original_glrlm_GrayLevelNonUniformityNormalized              0
original_glrlm_GrayLevelVariance                             0
original_glrlm_HighGrayLevelRunEmphasis                      0
original_glrlm_LongRunEmphasis                               0
original_glrlm_LongRunHighGrayLevelEmphasis                  0
original_glrlm_LongRunLowGrayLevelEmphasis                   0
original_glrlm_LowGrayLevelRunEmphasis                       0
original_glrlm_RunEntropy                                    0
original_glrlm_RunLengthNonUniformity                        0
original_glrlm_RunLengthNonUniformityNormalized              0
```

original_glrlm_RunPercentage	0
original_glrlm_RunVariance	0
original_glrlm_ShortRunEmphasis	0
original_glrlm_ShortRunHighGrayLevelEmphasis	0
original_glrlm_ShortRunLowGrayLevelEmphasis	0
original_glszm_GrayLevelNonUniformity	0
original_glszm_GrayLevelNonUniformityNormalized	0
original_glszm_GrayLevelVariance	0
original_glszm_HighGrayLevelZoneEmphasis	0
original_glszm_LargeAreaEmphasis	0
original_glszm_LargeAreaHighGrayLevelEmphasis	0
original_glszm_LargeAreaLowGrayLevelEmphasis	0
original_glszm_LowGrayLevelZoneEmphasis	0
original_glszm_SizeZoneNonUniformity	0
original_glszm_SizeZoneNonUniformityNormalized	0
original_glszm_SmallAreaEmphasis	0
original_glszm_SmallAreaHighGrayLevelEmphasis	0
original_glszm_SmallAreaLowGrayLevelEmphasis	0
original_glszm_ZoneEntropy	0
original_glszm_ZonePercentage	0
original_glszm_ZoneVariance	0
original_ngtdm_Busyness	0
original_ngtdm_Coarseness	0
original_ngtdm_Complexity	0
original_ngtdm_Contrast	0
original_ngtdm_Strength	0
original_shape_Elongation	0
original_shape_Flatness	0
original_shape_LeastAxisLength	0
original_shape_MajorAxisLength	0
original_shape_Maximum2DDiameterColumn	0
original_shape_Maximum2DDiameterRow	0
original_shape_Maximum2DDiameterSlice	0
original_shape_Maximum3DDiameter	0
original_shape_MeshVolume	0
original_shape_MinorAxisLength	0
original_shape_Sphericity	0
original_shape_SurfaceArea	0
original_shape_SurfaceVolumeRatio	0
original_shape_VoxelVolume	0

	exp(coef)
original_firstorder_10Percentile	1
original_firstorder_90Percentile	1
original_firstorder_Energy	1
original_firstorder_Entropy	1
original_firstorder_InterquartileRange	1
original_firstorder_Kurtosis	1
original_firstorder_Maximum	1
original_firstorder_Mean	1
original_firstorder_MeanAbsoluteDeviation	1
original_firstorder_Median	1
original_firstorder_Minimum	1
original_firstorder_Range	1
original_firstorder_RobustMeanAbsoluteDeviation	1
original_firstorder_RootMeanSquared	1
original_firstorder_Skewness	1

original_firstorder_TotalEnergy	1
original_firstorder_Uniformity	1
original_firstorder_Variance	1
original_glcm_Autocorrelation	1
original_glcm_ClusterProminence	1
original_glcm_ClusterShade	1
original_glcm_ClusterTendency	1
original_glcm_Contrast	1
original_glcm_Correlation	1
original_glcm_DifferenceAverage	1
original_glcm_DifferenceEntropy	1
original_glcm_DifferenceVariance	1
original_glcm_Id	1
original_glcm_Idm	1
original_glcm_Idmn	1
original_glcm_Idn	1
original_glcm_Imc1	1
original_glcm_Imc2	1
original_glcm_InverseVariance	1
original_glcm_JointAverage	1
original_glcm_JointEnergy	1
original_glcm_JointEntropy	1
original_glcm_MCC	1
original_glcm_MaximumProbability	1
original_glcm_SumAverage	1
original_glcm_SumEntropy	1
original_glcm_SumSquares	1
original_gldm_DependenceEntropy	1
original_gldm_DependenceNonUniformity	1
original_gldm_DependenceNonUniformityNormalized	1
original_gldm_DependenceVariance	1
original_gldm_GrayLevelNonUniformity	1
original_gldm_GrayLevelVariance	1
original_gldm_HighGrayLevelEmphasis	1
original_gldm_LargeDependenceEmphasis	1
original_gldm_LargeDependenceHighGrayLevelEmphasis	1
original_gldm_LargeDependenceLowGrayLevelEmphasis	1
original_gldm_LowGrayLevelEmphasis	1
original_gldm_SmallDependenceEmphasis	1
original_gldm_SmallDependenceHighGrayLevelEmphasis	1
original_gldm_SmallDependenceLowGrayLevelEmphasis	1
original_glrlm_GrayLevelNonUniformity	1
original_glrlm_GrayLevelNonUniformityNormalized	1
original_glrlm_GrayLevelVariance	1
original_glrlm_HighGrayLevelRunEmphasis	1
original_glrlm_LongRunEmphasis	1
original_glrlm_LongRunHighGrayLevelEmphasis	1
original_glrlm_LongRunLowGrayLevelEmphasis	1
original_glrlm_LowGrayLevelRunEmphasis	1
original_glrlm_RunEntropy	1
original_glrlm_RunLengthNonUniformity	1
original_glrlm_RunLengthNonUniformityNormalized	1
original_glrlm_RunPercentage	1
original_glrlm_RunVariance	1
original_glrlm_ShortRunEmphasis	1
original_glrlm_ShortRunHighGrayLevelEmphasis	1

```
original_glrlm_ShortRunLowGrayLevelEmphasis                    1
original_glszm_GrayLevelNonUniformity                          1
original_glszm_GrayLevelNonUniformityNormalized                1
original_glszm_GrayLevelVariance                               1
original_glszm_HighGrayLevelZoneEmphasis                       1
original_glszm_LargeAreaEmphasis                               1
original_glszm_LargeAreaHighGrayLevelEmphasis                  1
original_glszm_LargeAreaLowGrayLevelEmphasis                   1
original_glszm_LowGrayLevelZoneEmphasis                        1
original_glszm_SizeZoneNonUniformity                           1
original_glszm_SizeZoneNonUniformityNormalized                 1
original_glszm_SmallAreaEmphasis                               1
original_glszm_SmallAreaHighGrayLevelEmphasis                  1
original_glszm_SmallAreaLowGrayLevelEmphasis                   1
original_glszm_ZoneEntropy                                     1
original_glszm_ZonePercentage                                  1
original_glszm_ZoneVariance                                    1
original_ngtdm_Busyness                                        1
original_ngtdm_Coarseness                                      1
original_ngtdm_Complexity                                      1
original_ngtdm_Contrast                                        1
original_ngtdm_Strength                                        1
original_shape_Elongation                                      1
original_shape_Flatness                                        1
original_shape_LeastAxisLength                                 1
original_shape_MajorAxisLength                                 1
original_shape_Maximum2DDiameterColumn                         1
original_shape_Maximum2DDiameterRow                            1
original_shape_Maximum2DDiameterSlice                          1
original_shape_Maximum3DDiameter                               1
original_shape_MeshVolume                                      1
original_shape_MinorAxisLength                                 1
original_shape_Sphericity                                      1
original_shape_SurfaceArea                                     1
original_shape_SurfaceVolumeRatio                              1
original_shape_VoxelVolume                                     1
                                                         se(coef)
original_firstorder_10Percentile                               0
original_firstorder_90Percentile                               0
original_firstorder_Energy                                     0
original_firstorder_Entropy                                    0
original_firstorder_InterquartileRange                         0
original_firstorder_Kurtosis                                   0
original_firstorder_Maximum                                    0
original_firstorder_Mean                                       0
original_firstorder_MeanAbsoluteDeviation                      0
original_firstorder_Median                                     0
original_firstorder_Minimum                                    0
original_firstorder_Range                                      0
original_firstorder_RobustMeanAbsoluteDeviation                0
original_firstorder_RootMeanSquared                            0
original_firstorder_Skewness                                   0
original_firstorder_TotalEnergy                                0
original_firstorder_Uniformity                                 0
original_firstorder_Variance                                   0
original_glcm_Autocorrelation                                  0
```

original_glcm_ClusterProminence	0
original_glcm_ClusterShade	0
original_glcm_ClusterTendency	0
original_glcm_Contrast	0
original_glcm_Correlation	0
original_glcm_DifferenceAverage	0
original_glcm_DifferenceEntropy	0
original_glcm_DifferenceVariance	0
original_glcm_Id	0
original_glcm_Idm	0
original_glcm_Idmn	0
original_glcm_Idn	0
original_glcm_Imc1	0
original_glcm_Imc2	0
original_glcm_InverseVariance	0
original_glcm_JointAverage	0
original_glcm_JointEnergy	0
original_glcm_JointEntropy	0
original_glcm_MCC	0
original_glcm_MaximumProbability	0
original_glcm_SumAverage	0
original_glcm_SumEntropy	0
original_glcm_SumSquares	0
original_gldm_DependenceEntropy	0
original_gldm_DependenceNonUniformity	0
original_gldm_DependenceNonUniformityNormalized	0
original_gldm_DependenceVariance	0
original_gldm_GrayLevelNonUniformity	0
original_gldm_GrayLevelVariance	0
original_gldm_HighGrayLevelEmphasis	0
original_gldm_LargeDependenceEmphasis	0
original_gldm_LargeDependenceHighGrayLevelEmphasis	0
original_gldm_LargeDependenceLowGrayLevelEmphasis	0
original_gldm_LowGrayLevelEmphasis	0
original_gldm_SmallDependenceEmphasis	0
original_gldm_SmallDependenceHighGrayLevelEmphasis	0
original_gldm_SmallDependenceLowGrayLevelEmphasis	0
original_glrlm_GrayLevelNonUniformity	0
original_glrlm_GrayLevelNonUniformityNormalized	0
original_glrlm_GrayLevelVariance	0
original_glrlm_HighGrayLevelRunEmphasis	0
original_glrlm_LongRunEmphasis	0
original_glrlm_LongRunHighGrayLevelEmphasis	0
original_glrlm_LongRunLowGrayLevelEmphasis	0
original_glrlm_LowGrayLevelRunEmphasis	0
original_glrlm_RunEntropy	0
original_glrlm_RunLengthNonUniformity	0
original_glrlm_RunLengthNonUniformityNormalized	0
original_glrlm_RunPercentage	0
original_glrlm_RunVariance	0
original_glrlm_ShortRunEmphasis	0
original_glrlm_ShortRunHighGrayLevelEmphasis	0
original_glrlm_ShortRunLowGrayLevelEmphasis	0
original_glszm_GrayLevelNonUniformity	0
original_glszm_GrayLevelNonUniformityNormalized	0
original_glszm_GrayLevelVariance	0

original_glszm_HighGrayLevelZoneEmphasis	0
original_glszm_LargeAreaEmphasis	0
original_glszm_LargeAreaHighGrayLevelEmphasis	0
original_glszm_LargeAreaLowGrayLevelEmphasis	0
original_glszm_LowGrayLevelZoneEmphasis	0
original_glszm_SizeZoneNonUniformity	0
original_glszm_SizeZoneNonUniformityNormalized	0
original_glszm_SmallAreaEmphasis	0
original_glszm_SmallAreaHighGrayLevelEmphasis	0
original_glszm_SmallAreaLowGrayLevelEmphasis	0
original_glszm_ZoneEntropy	0
original_glszm_ZonePercentage	0
original_glszm_ZoneVariance	0
original_ngtdm_Busyness	0
original_ngtdm_Coarseness	0
original_ngtdm_Complexity	0
original_ngtdm_Contrast	0
original_ngtdm_Strength	0
original_shape_Elongation	0
original_shape_Flatness	0
original_shape_LeastAxisLength	0
original_shape_MajorAxisLength	0
original_shape_Maximum2DDiameterColumn	0
original_shape_Maximum2DDiameterRow	0
original_shape_Maximum2DDiameterSlice	0
original_shape_Maximum3DDiameter	0
original_shape_MeshVolume	0
original_shape_MinorAxisLength	0
original_shape_Sphericity	0
original_shape_SurfaceArea	0
original_shape_SurfaceVolumeRatio	0
original_shape_VoxelVolume	0

	z
original_firstorder_10Percentile	NaN
original_firstorder_90Percentile	NaN
original_firstorder_Energy	NaN
original_firstorder_Entropy	NaN
original_firstorder_InterquartileRange	NaN
original_firstorder_Kurtosis	NaN
original_firstorder_Maximum	NaN
original_firstorder_Mean	NaN
original_firstorder_MeanAbsoluteDeviation	NaN
original_firstorder_Median	NaN
original_firstorder_Minimum	NaN
original_firstorder_Range	NaN
original_firstorder_RobustMeanAbsoluteDeviation	NaN
original_firstorder_RootMeanSquared	NaN
original_firstorder_Skewness	NaN
original_firstorder_TotalEnergy	NaN
original_firstorder_Uniformity	NaN
original_firstorder_Variance	NaN
original_glcm_Autocorrelation	NaN
original_glcm_ClusterProminence	NaN
original_glcm_ClusterShade	NaN
original_glcm_ClusterTendency	NaN
original_glcm_Contrast	NaN

original_glcm_Correlation	NaN
original_glcm_DifferenceAverage	NaN
original_glcm_DifferenceEntropy	NaN
original_glcm_DifferenceVariance	NaN
original_glcm_Id	NaN
original_glcm_Idm	NaN
original_glcm_Idmn	NaN
original_glcm_Idn	NaN
original_glcm_Imc1	NaN
original_glcm_Imc2	NaN
original_glcm_InverseVariance	NaN
original_glcm_JointAverage	NaN
original_glcm_JointEnergy	NaN
original_glcm_JointEntropy	NaN
original_glcm_MCC	NaN
original_glcm_MaximumProbability	NaN
original_glcm_SumAverage	NaN
original_glcm_SumEntropy	NaN
original_glcm_SumSquares	NaN
original_gldm_DependenceEntropy	NaN
original_gldm_DependenceNonUniformity	NaN
original_gldm_DependenceNonUniformityNormalized	NaN
original_gldm_DependenceVariance	NaN
original_gldm_GrayLevelNonUniformity	NaN
original_gldm_GrayLevelVariance	NaN
original_gldm_HighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceEmphasis	NaN
original_gldm_LargeDependenceHighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceLowGrayLevelEmphasis	NaN
original_gldm_LowGrayLevelEmphasis	NaN
original_gldm_SmallDependenceEmphasis	NaN
original_gldm_SmallDependenceHighGrayLevelEmphasis	NaN
original_gldm_SmallDependenceLowGrayLevelEmphasis	NaN
original_glrlm_GrayLevelNonUniformity	NaN
original_glrlm_GrayLevelNonUniformityNormalized	NaN
original_glrlm_GrayLevelVariance	NaN
original_glrlm_HighGrayLevelRunEmphasis	NaN
original_glrlm_LongRunEmphasis	NaN
original_glrlm_LongRunHighGrayLevelEmphasis	NaN
original_glrlm_LongRunLowGrayLevelEmphasis	NaN
original_glrlm_LowGrayLevelRunEmphasis	NaN
original_glrlm_RunEntropy	NaN
original_glrlm_RunLengthNonUniformity	NaN
original_glrlm_RunLengthNonUniformityNormalized	NaN
original_glrlm_RunPercentage	NaN
original_glrlm_RunVariance	NaN
original_glrlm_ShortRunEmphasis	NaN
original_glrlm_ShortRunHighGrayLevelEmphasis	NaN
original_glrlm_ShortRunLowGrayLevelEmphasis	NaN
original_glszm_GrayLevelNonUniformity	NaN
original_glszm_GrayLevelNonUniformityNormalized	NaN
original_glszm_GrayLevelVariance	NaN
original_glszm_HighGrayLevelZoneEmphasis	NaN
original_glszm_LargeAreaEmphasis	NaN
original_glszm_LargeAreaHighGrayLevelEmphasis	NaN
original_glszm_LargeAreaLowGrayLevelEmphasis	NaN

original_glszm_LowGrayLevelZoneEmphasis	NaN
original_glszm_SizeZoneNonUniformity	NaN
original_glszm_SizeZoneNonUniformityNormalized	NaN
original_glszm_SmallAreaEmphasis	NaN
original_glszm_SmallAreaHighGrayLevelEmphasis	NaN
original_glszm_SmallAreaLowGrayLevelEmphasis	NaN
original_glszm_ZoneEntropy	NaN
original_glszm_ZonePercentage	NaN
original_glszm_ZoneVariance	NaN
original_ngtdm_Busyness	NaN
original_ngtdm_Coarseness	NaN
original_ngtdm_Complexity	NaN
original_ngtdm_Contrast	NaN
original_ngtdm_Strength	NaN
original_shape_Elongation	NaN
original_shape_Flatness	NaN
original_shape_LeastAxisLength	NaN
original_shape_MajorAxisLength	NaN
original_shape_Maximum2DDiameterColumn	NaN
original_shape_Maximum2DDiameterRow	NaN
original_shape_Maximum2DDiameterSlice	NaN
original_shape_Maximum3DDiameter	NaN
original_shape_MeshVolume	NaN
original_shape_MinorAxisLength	NaN
original_shape_Sphericity	NaN
original_shape_SurfaceArea	NaN
original_shape_SurfaceVolumeRatio	NaN
original_shape_VoxelVolume	NaN

	p
original_firstorder_10Percentile	NaN
original_firstorder_90Percentile	NaN
original_firstorder_Energy	NaN
original_firstorder_Entropy	NaN
original_firstorder_InterquartileRange	NaN
original_firstorder_Kurtosis	NaN
original_firstorder_Maximum	NaN
original_firstorder_Mean	NaN
original_firstorder_MeanAbsoluteDeviation	NaN
original_firstorder_Median	NaN
original_firstorder_Minimum	NaN
original_firstorder_Range	NaN
original_firstorder_RobustMeanAbsoluteDeviation	NaN
original_firstorder_RootMeanSquared	NaN
original_firstorder_Skewness	NaN
original_firstorder_TotalEnergy	NaN
original_firstorder_Uniformity	NaN
original_firstorder_Variance	NaN
original_glcm_Autocorrelation	NaN
original_glcm_ClusterProminence	NaN
original_glcm_ClusterShade	NaN
original_glcm_ClusterTendency	NaN
original_glcm_Contrast	NaN
original_glcm_Correlation	NaN
original_glcm_DifferenceAverage	NaN
original_glcm_DifferenceEntropy	NaN
original_glcm_DifferenceVariance	NaN

original_glcm_Id	NaN
original_glcm_Idm	NaN
original_glcm_Idmn	NaN
original_glcm_Idn	NaN
original_glcm_Imc1	NaN
original_glcm_Imc2	NaN
original_glcm_InverseVariance	NaN
original_glcm_JointAverage	NaN
original_glcm_JointEnergy	NaN
original_glcm_JointEntropy	NaN
original_glcm_MCC	NaN
original_glcm_MaximumProbability	NaN
original_glcm_SumAverage	NaN
original_glcm_SumEntropy	NaN
original_glcm_SumSquares	NaN
original_gldm_DependenceEntropy	NaN
original_gldm_DependenceNonUniformity	NaN
original_gldm_DependenceNonUniformityNormalized	NaN
original_gldm_DependenceVariance	NaN
original_gldm_GrayLevelNonUniformity	NaN
original_gldm_GrayLevelVariance	NaN
original_gldm_HighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceEmphasis	NaN
original_gldm_LargeDependenceHighGrayLevelEmphasis	NaN
original_gldm_LargeDependenceLowGrayLevelEmphasis	NaN
original_gldm_LowGrayLevelEmphasis	NaN
original_gldm_SmallDependenceEmphasis	NaN
original_gldm_SmallDependenceHighGrayLevelEmphasis	NaN
original_gldm_SmallDependenceLowGrayLevelEmphasis	NaN
original_glrlm_GrayLevelNonUniformity	NaN
original_glrlm_GrayLevelNonUniformityNormalized	NaN
original_glrlm_GrayLevelVariance	NaN
original_glrlm_HighGrayLevelRunEmphasis	NaN
original_glrlm_LongRunEmphasis	NaN
original_glrlm_LongRunHighGrayLevelEmphasis	NaN
original_glrlm_LongRunLowGrayLevelEmphasis	NaN
original_glrlm_LowGrayLevelRunEmphasis	NaN
original_glrlm_RunEntropy	NaN
original_glrlm_RunLengthNonUniformity	NaN
original_glrlm_RunLengthNonUniformityNormalized	NaN
original_glrlm_RunPercentage	NaN
original_glrlm_RunVariance	NaN
original_glrlm_ShortRunEmphasis	NaN
original_glrlm_ShortRunHighGrayLevelEmphasis	NaN
original_glrlm_ShortRunLowGrayLevelEmphasis	NaN
original_glszm_GrayLevelNonUniformity	NaN
original_glszm_GrayLevelNonUniformityNormalized	NaN
original_glszm_GrayLevelVariance	NaN
original_glszm_HighGrayLevelZoneEmphasis	NaN
original_glszm_LargeAreaEmphasis	NaN
original_glszm_LargeAreaHighGrayLevelEmphasis	NaN
original_glszm_LargeAreaLowGrayLevelEmphasis	NaN
original_glszm_LowGrayLevelZoneEmphasis	NaN
original_glszm_SizeZoneNonUniformity	NaN
original_glszm_SizeZoneNonUniformityNormalized	NaN
original_glszm_SmallAreaEmphasis	NaN

```
original_glszm_SmallAreaHighGrayLevelEmphasis        NaN
original_glszm_SmallAreaLowGrayLevelEmphasis         NaN
original_glszm_ZoneEntropy                           NaN
original_glszm_ZonePercentage                        NaN
original_glszm_ZoneVariance                          NaN
original_ngtdm_Busyness                              NaN
original_ngtdm_Coarseness                            NaN
original_ngtdm_Complexity                            NaN
original_ngtdm_Contrast                              NaN
original_ngtdm_Strength                              NaN
original_shape_Elongation                            NaN
original_shape_Flatness                              NaN
original_shape_LeastAxisLength                       NaN
original_shape_MajorAxisLength                       NaN
original_shape_Maximum2DDiameterColumn               NaN
original_shape_Maximum2DDiameterRow                  NaN
original_shape_Maximum2DDiameterSlice                NaN
original_shape_Maximum3DDiameter                     NaN
original_shape_MeshVolume                            NaN
original_shape_MinorAxisLength                       NaN
original_shape_Sphericity                            NaN
original_shape_SurfaceArea                           NaN
original_shape_SurfaceVolumeRatio                    NaN
original_shape_VoxelVolume                           NaN


Likelihood ratio test=0  on 107 df, p=1
n= 67, number of events= 0


$model_list[[3]]$coxmodels[[4]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                      coef
original_firstorder_10Percentile                   -2.529e+02
original_firstorder_90Percentile                    1.200e+00
original_firstorder_Energy                          9.154e+02
original_firstorder_Entropy                         6.534e+01
original_firstorder_InterquartileRange              2.895e+02
original_firstorder_Kurtosis                        3.927e+01
original_firstorder_Maximum                        -1.278e+03
original_firstorder_Mean                            5.858e+02
original_firstorder_MeanAbsoluteDeviation           2.239e+03
original_firstorder_Median                         -2.345e+02
original_firstorder_Minimum                         7.099e+02
original_firstorder_Range                           1.213e+03
original_firstorder_RobustMeanAbsoluteDeviation    -1.618e+03
original_firstorder_RootMeanSquared                -3.404e+02
original_firstorder_Skewness                       -8.729e+00
original_firstorder_TotalEnergy                     0.000e+00
original_firstorder_Uniformity                     -4.412e+02
original_firstorder_Variance                       -3.738e+04
original_glcm_Autocorrelation                       5.476e+02
original_glcm_ClusterProminence                    -5.775e+04
original_glcm_ClusterShade                         -1.181e+04
```

original_glcm_ClusterTendency	-2.340e+03
original_glcm_Contrast	9.103e+03
original_glcm_Correlation	-4.125e+01
original_glcm_DifferenceAverage	2.099e+03
original_glcm_DifferenceEntropy	2.380e+02
original_glcm_DifferenceVariance	-1.532e+04
original_glcm_Id	1.192e+04
original_glcm_Idm	-9.576e+03
original_glcm_Idmn	1.570e+02
original_glcm_Idn	4.360e+02
original_glcm_Imc1	-3.754e+02
original_glcm_Imc2	-4.104e+02
original_glcm_InverseVariance	1.380e+03
original_glcm_JointAverage	-1.104e+03
original_glcm_JointEnergy	2.346e+02
original_glcm_JointEntropy	5.417e+02
original_glcm_MCC	1.016e+01
original_glcm_MaximumProbability	9.034e+01
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	1.003e+03
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	-2.087e+02
original_gldm_DependenceNonUniformity	1.509e+03
original_gldm_DependenceNonUniformityNormalized	-9.610e+02
original_gldm_DependenceVariance	4.696e+01
original_gldm_GrayLevelNonUniformity	-2.699e+02
original_gldm_GrayLevelVariance	3.678e+04
original_gldm_HighGrayLevelEmphasis	-5.486e+03
original_gldm_LargeDependenceEmphasis	3.441e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	-1.692e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	-1.167e+04
original_gldm_LowGrayLevelEmphasis	-2.448e+04
original_gldm_SmallDependenceEmphasis	-1.020e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	4.507e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	6.011e+02
original_glrlm_GrayLevelNonUniformity	8.764e+01
original_glrlm_GrayLevelNonUniformityNormalized	4.700e+02
original_glrlm_GrayLevelVariance	-1.666e+03
original_glrlm_HighGrayLevelRunEmphasis	7.815e+03
original_glrlm_LongRunEmphasis	-2.697e+03
original_glrlm_LongRunHighGrayLevelEmphasis	1.513e+03
original_glrlm_LongRunLowGrayLevelEmphasis	9.043e+03
original_glrlm_LowGrayLevelRunEmphasis	4.995e+04
original_glrlm_RunEntropy	-1.026e+03
original_glrlm_RunLengthNonUniformity	-3.331e+03
original_glrlm_RunLengthNonUniformityNormalized	-7.311e+02
original_glrlm_RunPercentage	2.723e+03
original_glrlm_RunVariance	1.485e+03
original_glrlm_ShortRunEmphasis	2.185e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	-1.701e+03
original_glrlm_ShortRunLowGrayLevelEmphasis	-2.111e+04
original_glszm_GrayLevelNonUniformity	7.252e+02
original_glszm_GrayLevelNonUniformityNormalized	-2.710e+02
original_glszm_GrayLevelVariance	2.706e+02
original_glszm_HighGrayLevelZoneEmphasis	-9.656e+02
original_glszm_LargeAreaEmphasis	6.028e+04

```
original_glszm_LargeAreaHighGrayLevelEmphasis          7.518e+02
original_glszm_LargeAreaLowGrayLevelEmphasis           5.522e+02
original_glszm_LowGrayLevelZoneEmphasis               -3.942e+03
original_glszm_SizeZoneNonUniformity                   8.007e+02
original_glszm_SizeZoneNonUniformityNormalized        -1.278e+02
original_glszm_SmallAreaEmphasis                       3.816e+01
original_glszm_SmallAreaHighGrayLevelEmphasis          5.180e+02
original_glszm_SmallAreaLowGrayLevelEmphasis           1.215e+03
original_glszm_ZoneEntropy                             9.548e+01
original_glszm_ZonePercentage                          1.526e+02
original_glszm_ZoneVariance                           -6.108e+04
original_ngtdm_Busyness                                3.885e+02
original_ngtdm_Coarseness                             -1.348e+02
original_ngtdm_Complexity                              5.992e+02
original_ngtdm_Contrast                                1.075e+03
original_ngtdm_Strength                               -2.346e+01
original_shape_Elongation                             -1.131e+01
original_shape_Flatness                               -8.538e+01
original_shape_LeastAxisLength                         1.538e+02
original_shape_MajorAxisLength                        -3.319e+02
original_shape_Maximum2DDiameterColumn                 0.000e+00
original_shape_Maximum2DDiameterRow                    0.000e+00
original_shape_Maximum2DDiameterSlice                  0.000e+00
original_shape_Maximum3DDiameter                       0.000e+00
original_shape_MeshVolume                              0.000e+00
original_shape_MinorAxisLength                         0.000e+00
original_shape_Sphericity                              0.000e+00
original_shape_SurfaceArea                             0.000e+00
original_shape_SurfaceVolumeRatio                      0.000e+00
original_shape_VoxelVolume                             0.000e+00
                                                       exp(coef)
original_firstorder_10Percentile                      1.464e-110
original_firstorder_90Percentile                       3.320e+00
original_firstorder_Energy                                   Inf
original_firstorder_Entropy                            2.379e+28
original_firstorder_InterquartileRange                5.610e+125
original_firstorder_Kurtosis                           1.138e+17
original_firstorder_Maximum                            0.000e+00
original_firstorder_Mean                              2.582e+254
original_firstorder_MeanAbsoluteDeviation                    Inf
original_firstorder_Median                            1.465e-102
original_firstorder_Minimum                                  Inf
original_firstorder_Range                                    Inf
original_firstorder_RobustMeanAbsoluteDeviation        0.000e+00
original_firstorder_RootMeanSquared                   1.540e-148
original_firstorder_Skewness                           1.619e-04
original_firstorder_TotalEnergy                        1.000e+00
original_firstorder_Uniformity                        2.427e-192
original_firstorder_Variance                           0.000e+00
original_glcm_Autocorrelation                         6.368e+237
original_glcm_ClusterProminence                        0.000e+00
original_glcm_ClusterShade                             0.000e+00
original_glcm_ClusterTendency                          0.000e+00
original_glcm_Contrast                                       Inf
original_glcm_Correlation                              1.221e-18
original_glcm_DifferenceAverage                              Inf
```

original_glcm_DifferenceEntropy	2.285e+103
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	1.576e+68
original_glcm_Idn	2.217e+189
original_glcm_Imc1	9.665e-164
original_glcm_Imc2	6.086e-179
original_glcm_InverseVariance	Inf
original_glcm_JointAverage	0.000e+00
original_glcm_JointEnergy	7.990e+101
original_glcm_JointEntropy	1.731e+235
original_glcm_MCC	2.579e+04
original_glcm_MaximumProbability	1.710e+39
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	Inf
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	2.360e-91
original_gldm_DependenceNonUniformity	Inf
original_gldm_DependenceNonUniformityNormalized	0.000e+00
original_gldm_DependenceVariance	2.483e+20
original_gldm_GrayLevelNonUniformity	6.022e-118
original_gldm_GrayLevelVariance	Inf
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	Inf
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000e+00
original_gldm_LowGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceEmphasis	0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.610e+195
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.152e+261
original_glrlm_GrayLevelNonUniformity	1.158e+38
original_glrlm_GrayLevelNonUniformityNormalized	1.333e+204
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	Inf
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	Inf
original_glrlm_LongRunLowGrayLevelEmphasis	Inf
original_glrlm_LowGrayLevelRunEmphasis	Inf
original_glrlm_RunEntropy	0.000e+00
original_glrlm_RunLengthNonUniformity	0.000e+00
original_glrlm_RunLengthNonUniformityNormalized	2.980e-318
original_glrlm_RunPercentage	Inf
original_glrlm_RunVariance	Inf
original_glrlm_ShortRunEmphasis	7.957e+94
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	Inf
original_glszm_GrayLevelNonUniformityNormalized	2.122e-118
original_glszm_GrayLevelVariance	3.261e+117
original_glszm_HighGrayLevelZoneEmphasis	0.000e+00
original_glszm_LargeAreaEmphasis	Inf
original_glszm_LargeAreaHighGrayLevelEmphasis	Inf
original_glszm_LargeAreaLowGrayLevelEmphasis	6.543e+239
original_glszm_LowGrayLevelZoneEmphasis	0.000e+00
original_glszm_SizeZoneNonUniformity	Inf

original_glszm_SizeZoneNonUniformityNormalized	3.214e-56
original_glszm_SmallAreaEmphasis	3.753e+16
original_glszm_SmallAreaHighGrayLevelEmphasis	9.085e+224
original_glszm_SmallAreaLowGrayLevelEmphasis	Inf
original_glszm_ZoneEntropy	2.921e+41
original_glszm_ZonePercentage	1.800e+66
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	5.386e+168
original_ngtdm_Coarseness	2.821e-59
original_ngtdm_Complexity	1.652e+260
original_ngtdm_Contrast	Inf
original_ngtdm_Strength	6.481e-11
original_shape_Elongation	1.229e-05
original_shape_Flatness	8.300e-38
original_shape_LeastAxisLength	6.487e+66
original_shape_MajorAxisLength	6.910e-145
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	7.450e+03
original_firstorder_90Percentile	6.524e+03
original_firstorder_Energy	1.007e+06
original_firstorder_Entropy	2.200e+03
original_firstorder_InterquartileRange	5.206e+03
original_firstorder_Kurtosis	4.643e+03
original_firstorder_Maximum	1.046e+05
original_firstorder_Mean	8.907e+03
original_firstorder_MeanAbsoluteDeviation	3.575e+03
original_firstorder_Median	2.399e+04
original_firstorder_Minimum	3.167e+03
original_firstorder_Range	6.708e+03
original_firstorder_RobustMeanAbsoluteDeviation	5.332e+03
original_firstorder_RootMeanSquared	4.472e+03
original_firstorder_Skewness	6.317e+03
original_firstorder_TotalEnergy	1.007e+06
original_firstorder_Uniformity	2.176e+03
original_firstorder_Variance	9.973e+03
original_glcm_Autocorrelation	2.816e+03
original_glcm_ClusterProminence	7.857e+05
original_glcm_ClusterShade	7.448e+04
original_glcm_ClusterTendency	1.994e+04
original_glcm_Contrast	1.173e+04
original_glcm_Correlation	8.420e+03
original_glcm_DifferenceAverage	2.296e+03
original_glcm_DifferenceEntropy	2.232e+03
original_glcm_DifferenceVariance	1.387e+04
original_glcm_Id	2.163e+03
original_glcm_Idm	2.093e+03

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original_glcm_Idmn                                      2.500e+03
original_glcm_Idn                                       3.838e+03
original_glcm_Imc1                                      5.922e+03
original_glcm_Imc2                                      2.266e+03
original_glcm_InverseVariance                           1.331e+04
original_glcm_JointAverage                              3.155e+03
original_glcm_JointEnergy                               2.859e+03
original_glcm_JointEntropy                              2.207e+03
original_glcm_MCC                                       2.864e+03
original_glcm_MaximumProbability                        2.501e+03
original_glcm_SumAverage                                3.155e+03
original_glcm_SumEntropy                                2.332e+03
original_glcm_SumSquares                                1.716e+04
original_gldm_DependenceEntropy                         6.447e+03
original_gldm_DependenceNonUniformity                   1.182e+05
original_gldm_DependenceNonUniformityNormalized         7.422e+03
original_gldm_DependenceVariance                        3.615e+03
original_gldm_GrayLevelNonUniformity                    1.912e+04
original_gldm_GrayLevelVariance                         9.968e+03
original_gldm_HighGrayLevelEmphasis                     2.861e+03
original_gldm_LargeDependenceEmphasis                   3.418e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis      1.067e+05
original_gldm_LargeDependenceLowGrayLevelEmphasis       1.771e+04
original_gldm_LowGrayLevelEmphasis                      5.321e+04
original_gldm_SmallDependenceEmphasis                   3.392e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis      3.293e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis       7.929e+03
original_glrlm_GrayLevelNonUniformity                   2.452e+04
original_glrlm_GrayLevelNonUniformityNormalized         2.485e+03
original_glrlm_GrayLevelVariance                        8.604e+03
original_glrlm_HighGrayLevelRunEmphasis                 2.870e+03
original_glrlm_LongRunEmphasis                          5.510e+03
original_glrlm_LongRunHighGrayLevelEmphasis             2.434e+04
original_glrlm_LongRunLowGrayLevelEmphasis              3.049e+04
original_glrlm_LowGrayLevelRunEmphasis                  5.711e+04
original_glrlm_RunEntropy                               6.452e+03
original_glrlm_RunLengthNonUniformity                   1.602e+05
original_glrlm_RunLengthNonUniformityNormalized         4.082e+03
original_glrlm_RunPercentage                            3.349e+03
original_glrlm_RunVariance                              7.001e+03
original_glrlm_ShortRunEmphasis                         3.432e+03
original_glrlm_ShortRunHighGrayLevelEmphasis            2.527e+03
original_glrlm_ShortRunLowGrayLevelEmphasis             2.136e+05
original_glszm_GrayLevelNonUniformity                   1.549e+04
original_glszm_GrayLevelNonUniformityNormalized         2.922e+03
original_glszm_GrayLevelVariance                        4.448e+03
original_glszm_HighGrayLevelZoneEmphasis                3.536e+03
original_glszm_LargeAreaEmphasis                        2.860e+04
original_glszm_LargeAreaHighGrayLevelEmphasis           8.722e+04
original_glszm_LargeAreaLowGrayLevelEmphasis            8.545e+04
original_glszm_LowGrayLevelZoneEmphasis                 1.101e+06
original_glszm_SizeZoneNonUniformity                    2.012e+05
original_glszm_SizeZoneNonUniformityNormalized          5.006e+03
original_glszm_SmallAreaEmphasis                        6.433e+03
original_glszm_SmallAreaHighGrayLevelEmphasis           3.324e+03
original_glszm_SmallAreaLowGrayLevelEmphasis            8.919e+04
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original_glszm_ZoneEntropy	4.470e+03
original_glszm_ZonePercentage	3.886e+03
original_glszm_ZoneVariance	2.883e+04
original_ngtdm_Busyness	1.708e+04
original_ngtdm_Coarseness	5.536e+03
original_ngtdm_Complexity	7.562e+03
original_ngtdm_Contrast	5.254e+03
original_ngtdm_Strength	3.686e+03
original_shape_Elongation	1.438e+04
original_shape_Flatness	4.188e+04
original_shape_LeastAxisLength	1.230e+04
original_shape_MajorAxisLength	1.381e+04
original_shape_Maximum2DDiameterColumn	2.203e+04
original_shape_Maximum2DDiameterRow	1.065e+04
original_shape_Maximum2DDiameterSlice	3.014e+04
original_shape_Maximum3DDiameter	2.189e+04
original_shape_MeshVolume	3.444e+04
original_shape_MinorAxisLength	9.728e+03
original_shape_Sphericity	6.335e+04
original_shape_SurfaceArea	8.360e+04
original_shape_SurfaceVolumeRatio	2.534e+04
original_shape_VoxelVolume	3.442e+04

	z
original_firstorder_10Percentile	-0.034
original_firstorder_90Percentile	0.000
original_firstorder_Energy	0.001
original_firstorder_Entropy	0.030
original_firstorder_InterquartileRange	0.056
original_firstorder_Kurtosis	0.008
original_firstorder_Maximum	-0.012
original_firstorder_Mean	0.066
original_firstorder_MeanAbsoluteDeviation	0.626
original_firstorder_Median	-0.010
original_firstorder_Minimum	0.224
original_firstorder_Range	0.181
original_firstorder_RobustMeanAbsoluteDeviation	-0.303
original_firstorder_RootMeanSquared	-0.076
original_firstorder_Skewness	-0.001
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	-0.203
original_firstorder_Variance	-3.748
original_glcm_Autocorrelation	0.194
original_glcm_ClusterProminence	-0.073
original_glcm_ClusterShade	-0.159
original_glcm_ClusterTendency	-0.117
original_glcm_Contrast	0.776
original_glcm_Correlation	-0.005
original_glcm_DifferenceAverage	0.914
original_glcm_DifferenceEntropy	0.107
original_glcm_DifferenceVariance	-1.105
original_glcm_Id	5.510
original_glcm_Idm	-4.576
original_glcm_Idmn	0.063
original_glcm_Idn	0.114
original_glcm_Imc1	-0.063
original_glcm_Imc2	-0.181

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original_glcm_InverseVariance                              0.104
original_glcm_JointAverage                                -0.350
original_glcm_JointEnergy                                  0.082
original_glcm_JointEntropy                                 0.245
original_glcm_MCC                                          0.004
original_glcm_MaximumProbability                           0.036
original_glcm_SumAverage                                   0.000
original_glcm_SumEntropy                                   0.430
original_glcm_SumSquares                                   0.000
original_gldm_DependenceEntropy                           -0.032
original_gldm_DependenceNonUniformity                      0.013
original_gldm_DependenceNonUniformityNormalized           -0.129
original_gldm_DependenceVariance                           0.013
original_gldm_GrayLevelNonUniformity                      -0.014
original_gldm_GrayLevelVariance                            3.690
original_gldm_HighGrayLevelEmphasis                       -1.917
original_gldm_LargeDependenceEmphasis                      1.007
original_gldm_LargeDependenceHighGrayLevelEmphasis        -0.016
original_gldm_LargeDependenceLowGrayLevelEmphasis         -0.659
original_gldm_LowGrayLevelEmphasis                        -0.460
original_gldm_SmallDependenceEmphasis                     -0.301
original_gldm_SmallDependenceHighGrayLevelEmphasis         0.137
original_gldm_SmallDependenceLowGrayLevelEmphasis          0.076
original_glrlm_GrayLevelNonUniformity                      0.004
original_glrlm_GrayLevelNonUniformityNormalized            0.189
original_glrlm_GrayLevelVariance                          -0.194
original_glrlm_HighGrayLevelRunEmphasis                    2.723
original_glrlm_LongRunEmphasis                            -0.490
original_glrlm_LongRunHighGrayLevelEmphasis                0.062
original_glrlm_LongRunLowGrayLevelEmphasis                 0.297
original_glrlm_LowGrayLevelRunEmphasis                     0.875
original_glrlm_RunEntropy                                 -0.159
original_glrlm_RunLengthNonUniformity                     -0.021
original_glrlm_RunLengthNonUniformityNormalized           -0.179
original_glrlm_RunPercentage                               0.813
original_glrlm_RunVariance                                 0.212
original_glrlm_ShortRunEmphasis                            0.064
original_glrlm_ShortRunHighGrayLevelEmphasis              -0.673
original_glrlm_ShortRunLowGrayLevelEmphasis               -0.099
original_glszm_GrayLevelNonUniformity                      0.047
original_glszm_GrayLevelNonUniformityNormalized           -0.093
original_glszm_GrayLevelVariance                           0.061
original_glszm_HighGrayLevelZoneEmphasis                  -0.273
original_glszm_LargeAreaEmphasis                           2.108
original_glszm_LargeAreaHighGrayLevelEmphasis              0.009
original_glszm_LargeAreaLowGrayLevelEmphasis               0.006
original_glszm_LowGrayLevelZoneEmphasis                   -0.004
original_glszm_SizeZoneNonUniformity                       0.004
original_glszm_SizeZoneNonUniformityNormalized            -0.026
original_glszm_SmallAreaEmphasis                           0.006
original_glszm_SmallAreaHighGrayLevelEmphasis              0.156
original_glszm_SmallAreaLowGrayLevelEmphasis               0.014
original_glszm_ZoneEntropy                                 0.021
original_glszm_ZonePercentage                              0.039
original_glszm_ZoneVariance                               -2.119
original_ngtdm_Busyness                                    0.023
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original_ngtdm_Coarseness	-0.024
original_ngtdm_Complexity	0.079
original_ngtdm_Contrast	0.205
original_ngtdm_Strength	-0.006
original_shape_Elongation	-0.001
original_shape_Flatness	-0.002
original_shape_LeastAxisLength	0.013
original_shape_MajorAxisLength	-0.024
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

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original_firstorder_10Percentile	0.972919
original_firstorder_90Percentile	0.999853
original_firstorder_Energy	0.999274
original_firstorder_Entropy	0.976311
original_firstorder_InterquartileRange	0.955645
original_firstorder_Kurtosis	0.993252
original_firstorder_Maximum	0.990250
original_firstorder_Mean	0.947559
original_firstorder_MeanAbsoluteDeviation	0.531204
original_firstorder_Median	0.992201
original_firstorder_Minimum	0.822643
original_firstorder_Range	0.856559
original_firstorder_RobustMeanAbsoluteDeviation	0.761557
original_firstorder_RootMeanSquared	0.939341
original_firstorder_Skewness	0.998897
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	0.839289
original_firstorder_Variance	0.000178
original_glcm_Autocorrelation	0.845829
original_glcm_ClusterProminence	0.941416
original_glcm_ClusterShade	0.873998
original_glcm_ClusterTendency	0.906590
original_glcm_Contrast	0.437767
original_glcm_Correlation	0.996092
original_glcm_DifferenceAverage	0.360611
original_glcm_DifferenceEntropy	0.915093
original_glcm_DifferenceVariance	0.269213
original_glcm_Id	3.58e-08
original_glcm_Idm	4.74e-06
original_glcm_Idmn	0.949919
original_glcm_Idn	0.909556
original_glcm_Imc1	0.949457
original_glcm_Imc2	0.856298
original_glcm_InverseVariance	0.917452
original_glcm_JointAverage	0.726495
original_glcm_JointEnergy	0.934596
original_glcm_JointEntropy	0.806088

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original_glcm_MCC                                      0.997170
original_glcm_MaximumProbability                       0.971185
original_glcm_SumAverage                               1.000000
original_glcm_SumEntropy                               0.667166
original_glcm_SumSquares                               1.000000
original_gldm_DependenceEntropy                        0.974178
original_gldm_DependenceNonUniformity                  0.989809
original_gldm_DependenceNonUniformityNormalized        0.896973
original_gldm_DependenceVariance                       0.989636
original_gldm_GrayLevelNonUniformity                   0.988736
original_gldm_GrayLevelVariance                        0.000225
original_gldm_HighGrayLevelEmphasis                    0.055183
original_gldm_LargeDependenceEmphasis                  0.314018
original_gldm_LargeDependenceHighGrayLevelEmphasis     0.987349
original_gldm_LargeDependenceLowGrayLevelEmphasis      0.510108
original_gldm_LowGrayLevelEmphasis                     0.645536
original_gldm_SmallDependenceEmphasis                  0.763604
original_gldm_SmallDependenceHighGrayLevelEmphasis     0.891115
original_gldm_SmallDependenceLowGrayLevelEmphasis      0.939567
original_glrlm_GrayLevelNonUniformity                  0.997148
original_glrlm_GrayLevelNonUniformityNormalized        0.849980
original_glrlm_GrayLevelVariance                       0.846482
original_glrlm_HighGrayLevelRunEmphasis                0.006467
original_glrlm_LongRunEmphasis                         0.624472
original_glrlm_LongRunHighGrayLevelEmphasis            0.950440
original_glrlm_LongRunLowGrayLevelEmphasis             0.766820
original_glrlm_LowGrayLevelRunEmphasis                 0.381811
original_glrlm_RunEntropy                              0.873592
original_glrlm_RunLengthNonUniformity                  0.983410
original_glrlm_RunLengthNonUniformityNormalized        0.857854
original_glrlm_RunPercentage                           0.416198
original_glrlm_RunVariance                             0.832010
original_glrlm_ShortRunEmphasis                        0.949239
original_glrlm_ShortRunHighGrayLevelEmphasis           0.500921
original_glrlm_ShortRunLowGrayLevelEmphasis            0.921270
original_glszm_GrayLevelNonUniformity                  0.962649
original_glszm_GrayLevelNonUniformityNormalized        0.926127
original_glszm_GrayLevelVariance                       0.951489
original_glszm_HighGrayLevelZoneEmphasis               0.784777
original_glszm_LargeAreaEmphasis                       0.035051
original_glszm_LargeAreaHighGrayLevelEmphasis          0.993122
original_glszm_LargeAreaLowGrayLevelEmphasis           0.994844
original_glszm_LowGrayLevelZoneEmphasis                0.997142
original_glszm_SizeZoneNonUniformity                   0.996824
original_glszm_SizeZoneNonUniformityNormalized         0.979635
original_glszm_SmallAreaEmphasis                       0.995267
original_glszm_SmallAreaHighGrayLevelEmphasis          0.876165
original_glszm_SmallAreaLowGrayLevelEmphasis           0.989135
original_glszm_ZoneEntropy                             0.982959
original_glszm_ZonePercentage                          0.968684
original_glszm_ZoneVariance                            0.034119
original_ngtdm_Busyness                                0.981850
original_ngtdm_Coarseness                              0.980573
original_ngtdm_Complexity                              0.936846
original_ngtdm_Contrast                                0.837940
original_ngtdm_Strength                                0.994922
```

```
original_shape_Elongation                          0.999373
original_shape_Flatness                            0.998373
original_shape_LeastAxisLength                     0.990024
original_shape_MajorAxisLength                     0.980825
original_shape_Maximum2DDiameterColumn             1.000000
original_shape_Maximum2DDiameterRow                1.000000
original_shape_Maximum2DDiameterSlice              1.000000
original_shape_Maximum3DDiameter                   1.000000
original_shape_MeshVolume                          1.000000
original_shape_MinorAxisLength                     1.000000
original_shape_Sphericity                          1.000000
original_shape_SurfaceArea                         1.000000
original_shape_SurfaceVolumeRatio                  1.000000
original_shape_VoxelVolume                         1.000000


Likelihood ratio test=27.06  on 107 df, p=1
n= 95, number of events= 3


$model_list[[3]]$coxmodels[[5]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                        coef
original_firstorder_10Percentile                    1.313e+03
original_firstorder_90Percentile                    4.865e+03
original_firstorder_Energy                         -1.044e+03
original_firstorder_Entropy                        -2.501e+03
original_firstorder_InterquartileRange             -3.296e+03
original_firstorder_Kurtosis                        8.403e+02
original_firstorder_Maximum                        -1.083e+04
original_firstorder_Mean                           -9.862e+03
original_firstorder_MeanAbsoluteDeviation          -6.649e+03
original_firstorder_Median                          6.568e+03
original_firstorder_Minimum                         6.809e+03
original_firstorder_Range                           1.396e+04
original_firstorder_RobustMeanAbsoluteDeviation     1.007e+04
original_firstorder_RootMeanSquared                -6.646e+03
original_firstorder_Skewness                        1.643e+03
original_firstorder_TotalEnergy                     0.000e+00
original_firstorder_Uniformity                     -3.286e+02
original_firstorder_Variance                        2.977e+04
original_glcm_Autocorrelation                       2.807e+03
original_glcm_ClusterProminence                    -3.560e+04
original_glcm_ClusterShade                         -4.363e+04
original_glcm_ClusterTendency                      -5.147e+03
original_glcm_Contrast                             -1.020e+05
original_glcm_Correlation                          -2.225e+03
original_glcm_DifferenceAverage                     8.281e+03
original_glcm_DifferenceEntropy                    -2.422e+02
original_glcm_DifferenceVariance                    4.432e+04
original_glcm_Id                                   -1.731e+01
original_glcm_Idm                                   1.474e+03
original_glcm_Idmn                                  6.677e+01
original_glcm_Idn                                   0.000e+00
```

original_glcm_Imc1	-9.327e+02
original_glcm_Imc2	0.000e+00
original_glcm_InverseVariance	-6.754e+01
original_glcm_JointAverage	3.791e+01
original_glcm_JointEnergy	2.182e+02
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	0.000e+00
original_glcm_MaximumProbability	0.000e+00
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	0.000e+00
original_glcm_SumSquares	-7.699e+02
original_gldm_DependenceEntropy	0.000e+00
original_gldm_DependenceNonUniformity	0.000e+00
original_gldm_DependenceNonUniformityNormalized	0.000e+00
original_gldm_DependenceVariance	-7.283e+00
original_gldm_GrayLevelNonUniformity	1.974e+02
original_gldm_GrayLevelVariance	0.000e+00
original_gldm_HighGrayLevelEmphasis	2.984e+02
original_gldm_LargeDependenceEmphasis	1.089e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000e+00
original_gldm_LowGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceEmphasis	0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000e+00
original_glrlm_GrayLevelNonUniformity	2.303e+02
original_glrlm_GrayLevelNonUniformityNormalized	0.000e+00
original_glrlm_GrayLevelVariance	0.000e+00
original_glrlm_HighGrayLevelRunEmphasis	-1.079e+03
original_glrlm_LongRunEmphasis	0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	0.000e+00
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	0.000e+00
original_glrlm_RunLengthNonUniformity	0.000e+00
original_glrlm_RunLengthNonUniformityNormalized	0.000e+00
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	0.000e+00
original_glrlm_ShortRunEmphasis	0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	0.000e+00
original_glszm_GrayLevelNonUniformityNormalized	0.000e+00
original_glszm_GrayLevelVariance	0.000e+00
original_glszm_HighGrayLevelZoneEmphasis	0.000e+00
original_glszm_LargeAreaEmphasis	0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000e+00
original_glszm_LowGrayLevelZoneEmphasis	-5.100e+01
original_glszm_SizeZoneNonUniformity	0.000e+00
original_glszm_SizeZoneNonUniformityNormalized	0.000e+00
original_glszm_SmallAreaEmphasis	0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	8.540e+01
original_glszm_ZoneEntropy	0.000e+00
original_glszm_ZonePercentage	0.000e+00

```
original_glszm_ZoneVariance                          0.000e+00
original_ngtdm_Busyness                              0.000e+00
original_ngtdm_Coarseness                            0.000e+00
original_ngtdm_Complexity                            0.000e+00
original_ngtdm_Contrast                              0.000e+00
original_ngtdm_Strength                             -5.567e+01
original_shape_Elongation                            0.000e+00
original_shape_Flatness                              0.000e+00
original_shape_LeastAxisLength                       0.000e+00
original_shape_MajorAxisLength                       0.000e+00
original_shape_Maximum2DDiameterColumn               0.000e+00
original_shape_Maximum2DDiameterRow                  0.000e+00
original_shape_Maximum2DDiameterSlice                0.000e+00
original_shape_Maximum3DDiameter                     0.000e+00
original_shape_MeshVolume                            0.000e+00
original_shape_MinorAxisLength                       0.000e+00
original_shape_Sphericity                            0.000e+00
original_shape_SurfaceArea                           0.000e+00
original_shape_SurfaceVolumeRatio                    0.000e+00
original_shape_VoxelVolume                           0.000e+00
                                                       exp(coef)
original_firstorder_10Percentile                           Inf
original_firstorder_90Percentile                           Inf
original_firstorder_Energy                           0.000e+00
original_firstorder_Entropy                          0.000e+00
original_firstorder_InterquartileRange               0.000e+00
original_firstorder_Kurtosis                               Inf
original_firstorder_Maximum                          0.000e+00
original_firstorder_Mean                             0.000e+00
original_firstorder_MeanAbsoluteDeviation            0.000e+00
original_firstorder_Median                                 Inf
original_firstorder_Minimum                                Inf
original_firstorder_Range                                  Inf
original_firstorder_RobustMeanAbsoluteDeviation            Inf
original_firstorder_RootMeanSquared                  0.000e+00
original_firstorder_Skewness                               Inf
original_firstorder_TotalEnergy                      1.000e+00
original_firstorder_Uniformity                      1.904e-143
original_firstorder_Variance                               Inf
original_glcm_Autocorrelation                              Inf
original_glcm_ClusterProminence                      0.000e+00
original_glcm_ClusterShade                           0.000e+00
original_glcm_ClusterTendency                        0.000e+00
original_glcm_Contrast                               0.000e+00
original_glcm_Correlation                            0.000e+00
original_glcm_DifferenceAverage                            Inf
original_glcm_DifferenceEntropy                     6.220e-106
original_glcm_DifferenceVariance                           Inf
original_glcm_Id                                     3.037e-08
original_glcm_Idm                                          Inf
original_glcm_Idmn                                   9.992e+28
original_glcm_Idn                                    1.000e+00
original_glcm_Imc1                                   0.000e+00
original_glcm_Imc2                                   1.000e+00
original_glcm_InverseVariance                        4.650e-30
original_glcm_JointAverage                           2.909e+16
```

```
original_glcm_JointEnergy                              6.060e+94
original_glcm_JointEntropy                             1.000e+00
original_glcm_MCC                                       1.000e+00
original_glcm_MaximumProbability                        1.000e+00
original_glcm_SumAverage                               1.000e+00
original_glcm_SumEntropy                               1.000e+00
original_glcm_SumSquares                               0.000e+00
original_gldm_DependenceEntropy                        1.000e+00
original_gldm_DependenceNonUniformity                  1.000e+00
original_gldm_DependenceNonUniformityNormalized        1.000e+00
original_gldm_DependenceVariance                       6.868e-04
original_gldm_GrayLevelNonUniformity                   5.217e+85
original_gldm_GrayLevelVariance                        1.000e+00
original_gldm_HighGrayLevelEmphasis                    3.899e+129
original_gldm_LargeDependenceEmphasis                  1.942e+47
original_gldm_LargeDependenceHighGrayLevelEmphasis     1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis      1.000e+00
original_gldm_LowGrayLevelEmphasis                     1.000e+00
original_gldm_SmallDependenceEmphasis                  1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis     1.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis      1.000e+00
original_glrlm_GrayLevelNonUniformity                  1.055e+100
original_glrlm_GrayLevelNonUniformityNormalized        1.000e+00
original_glrlm_GrayLevelVariance                       1.000e+00
original_glrlm_HighGrayLevelRunEmphasis                0.000e+00
original_glrlm_LongRunEmphasis                         1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis            1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis             1.000e+00
original_glrlm_LowGrayLevelRunEmphasis                 1.000e+00
original_glrlm_RunEntropy                              1.000e+00
original_glrlm_RunLengthNonUniformity                  1.000e+00
original_glrlm_RunLengthNonUniformityNormalized        1.000e+00
original_glrlm_RunPercentage                           1.000e+00
original_glrlm_RunVariance                             1.000e+00
original_glrlm_ShortRunEmphasis                        1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis           1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis            1.000e+00
original_glszm_GrayLevelNonUniformity                  1.000e+00
original_glszm_GrayLevelNonUniformityNormalized        1.000e+00
original_glszm_GrayLevelVariance                       1.000e+00
original_glszm_HighGrayLevelZoneEmphasis               1.000e+00
original_glszm_LargeAreaEmphasis                       1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis          1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis           1.000e+00
original_glszm_LowGrayLevelZoneEmphasis                7.131e-23
original_glszm_SizeZoneNonUniformity                   1.000e+00
original_glszm_SizeZoneNonUniformityNormalized         1.000e+00
original_glszm_SmallAreaEmphasis                       1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis          1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis           1.222e+37
original_glszm_ZoneEntropy                             1.000e+00
original_glszm_ZonePercentage                          1.000e+00
original_glszm_ZoneVariance                            1.000e+00
original_ngtdm_Busyness                                1.000e+00
original_ngtdm_Coarseness                              1.000e+00
original_ngtdm_Complexity                              1.000e+00
```

original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	6.672e-25
original_shape_Elongation	1.000e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	1.184e+04
original_firstorder_90Percentile	1.091e+04
original_firstorder_Energy	7.399e+04
original_firstorder_Entropy	7.499e+03
original_firstorder_InterquartileRange	3.198e+04
original_firstorder_Kurtosis	5.861e+03
original_firstorder_Maximum	1.433e+04
original_firstorder_Mean	8.251e+03
original_firstorder_MeanAbsoluteDeviation	1.369e+04
original_firstorder_Median	9.875e+03
original_firstorder_Minimum	1.670e+04
original_firstorder_Range	1.465e+04
original_firstorder_RobustMeanAbsoluteDeviation	2.506e+04
original_firstorder_RootMeanSquared	3.640e+04
original_firstorder_Skewness	8.246e+03
original_firstorder_TotalEnergy	7.399e+04
original_firstorder_Uniformity	9.121e+03
original_firstorder_Variance	4.211e+04
original_glcm_Autocorrelation	1.446e+04
original_glcm_ClusterProminence	1.653e+06
original_glcm_ClusterShade	1.951e+05
original_glcm_ClusterTendency	6.372e+04
original_glcm_Contrast	5.530e+04
original_glcm_Correlation	9.439e+03
original_glcm_DifferenceAverage	1.054e+04
original_glcm_DifferenceEntropy	7.684e+03
original_glcm_DifferenceVariance	5.857e+04
original_glcm_Id	8.210e+03
original_glcm_Idm	7.935e+03
original_glcm_Idmn	7.190e+03
original_glcm_Idn	1.016e+04
original_glcm_Imc1	1.389e+04
original_glcm_Imc2	8.971e+03
original_glcm_InverseVariance	1.072e+04
original_glcm_JointAverage	1.936e+04
original_glcm_JointEnergy	1.049e+04
original_glcm_JointEntropy	7.380e+03
original_glcm_MCC	7.573e+03
original_glcm_MaximumProbability	8.304e+03

original_glcm_SumAverage	1.936e+04
original_glcm_SumEntropy	7.772e+03
original_glcm_SumSquares	6.244e+04
original_gldm_DependenceEntropy	1.184e+04
original_gldm_DependenceNonUniformity	5.786e+04
original_gldm_DependenceNonUniformityNormalized	1.768e+04
original_gldm_DependenceVariance	9.742e+03
original_gldm_GrayLevelNonUniformity	3.586e+04
original_gldm_GrayLevelVariance	4.216e+04
original_gldm_HighGrayLevelEmphasis	1.430e+04
original_gldm_LargeDependenceEmphasis	1.131e+04
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.333e+04
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.413e+05
original_gldm_LowGrayLevelEmphasis	3.364e+05
original_gldm_SmallDependenceEmphasis	1.425e+04
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.753e+04
original_gldm_SmallDependenceLowGrayLevelEmphasis	5.962e+04
original_glrlm_GrayLevelNonUniformity	5.274e+04
original_glrlm_GrayLevelNonUniformityNormalized	7.224e+03
original_glrlm_GrayLevelVariance	2.806e+04
original_glrlm_HighGrayLevelRunEmphasis	1.390e+04
original_glrlm_LongRunEmphasis	1.345e+04
original_glrlm_LongRunHighGrayLevelEmphasis	1.229e+04
original_glrlm_LongRunLowGrayLevelEmphasis	2.086e+05
original_glrlm_LowGrayLevelRunEmphasis	2.545e+05
original_glrlm_RunEntropy	1.059e+04
original_glrlm_RunLengthNonUniformity	3.248e+04
original_glrlm_RunLengthNonUniformityNormalized	1.382e+04
original_glrlm_RunPercentage	1.229e+04
original_glrlm_RunVariance	1.475e+04
original_glrlm_ShortRunEmphasis	1.123e+04
original_glrlm_ShortRunHighGrayLevelEmphasis	1.217e+04
original_glrlm_ShortRunLowGrayLevelEmphasis	2.103e+05
original_glszm_GrayLevelNonUniformity	4.339e+04
original_glszm_GrayLevelNonUniformityNormalized	9.818e+03
original_glszm_GrayLevelVariance	1.519e+04
original_glszm_HighGrayLevelZoneEmphasis	1.016e+04
original_glszm_LargeAreaEmphasis	3.498e+04
original_glszm_LargeAreaHighGrayLevelEmphasis	3.156e+04
original_glszm_LargeAreaLowGrayLevelEmphasis	2.663e+05
original_glszm_LowGrayLevelZoneEmphasis	9.670e+04
original_glszm_SizeZoneNonUniformity	1.478e+04
original_glszm_SizeZoneNonUniformityNormalized	4.758e+03
original_glszm_SmallAreaEmphasis	5.664e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	1.259e+04
original_glszm_SmallAreaLowGrayLevelEmphasis	5.524e+04
original_glszm_ZoneEntropy	9.913e+03
original_glszm_ZonePercentage	1.659e+04
original_glszm_ZoneVariance	3.519e+04
original_ngtdm_Busyness	7.686e+04
original_ngtdm_Coarseness	5.746e+04
original_ngtdm_Complexity	2.658e+04
original_ngtdm_Contrast	4.219e+04
original_ngtdm_Strength	2.820e+04
original_shape_Elongation	5.759e+03
original_shape_Flatness	9.242e+03

```
original_shape_LeastAxisLength                          1.883e+04
original_shape_MajorAxisLength                          4.218e+04
original_shape_Maximum2DDiameterColumn                  3.879e+04
original_shape_Maximum2DDiameterRow                     3.019e+04
original_shape_Maximum2DDiameterSlice                   1.058e+04
original_shape_Maximum3DDiameter                        4.552e+04
original_shape_MeshVolume                               3.420e+04
original_shape_MinorAxisLength                          1.501e+04
original_shape_Sphericity                               1.535e+04
original_shape_SurfaceArea                              6.807e+04
original_shape_SurfaceVolumeRatio                       2.274e+04
original_shape_VoxelVolume                              3.445e+04
                                                          z
original_firstorder_10Percentile                        0.111
original_firstorder_90Percentile                        0.446
original_firstorder_Energy                             -0.014
original_firstorder_Entropy                            -0.333
original_firstorder_InterquartileRange                 -0.103
original_firstorder_Kurtosis                            0.143
original_firstorder_Maximum                            -0.756
original_firstorder_Mean                               -1.195
original_firstorder_MeanAbsoluteDeviation              -0.486
original_firstorder_Median                              0.665
original_firstorder_Minimum                            0.408
original_firstorder_Range                               0.953
original_firstorder_RobustMeanAbsoluteDeviation         0.402
original_firstorder_RootMeanSquared                    -0.183
original_firstorder_Skewness                            0.199
original_firstorder_TotalEnergy                         0.000
original_firstorder_Uniformity                         -0.036
original_firstorder_Variance                            0.707
original_glcm_Autocorrelation                           0.194
original_glcm_ClusterProminence                        -0.022
original_glcm_ClusterShade                             -0.224
original_glcm_ClusterTendency                          -0.081
original_glcm_Contrast                                 -1.845
original_glcm_Correlation                              -0.236
original_glcm_DifferenceAverage                         0.786
original_glcm_DifferenceEntropy                        -0.032
original_glcm_DifferenceVariance                        0.757
original_glcm_Id                                       -0.002
original_glcm_Idm                                       0.186
original_glcm_Idmn                                      0.009
original_glcm_Idn                                       0.000
original_glcm_Imc1                                     -0.067
original_glcm_Imc2                                      0.000
original_glcm_InverseVariance                          -0.006
original_glcm_JointAverage                              0.002
original_glcm_JointEnergy                               0.021
original_glcm_JointEntropy                              0.000
original_glcm_MCC                                       0.000
original_glcm_MaximumProbability                        0.000
original_glcm_SumAverage                                0.000
original_glcm_SumEntropy                                0.000
original_glcm_SumSquares                               -0.012
original_gldm_DependenceEntropy                         0.000
```

```
original_gldm_DependenceNonUniformity                    0.000
original_gldm_DependenceNonUniformityNormalized          0.000
original_gldm_DependenceVariance                        -0.001
original_gldm_GrayLevelNonUniformity                     0.006
original_gldm_GrayLevelVariance                          0.000
original_gldm_HighGrayLevelEmphasis                      0.021
original_gldm_LargeDependenceEmphasis                    0.010
original_gldm_LargeDependenceHighGrayLevelEmphasis       0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis        0.000
original_gldm_LowGrayLevelEmphasis                       0.000
original_gldm_SmallDependenceEmphasis                    0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis       0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis        0.000
original_glrlm_GrayLevelNonUniformity                    0.004
original_glrlm_GrayLevelNonUniformityNormalized          0.000
original_glrlm_GrayLevelVariance                         0.000
original_glrlm_HighGrayLevelRunEmphasis                 -0.078
original_glrlm_LongRunEmphasis                           0.000
original_glrlm_LongRunHighGrayLevelEmphasis              0.000
original_glrlm_LongRunLowGrayLevelEmphasis               0.000
original_glrlm_LowGrayLevelRunEmphasis                   0.000
original_glrlm_RunEntropy                                0.000
original_glrlm_RunLengthNonUniformity                    0.000
original_glrlm_RunLengthNonUniformityNormalized          0.000
original_glrlm_RunPercentage                             0.000
original_glrlm_RunVariance                               0.000
original_glrlm_ShortRunEmphasis                          0.000
original_glrlm_ShortRunHighGrayLevelEmphasis             0.000
original_glrlm_ShortRunLowGrayLevelEmphasis              0.000
original_glszm_GrayLevelNonUniformity                    0.000
original_glszm_GrayLevelNonUniformityNormalized          0.000
original_glszm_GrayLevelVariance                         0.000
original_glszm_HighGrayLevelZoneEmphasis                 0.000
original_glszm_LargeAreaEmphasis                         0.000
original_glszm_LargeAreaHighGrayLevelEmphasis            0.000
original_glszm_LargeAreaLowGrayLevelEmphasis             0.000
original_glszm_LowGrayLevelZoneEmphasis                 -0.001
original_glszm_SizeZoneNonUniformity                     0.000
original_glszm_SizeZoneNonUniformityNormalized           0.000
original_glszm_SmallAreaEmphasis                         0.000
original_glszm_SmallAreaHighGrayLevelEmphasis            0.000
original_glszm_SmallAreaLowGrayLevelEmphasis             0.002
original_glszm_ZoneEntropy                               0.000
original_glszm_ZonePercentage                            0.000
original_glszm_ZoneVariance                              0.000
original_ngtdm_Busyness                                  0.000
original_ngtdm_Coarseness                                0.000
original_ngtdm_Complexity                                0.000
original_ngtdm_Contrast                                  0.000
original_ngtdm_Strength                                 -0.002
original_shape_Elongation                                0.000
original_shape_Flatness                                  0.000
original_shape_LeastAxisLength                           0.000
original_shape_MajorAxisLength                           0.000
original_shape_Maximum2DDiameterColumn                   0.000
original_shape_Maximum2DDiameterRow                      0.000
```

original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	0.912
original_firstorder_90Percentile	0.656
original_firstorder_Energy	0.989
original_firstorder_Entropy	0.739
original_firstorder_InterquartileRange	0.918
original_firstorder_Kurtosis	0.886
original_firstorder_Maximum	0.450
original_firstorder_Mean	0.232
original_firstorder_MeanAbsoluteDeviation	0.627
original_firstorder_Median	0.506
original_firstorder_Minimum	0.683
original_firstorder_Range	0.340
original_firstorder_RobustMeanAbsoluteDeviation	0.688
original_firstorder_RootMeanSquared	0.855
original_firstorder_Skewness	0.842
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	0.971
original_firstorder_Variance	0.480
original_glcm_Autocorrelation	0.846
original_glcm_ClusterProminence	0.983
original_glcm_ClusterShade	0.823
original_glcm_ClusterTendency	0.936
original_glcm_Contrast	0.065
original_glcm_Correlation	0.814
original_glcm_DifferenceAverage	0.432
original_glcm_DifferenceEntropy	0.975
original_glcm_DifferenceVariance	0.449
original_glcm_Id	0.998
original_glcm_Idm	0.853
original_glcm_Idmn	0.993
original_glcm_Idn	1.000
original_glcm_Imc1	0.946
original_glcm_Imc2	1.000
original_glcm_InverseVariance	0.995
original_glcm_JointAverage	0.998
original_glcm_JointEnergy	0.983
original_glcm_JointEntropy	1.000
original_glcm_MCC	1.000
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	1.000
original_glcm_SumSquares	0.990
original_gldm_DependenceEntropy	1.000
original_gldm_DependenceNonUniformity	1.000
original_gldm_DependenceNonUniformityNormalized	1.000
original_gldm_DependenceVariance	0.999
original_gldm_GrayLevelNonUniformity	0.996

```
original_gldm_GrayLevelVariance                          1.000
original_gldm_HighGrayLevelEmphasis                      0.983
original_gldm_LargeDependenceEmphasis                    0.992
original_gldm_LargeDependenceHighGrayLevelEmphasis       1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis        1.000
original_gldm_LowGrayLevelEmphasis                       1.000
original_gldm_SmallDependenceEmphasis                    1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis       1.000
original_gldm_SmallDependenceLowGrayLevelEmphasis        1.000
original_glrlm_GrayLevelNonUniformity                    0.997
original_glrlm_GrayLevelNonUniformityNormalized          1.000
original_glrlm_GrayLevelVariance                         1.000
original_glrlm_HighGrayLevelRunEmphasis                  0.938
original_glrlm_LongRunEmphasis                           1.000
original_glrlm_LongRunHighGrayLevelEmphasis              1.000
original_glrlm_LongRunLowGrayLevelEmphasis               1.000
original_glrlm_LowGrayLevelRunEmphasis                   1.000
original_glrlm_RunEntropy                                1.000
original_glrlm_RunLengthNonUniformity                    1.000
original_glrlm_RunLengthNonUniformityNormalized          1.000
original_glrlm_RunPercentage                             1.000
original_glrlm_RunVariance                               1.000
original_glrlm_ShortRunEmphasis                          1.000
original_glrlm_ShortRunHighGrayLevelEmphasis             1.000
original_glrlm_ShortRunLowGrayLevelEmphasis              1.000
original_glszm_GrayLevelNonUniformity                    1.000
original_glszm_GrayLevelNonUniformityNormalized          1.000
original_glszm_GrayLevelVariance                         1.000
original_glszm_HighGrayLevelZoneEmphasis                 1.000
original_glszm_LargeAreaEmphasis                         1.000
original_glszm_LargeAreaHighGrayLevelEmphasis            1.000
original_glszm_LargeAreaLowGrayLevelEmphasis             1.000
original_glszm_LowGrayLevelZoneEmphasis                  1.000
original_glszm_SizeZoneNonUniformity                     1.000
original_glszm_SizeZoneNonUniformityNormalized           1.000
original_glszm_SmallAreaEmphasis                         1.000
original_glszm_SmallAreaHighGrayLevelEmphasis            1.000
original_glszm_SmallAreaLowGrayLevelEmphasis             0.999
original_glszm_ZoneEntropy                               1.000
original_glszm_ZonePercentage                            1.000
original_glszm_ZoneVariance                              1.000
original_ngtdm_Busyness                                  1.000
original_ngtdm_Coarseness                                1.000
original_ngtdm_Complexity                                1.000
original_ngtdm_Contrast                                  1.000
original_ngtdm_Strength                                  0.998
original_shape_Elongation                                1.000
original_shape_Flatness                                  1.000
original_shape_LeastAxisLength                           1.000
original_shape_MajorAxisLength                           1.000
original_shape_Maximum2DDiameterColumn                   1.000
original_shape_Maximum2DDiameterRow                      1.000
original_shape_Maximum2DDiameterSlice                    1.000
original_shape_Maximum3DDiameter                         1.000
original_shape_MeshVolume                                1.000
original_shape_MinorAxisLength                           1.000
```

```
original_shape_Sphericity                              1.000
original_shape_SurfaceArea                             1.000
original_shape_SurfaceVolumeRatio                      1.000
original_shape_VoxelVolume                             1.000


Likelihood ratio test=31.76  on 107 df, p=1
n= 26, number of events= 5


$model_list[[3]]$coxmodels[[6]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                         coef
original_firstorder_10Percentile                     -1.125e+05
original_firstorder_90Percentile                     -4.106e+04
original_firstorder_Energy                            3.149e+04
original_firstorder_Entropy                           1.298e+05
original_firstorder_InterquartileRange                3.036e+05
original_firstorder_Kurtosis                          3.312e+02
original_firstorder_Maximum                          -1.739e+03
original_firstorder_Mean                             -8.092e+04
original_firstorder_MeanAbsoluteDeviation             1.904e+04
original_firstorder_Median                            1.271e+05
original_firstorder_Minimum                          -2.715e+04
original_firstorder_Range                             0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation      -3.434e+05
original_firstorder_RootMeanSquared                  -3.469e+02
original_firstorder_Skewness                          8.725e+02
original_firstorder_TotalEnergy                       0.000e+00
original_firstorder_Uniformity                        1.969e+05
original_firstorder_Variance                          2.748e+05
original_glcm_Autocorrelation                         5.475e+05
original_glcm_ClusterProminence                       4.337e+06
original_glcm_ClusterShade                            7.478e+05
original_glcm_ClusterTendency                         2.898e+04
original_glcm_Contrast                               -1.251e+06
original_glcm_Correlation                             9.264e+02
original_glcm_DifferenceAverage                       8.168e+04
original_glcm_DifferenceEntropy                      -1.240e+05
original_glcm_DifferenceVariance                      1.393e+06
original_glcm_Id                                     -8.594e+05
original_glcm_Idm                                     8.036e+05
original_glcm_Idmn                                    4.359e+04
original_glcm_Idn                                    -1.067e+04
original_glcm_Imc1                                    -6.649e+03
original_glcm_Imc2                                     1.351e+04
original_glcm_InverseVariance                        -7.704e+04
original_glcm_JointAverage                            3.360e+05
original_glcm_JointEnergy                            -1.559e+05
original_glcm_JointEntropy                            1.875e+05
original_glcm_MCC                                     -1.365e+04
original_glcm_MaximumProbability                      1.236e+04
original_glcm_SumAverage                              0.000e+00
original_glcm_SumEntropy                             -1.505e+05
```

```
original_glcm_SumSquares                                0.000e+00
original_gldm_DependenceEntropy                        -2.090e+04
original_gldm_DependenceNonUniformity                  -3.982e+04
original_gldm_DependenceNonUniformityNormalized         3.810e+04
original_gldm_DependenceVariance                        1.598e+04
original_gldm_GrayLevelNonUniformity                   -4.768e+04
original_gldm_GrayLevelVariance                        -6.454e+05
original_gldm_HighGrayLevelEmphasis                    -7.872e+05
original_gldm_LargeDependenceEmphasis                   3.702e+04
original_gldm_LargeDependenceHighGrayLevelEmphasis     -2.837e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis       5.818e+03
original_gldm_LowGrayLevelEmphasis                      7.303e+05
original_gldm_SmallDependenceEmphasis                   1.494e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis      1.673e+04
original_gldm_SmallDependenceLowGrayLevelEmphasis      -8.468e+04
original_glrlm_GrayLevelNonUniformity                   6.913e+04
original_glrlm_GrayLevelNonUniformityNormalized         1.915e+02
original_glrlm_GrayLevelVariance                        1.670e+02
original_glrlm_HighGrayLevelRunEmphasis                -2.239e+03
original_glrlm_LongRunEmphasis                          4.498e+01
original_glrlm_LongRunHighGrayLevelEmphasis             0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis              0.000e+00
original_glrlm_LowGrayLevelRunEmphasis                 -1.801e+03
original_glrlm_RunEntropy                               0.000e+00
original_glrlm_RunLengthNonUniformity                  0.000e+00
original_glrlm_RunLengthNonUniformityNormalized        0.000e+00
original_glrlm_RunPercentage                            0.000e+00
original_glrlm_RunVariance                              0.000e+00
original_glrlm_ShortRunEmphasis                         0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis            0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis             0.000e+00
original_glszm_GrayLevelNonUniformity                   0.000e+00
original_glszm_GrayLevelNonUniformityNormalized         0.000e+00
original_glszm_GrayLevelVariance                        0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                0.000e+00
original_glszm_LargeAreaEmphasis                        0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis           0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis            0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                 0.000e+00
original_glszm_SizeZoneNonUniformity                    0.000e+00
original_glszm_SizeZoneNonUniformityNormalized         -3.257e+02
original_glszm_SmallAreaEmphasis                        0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis           0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis            0.000e+00
original_glszm_ZoneEntropy                              1.703e+01
original_glszm_ZonePercentage                           0.000e+00
original_glszm_ZoneVariance                             0.000e+00
original_ngtdm_Busyness                                 0.000e+00
original_ngtdm_Coarseness                               0.000e+00
original_ngtdm_Complexity                               0.000e+00
original_ngtdm_Contrast                                 0.000e+00
original_ngtdm_Strength                                 0.000e+00
original_shape_Elongation                              -2.273e+01
original_shape_Flatness                                 6.505e+00
original_shape_LeastAxisLength                          0.000e+00
original_shape_MajorAxisLength                          0.000e+00
```

```
original_shape_Maximum2DDiameterColumn                0.000e+00
original_shape_Maximum2DDiameterRow                   0.000e+00
original_shape_Maximum2DDiameterSlice                 0.000e+00
original_shape_Maximum3DDiameter                      0.000e+00
original_shape_MeshVolume                             0.000e+00
original_shape_MinorAxisLength                        0.000e+00
original_shape_Sphericity                             0.000e+00
original_shape_SurfaceArea                            0.000e+00
original_shape_SurfaceVolumeRatio                     0.000e+00
original_shape_VoxelVolume                            0.000e+00
                                                      exp(coef)
original_firstorder_10Percentile                      0.000e+00
original_firstorder_90Percentile                      0.000e+00
original_firstorder_Energy                                  Inf
original_firstorder_Entropy                                 Inf
original_firstorder_InterquartileRange                      Inf
original_firstorder_Kurtosis                          7.159e+143
original_firstorder_Maximum                           0.000e+00
original_firstorder_Mean                              0.000e+00
original_firstorder_MeanAbsoluteDeviation                   Inf
original_firstorder_Median                                  Inf
original_firstorder_Minimum                           0.000e+00
original_firstorder_Range                             1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation       0.000e+00
original_firstorder_RootMeanSquared                   2.226e-151
original_firstorder_Skewness                                Inf
original_firstorder_TotalEnergy                       1.000e+00
original_firstorder_Uniformity                              Inf
original_firstorder_Variance                                Inf
original_glcm_Autocorrelation                               Inf
original_glcm_ClusterProminence                             Inf
original_glcm_ClusterShade                                  Inf
original_glcm_ClusterTendency                               Inf
original_glcm_Contrast                                0.000e+00
original_glcm_Correlation                                   Inf
original_glcm_DifferenceAverage                             Inf
original_glcm_DifferenceEntropy                       0.000e+00
original_glcm_DifferenceVariance                            Inf
original_glcm_Id                                      0.000e+00
original_glcm_Idm                                           Inf
original_glcm_Idmn                                          Inf
original_glcm_Idn                                     0.000e+00
original_glcm_Imc1                                    0.000e+00
original_glcm_Imc2                                          Inf
original_glcm_InverseVariance                         0.000e+00
original_glcm_JointAverage                                  Inf
original_glcm_JointEnergy                             0.000e+00
original_glcm_JointEntropy                                  Inf
original_glcm_MCC                                     0.000e+00
original_glcm_MaximumProbability                            Inf
original_glcm_SumAverage                              1.000e+00
original_glcm_SumEntropy                              0.000e+00
original_glcm_SumSquares                              1.000e+00
original_gldm_DependenceEntropy                       0.000e+00
original_gldm_DependenceNonUniformity                 0.000e+00
original_gldm_DependenceNonUniformityNormalized             Inf
```

original_gldm_DependenceVariance	Inf
original_gldm_GrayLevelNonUniformity	0.000e+00
original_gldm_GrayLevelVariance	0.000e+00
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	Inf
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	Inf
original_gldm_LowGrayLevelEmphasis	Inf
original_gldm_SmallDependenceEmphasis	Inf
original_gldm_SmallDependenceHighGrayLevelEmphasis	Inf
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000e+00
original_glrlm_GrayLevelNonUniformity	Inf
original_glrlm_GrayLevelNonUniformityNormalized	1.512e+83
original_glrlm_GrayLevelVariance	3.227e+72
original_glrlm_HighGrayLevelRunEmphasis	0.000e+00
original_glrlm_LongRunEmphasis	3.428e+19
original_glrlm_LongRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	1.000e+00
original_glrlm_LowGrayLevelRunEmphasis	0.000e+00
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	1.000e+00
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	3.696e-142
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	2.494e+07
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	1.000e+00
original_ngtdm_Coarseness	1.000e+00
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	1.350e-10
original_shape_Flatness	6.688e+02
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	1.000e+00
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00

original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	3.022e+02
original_firstorder_90Percentile	3.166e+02
original_firstorder_Energy	5.798e+02
original_firstorder_Entropy	1.150e+02
original_firstorder_InterquartileRange	3.180e+02
original_firstorder_Kurtosis	2.249e+02
original_firstorder_Maximum	1.026e+02
original_firstorder_Mean	2.010e+02
original_firstorder_MeanAbsoluteDeviation	2.232e+02
original_firstorder_Median	1.928e+02
original_firstorder_Minimum	1.288e+02
original_firstorder_Range	9.984e+01
original_firstorder_RobustMeanAbsoluteDeviation	3.381e+02
original_firstorder_RootMeanSquared	3.295e+02
original_firstorder_Skewness	9.054e+01
original_firstorder_TotalEnergy	5.798e+02
original_firstorder_Uniformity	1.089e+02
original_firstorder_Variance	5.918e+02
original_glcm_Autocorrelation	1.131e+02
original_glcm_ClusterProminence	1.230e+04
original_glcm_ClusterShade	1.700e+03
original_glcm_ClusterTendency	6.857e+02
original_glcm_Contrast	1.005e+03
original_glcm_Correlation	1.181e+02
original_glcm_DifferenceAverage	1.743e+02
original_glcm_DifferenceEntropy	1.246e+02
original_glcm_DifferenceVariance	1.091e+03
original_glcm_Id	1.351e+02
original_glcm_Idm	1.350e+02
original_glcm_Idmn	4.797e+02
original_glcm_Idn	4.280e+02
original_glcm_Imc1	1.407e+02
original_glcm_Imc2	1.060e+02
original_glcm_InverseVariance	1.538e+02
original_glcm_JointAverage	1.380e+02
original_glcm_JointEnergy	1.243e+02
original_glcm_JointEntropy	1.153e+02
original_glcm_MCC	1.704e+02
original_glcm_MaximumProbability	1.042e+02
original_glcm_SumAverage	1.380e+02
original_glcm_SumEntropy	1.096e+02
original_glcm_SumSquares	7.294e+02
original_gldm_DependenceEntropy	1.619e+02
original_gldm_DependenceNonUniformity	1.791e+02
original_gldm_DependenceNonUniformityNormalized	2.226e+02
original_gldm_DependenceVariance	2.161e+02
original_gldm_GrayLevelNonUniformity	1.399e+02
original_gldm_GrayLevelVariance	5.920e+02
original_gldm_HighGrayLevelEmphasis	1.130e+02

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original_gldm_LargeDependenceEmphasis                    1.597e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis       1.797e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis        8.986e+02
original_gldm_LowGrayLevelEmphasis                       2.367e+03
original_gldm_SmallDependenceEmphasis                    2.203e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis       2.053e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis        1.547e+03
original_glrlm_GrayLevelNonUniformity                    1.727e+02
original_glrlm_GrayLevelNonUniformityNormalized          1.240e+02
original_glrlm_GrayLevelVariance                         4.090e+02
original_glrlm_HighGrayLevelRunEmphasis                  1.140e+02
original_glrlm_LongRunEmphasis                           1.056e+02
original_glrlm_LongRunHighGrayLevelEmphasis              1.478e+02
original_glrlm_LongRunLowGrayLevelEmphasis               9.951e+02
original_glrlm_LowGrayLevelRunEmphasis                   2.783e+03
original_glrlm_RunEntropy                                1.768e+02
original_glrlm_RunLengthNonUniformity                    2.465e+02
original_glrlm_RunLengthNonUniformityNormalized          2.321e+02
original_glrlm_RunPercentage                             1.808e+02
original_glrlm_RunVariance                               1.039e+02
original_glrlm_ShortRunEmphasis                          1.855e+02
original_glrlm_ShortRunHighGrayLevelEmphasis             1.174e+02
original_glrlm_ShortRunLowGrayLevelEmphasis              5.014e+03
original_glszm_GrayLevelNonUniformity                    2.634e+02
original_glszm_GrayLevelNonUniformityNormalized          1.064e+02
original_glszm_GrayLevelVariance                         1.342e+02
original_glszm_HighGrayLevelZoneEmphasis                 1.289e+02
original_glszm_LargeAreaEmphasis                         6.918e+01
original_glszm_LargeAreaHighGrayLevelEmphasis            1.713e+02
original_glszm_LargeAreaLowGrayLevelEmphasis             2.736e+02
original_glszm_LowGrayLevelZoneEmphasis                  1.622e+03
original_glszm_SizeZoneNonUniformity                     1.431e+02
original_glszm_SizeZoneNonUniformityNormalized           1.993e+02
original_glszm_SmallAreaEmphasis                         2.224e+02
original_glszm_SmallAreaHighGrayLevelEmphasis            1.178e+02
original_glszm_SmallAreaLowGrayLevelEmphasis             9.574e+02
original_glszm_ZoneEntropy                               1.006e+02
original_glszm_ZonePercentage                            2.252e+02
original_glszm_ZoneVariance                              6.929e+01
original_ngtdm_Busyness                                  1.986e+02
original_ngtdm_Coarseness                                1.655e+03
original_ngtdm_Complexity                                2.076e+02
original_ngtdm_Contrast                                  1.700e+03
original_ngtdm_Strength                                  6.114e+02
original_shape_Elongation                                1.124e+02
original_shape_Flatness                                  1.718e+02
original_shape_LeastAxisLength                           3.092e+02
original_shape_MajorAxisLength                           2.070e+02
original_shape_Maximum2DDiameterColumn                   3.521e+02
original_shape_Maximum2DDiameterRow                      1.521e+02
original_shape_Maximum2DDiameterSlice                    2.484e+02
original_shape_Maximum3DDiameter                         1.941e+02
original_shape_MeshVolume                                2.911e+02
original_shape_MinorAxisLength                           2.521e+02
original_shape_Sphericity                                1.640e+02
original_shape_SurfaceArea                               3.133e+02
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original_shape_SurfaceVolumeRatio                         2.989e+02
original_shape_VoxelVolume                                2.932e+02
                                                                  z
original_firstorder_10Percentile                           -372.131
original_firstorder_90Percentile                           -129.706
original_firstorder_Energy                                   54.312
original_firstorder_Entropy                                1128.425
original_firstorder_InterquartileRange                      954.749
original_firstorder_Kurtosis                                  1.473
original_firstorder_Maximum                                 -16.952
original_firstorder_Mean                                   -402.638
original_firstorder_MeanAbsoluteDeviation                    85.289
original_firstorder_Median                                  658.927
original_firstorder_Minimum                                -210.730
original_firstorder_Range                                     0.000
original_firstorder_RobustMeanAbsoluteDeviation           -1015.601
original_firstorder_RootMeanSquared                          -1.053
original_firstorder_Skewness                                  9.636
original_firstorder_TotalEnergy                               0.000
original_firstorder_Uniformity                             1807.773
original_firstorder_Variance                                464.331
original_glcm_Autocorrelation                              4842.400
original_glcm_ClusterProminence                             352.609
original_glcm_ClusterShade                                  439.943
original_glcm_ClusterTendency                                42.264
original_glcm_Contrast                                    -1245.137
original_glcm_Correlation                                     7.841
original_glcm_DifferenceAverage                             468.657
original_glcm_DifferenceEntropy                            -995.271
original_glcm_DifferenceVariance                           1277.142
original_glcm_Id                                          -6361.196
original_glcm_Idm                                          5954.076
original_glcm_Idmn                                           90.857
original_glcm_Idn                                           -24.943
original_glcm_Imc1                                          -47.260
original_glcm_Imc2                                          127.526
original_glcm_InverseVariance                             -500.833
original_glcm_JointAverage                                 2435.580
original_glcm_JointEnergy                                 -1254.309
original_glcm_JointEntropy                                 1626.470
original_glcm_MCC                                           -80.140
original_glcm_MaximumProbability                            118.548
original_glcm_SumAverage                                      0.000
original_glcm_SumEntropy                                  -1372.833
original_glcm_SumSquares                                      0.000
original_gldm_DependenceEntropy                            -129.093
original_gldm_DependenceNonUniformity                      -222.332
original_gldm_DependenceNonUniformityNormalized            171.153
original_gldm_DependenceVariance                             73.920
original_gldm_GrayLevelNonUniformity                       -340.757
original_gldm_GrayLevelVariance                           -1090.087
original_gldm_HighGrayLevelEmphasis                       -6966.230
original_gldm_LargeDependenceEmphasis                       231.761
original_gldm_LargeDependenceHighGrayLevelEmphasis          -15.790
original_gldm_LargeDependenceLowGrayLevelEmphasis             6.474
original_gldm_LowGrayLevelEmphasis                          308.467
```

original_gldm_SmallDependenceEmphasis	6.781
original_gldm_SmallDependenceHighGrayLevelEmphasis	81.505
original_gldm_SmallDependenceLowGrayLevelEmphasis	-54.737
original_glrlm_GrayLevelNonUniformity	400.219
original_glrlm_GrayLevelNonUniformityNormalized	1.545
original_glrlm_GrayLevelVariance	0.408
original_glrlm_HighGrayLevelRunEmphasis	-19.642
original_glrlm_LongRunEmphasis	0.426
original_glrlm_LongRunHighGrayLevelEmphasis	0.000
original_glrlm_LongRunLowGrayLevelEmphasis	0.000
original_glrlm_LowGrayLevelRunEmphasis	-0.647
original_glrlm_RunEntropy	0.000
original_glrlm_RunLengthNonUniformity	0.000
original_glrlm_RunLengthNonUniformityNormalized	0.000
original_glrlm_RunPercentage	0.000
original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	-1.634
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.169
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	-0.202
original_shape_Flatness	0.038
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000
	p
original_firstorder_10Percentile	< 2e-16

```
original_firstorder_90Percentile                           < 2e-16
original_firstorder_Energy                                 < 2e-16
original_firstorder_Entropy                                < 2e-16
original_firstorder_InterquartileRange                     < 2e-16
original_firstorder_Kurtosis                                 0.141
original_firstorder_Maximum                                < 2e-16
original_firstorder_Mean                                   < 2e-16
original_firstorder_MeanAbsoluteDeviation                  < 2e-16
original_firstorder_Median                                 < 2e-16
original_firstorder_Minimum                                < 2e-16
original_firstorder_Range                                   1.000
original_firstorder_RobustMeanAbsoluteDeviation            < 2e-16
original_firstorder_RootMeanSquared                         0.292
original_firstorder_Skewness                               < 2e-16
original_firstorder_TotalEnergy                             1.000
original_firstorder_Uniformity                             < 2e-16
original_firstorder_Variance                               < 2e-16
original_glcm_Autocorrelation                              < 2e-16
original_glcm_ClusterProminence                            < 2e-16
original_glcm_ClusterShade                                 < 2e-16
original_glcm_ClusterTendency                              < 2e-16
original_glcm_Contrast                                     < 2e-16
original_glcm_Correlation                                 4.46e-15
original_glcm_DifferenceAverage                            < 2e-16
original_glcm_DifferenceEntropy                            < 2e-16
original_glcm_DifferenceVariance                           < 2e-16
original_glcm_Id                                           < 2e-16
original_glcm_Idm                                          < 2e-16
original_glcm_Idmn                                         < 2e-16
original_glcm_Idn                                          < 2e-16
original_glcm_Imc1                                         < 2e-16
original_glcm_Imc2                                         < 2e-16
original_glcm_InverseVariance                              < 2e-16
original_glcm_JointAverage                                 < 2e-16
original_glcm_JointEnergy                                  < 2e-16
original_glcm_JointEntropy                                 < 2e-16
original_glcm_MCC                                          < 2e-16
original_glcm_MaximumProbability                           < 2e-16
original_glcm_SumAverage                                    1.000
original_glcm_SumEntropy                                   < 2e-16
original_glcm_SumSquares                                    1.000
original_gldm_DependenceEntropy                            < 2e-16
original_gldm_DependenceNonUniformity                      < 2e-16
original_gldm_DependenceNonUniformityNormalized            < 2e-16
original_gldm_DependenceVariance                           < 2e-16
original_gldm_GrayLevelNonUniformity                       < 2e-16
original_gldm_GrayLevelVariance                            < 2e-16
original_gldm_HighGrayLevelEmphasis                        < 2e-16
original_gldm_LargeDependenceEmphasis                      < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis         < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis         9.54e-11
original_gldm_LowGrayLevelEmphasis                         < 2e-16
original_gldm_SmallDependenceEmphasis                     1.19e-11
original_gldm_SmallDependenceHighGrayLevelEmphasis         < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis          < 2e-16
original_glrlm_GrayLevelNonUniformity                      < 2e-16
```

```
original_glrlm_GrayLevelNonUniformityNormalized        0.122
original_glrlm_GrayLevelVariance                       0.683
original_glrlm_HighGrayLevelRunEmphasis              < 2e-16
original_glrlm_LongRunEmphasis                         0.670
original_glrlm_LongRunHighGrayLevelEmphasis           1.000
original_glrlm_LongRunLowGrayLevelEmphasis            1.000
original_glrlm_LowGrayLevelRunEmphasis                0.518
original_glrlm_RunEntropy                             1.000
original_glrlm_RunLengthNonUniformity                 1.000
original_glrlm_RunLengthNonUniformityNormalized       1.000
original_glrlm_RunPercentage                          1.000
original_glrlm_RunVariance                            1.000
original_glrlm_ShortRunEmphasis                       1.000
original_glrlm_ShortRunHighGrayLevelEmphasis          1.000
original_glrlm_ShortRunLowGrayLevelEmphasis           1.000
original_glszm_GrayLevelNonUniformity                 1.000
original_glszm_GrayLevelNonUniformityNormalized       1.000
original_glszm_GrayLevelVariance                      1.000
original_glszm_HighGrayLevelZoneEmphasis              1.000
original_glszm_LargeAreaEmphasis                      1.000
original_glszm_LargeAreaHighGrayLevelEmphasis         1.000
original_glszm_LargeAreaLowGrayLevelEmphasis          1.000
original_glszm_LowGrayLevelZoneEmphasis               1.000
original_glszm_SizeZoneNonUniformity                  1.000
original_glszm_SizeZoneNonUniformityNormalized        0.102
original_glszm_SmallAreaEmphasis                      1.000
original_glszm_SmallAreaHighGrayLevelEmphasis         1.000
original_glszm_SmallAreaLowGrayLevelEmphasis          1.000
original_glszm_ZoneEntropy                            0.866
original_glszm_ZonePercentage                         1.000
original_glszm_ZoneVariance                           1.000
original_ngtdm_Busyness                               1.000
original_ngtdm_Coarseness                             1.000
original_ngtdm_Complexity                             1.000
original_ngtdm_Contrast                               1.000
original_ngtdm_Strength                               1.000
original_shape_Elongation                             0.840
original_shape_Flatness                               0.970
original_shape_LeastAxisLength                        1.000
original_shape_MajorAxisLength                        1.000
original_shape_Maximum2DDiameterColumn                1.000
original_shape_Maximum2DDiameterRow                   1.000
original_shape_Maximum2DDiameterSlice                 1.000
original_shape_Maximum3DDiameter                      1.000
original_shape_MeshVolume                             1.000
original_shape_MinorAxisLength                        1.000
original_shape_Sphericity                             1.000
original_shape_SurfaceArea                            1.000
original_shape_SurfaceVolumeRatio                     1.000
original_shape_VoxelVolume                            1.000


Likelihood ratio test=54.91  on 107 df, p=1
n= 54, number of events= 7


$model_list[[3]]$coxmodels[[7]]
Call:
```

```
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	5.519e+02
original_firstorder_90Percentile	2.574e+02
original_firstorder_Energy	-4.224e+00
original_firstorder_Entropy	-1.422e+02
original_firstorder_InterquartileRange	-3.429e+02
original_firstorder_Kurtosis	-2.344e+01
original_firstorder_Maximum	1.865e+02
original_firstorder_Mean	3.115e+02
original_firstorder_MeanAbsoluteDeviation	7.589e+02
original_firstorder_Median	-4.186e+02
original_firstorder_Minimum	-4.519e+02
original_firstorder_Range	-5.145e+02
original_firstorder_RobustMeanAbsoluteDeviation	7.283e+02
original_firstorder_RootMeanSquared	-1.282e+02
original_firstorder_Skewness	4.640e+01
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	4.126e+01
original_firstorder_Variance	1.007e+03
original_glcm_Autocorrelation	-7.799e+02
original_glcm_ClusterProminence	7.379e+03
original_glcm_ClusterShade	-2.588e+02
original_glcm_ClusterTendency	-1.610e+03
original_glcm_Contrast	-1.300e+04
original_glcm_Correlation	4.731e+01
original_glcm_DifferenceAverage	2.375e+02
original_glcm_DifferenceEntropy	5.274e+02
original_glcm_DifferenceVariance	1.293e+04
original_glcm_Id	4.100e+01
original_glcm_Idm	3.434e+02
original_glcm_Idmn	-1.265e+01
original_glcm_Idn	0.000e+00
original_glcm_Imc1	-9.851e+00
original_glcm_Imc2	2.606e+01
original_glcm_InverseVariance	0.000e+00
original_glcm_JointAverage	2.126e+02
original_glcm_JointEnergy	0.000e+00
original_glcm_JointEntropy	0.000e+00
original_glcm_MCC	2.709e+01
original_glcm_MaximumProbability	0.000e+00
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	0.000e+00
original_glcm_SumSquares	1.721e+00
original_gldm_DependenceEntropy	-2.817e-01
original_gldm_DependenceNonUniformity	2.899e+00
original_gldm_DependenceNonUniformityNormalized	1.833e+00
original_gldm_DependenceVariance	-1.642e+00
original_gldm_GrayLevelNonUniformity	3.323e+01
original_gldm_GrayLevelVariance	0.000e+00
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	0.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000e+00

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original_gldm_LargeDependenceLowGrayLevelEmphasis        4.105e+00
original_gldm_LowGrayLevelEmphasis                       0.000e+00
original_gldm_SmallDependenceEmphasis                    0.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis       0.000e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis       -6.227e+00
original_glrlm_GrayLevelNonUniformity                   -6.853e+00
original_glrlm_GrayLevelNonUniformityNormalized          0.000e+00
original_glrlm_GrayLevelVariance                         0.000e+00
original_glrlm_HighGrayLevelRunEmphasis                  0.000e+00
original_glrlm_LongRunEmphasis                           0.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis              0.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis               0.000e+00
original_glrlm_LowGrayLevelRunEmphasis                   9.508e+00
original_glrlm_RunEntropy                                0.000e+00
original_glrlm_RunLengthNonUniformity                    0.000e+00
original_glrlm_RunLengthNonUniformityNormalized          0.000e+00
original_glrlm_RunPercentage                             0.000e+00
original_glrlm_RunVariance                               1.478e+01
original_glrlm_ShortRunEmphasis                          0.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis             0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis              0.000e+00
original_glszm_GrayLevelNonUniformity                    0.000e+00
original_glszm_GrayLevelNonUniformityNormalized          0.000e+00
original_glszm_GrayLevelVariance                         0.000e+00
original_glszm_HighGrayLevelZoneEmphasis                 0.000e+00
original_glszm_LargeAreaEmphasis                         0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis            0.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis             2.359e-01
original_glszm_LowGrayLevelZoneEmphasis                  0.000e+00
original_glszm_SizeZoneNonUniformity                     0.000e+00
original_glszm_SizeZoneNonUniformityNormalized           0.000e+00
original_glszm_SmallAreaEmphasis                         0.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis            0.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis             0.000e+00
original_glszm_ZoneEntropy                               3.877e+00
original_glszm_ZonePercentage                            0.000e+00
original_glszm_ZoneVariance                              0.000e+00
original_ngtdm_Busyness                                  8.246e-01
original_ngtdm_Coarseness                               -1.798e+00
original_ngtdm_Complexity                                0.000e+00
original_ngtdm_Contrast                                  0.000e+00
original_ngtdm_Strength                                  0.000e+00
original_shape_Elongation                                1.084e+00
original_shape_Flatness                                  0.000e+00
original_shape_LeastAxisLength                           0.000e+00
original_shape_MajorAxisLength                          -7.334e+00
original_shape_Maximum2DDiameterColumn                   0.000e+00
original_shape_Maximum2DDiameterRow                      0.000e+00
original_shape_Maximum2DDiameterSlice                    0.000e+00
original_shape_Maximum3DDiameter                         0.000e+00
original_shape_MeshVolume                                0.000e+00
original_shape_MinorAxisLength                           0.000e+00
original_shape_Sphericity                                0.000e+00
original_shape_SurfaceArea                               0.000e+00
original_shape_SurfaceVolumeRatio                        0.000e+00
original_shape_VoxelVolume                               0.000e+00
```

	exp(coef)
original_firstorder_10Percentile	5.027e+239
original_firstorder_90Percentile	6.154e+111
original_firstorder_Energy	1.463e-02
original_firstorder_Entropy	1.786e-62
original_firstorder_InterquartileRange	1.243e-149
original_firstorder_Kurtosis	6.608e-11
original_firstorder_Maximum	9.685e+80
original_firstorder_Mean	1.852e+135
original_firstorder_MeanAbsoluteDeviation	Inf
original_firstorder_Median	1.683e-182
original_firstorder_Minimum	5.692e-197
original_firstorder_Range	3.449e-224
original_firstorder_RobustMeanAbsoluteDeviation	Inf
original_firstorder_RootMeanSquared	2.078e-56
original_firstorder_Skewness	1.415e+20
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	8.284e+17
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	3.839e-113
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	0.000e+00
original_glcm_Correlation	3.529e+20
original_glcm_DifferenceAverage	1.410e+103
original_glcm_DifferenceEntropy	1.134e+229
original_glcm_DifferenceVariance	Inf
original_glcm_Id	6.398e+17
original_glcm_Idm	1.365e+149
original_glcm_Idmn	3.192e-06
original_glcm_Idn	1.000e+00
original_glcm_Imc1	5.268e-05
original_glcm_Imc2	2.073e+11
original_glcm_InverseVariance	1.000e+00
original_glcm_JointAverage	2.130e+92
original_glcm_JointEnergy	1.000e+00
original_glcm_JointEntropy	1.000e+00
original_glcm_MCC	5.794e+11
original_glcm_MaximumProbability	1.000e+00
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	1.000e+00
original_glcm_SumSquares	5.592e+00
original_gldm_DependenceEntropy	7.545e-01
original_gldm_DependenceNonUniformity	1.816e+01
original_gldm_DependenceNonUniformityNormalized	6.250e+00
original_gldm_DependenceVariance	1.936e-01
original_gldm_GrayLevelNonUniformity	2.694e+14
original_gldm_GrayLevelVariance	1.000e+00
original_gldm_HighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceEmphasis	1.000e+00
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000e+00
original_gldm_LargeDependenceLowGrayLevelEmphasis	6.065e+01
original_gldm_LowGrayLevelEmphasis	1.000e+00
original_gldm_SmallDependenceEmphasis	1.000e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000e+00

original_gldm_SmallDependenceLowGrayLevelEmphasis	1.976e-03
original_glrlm_GrayLevelNonUniformity	1.056e-03
original_glrlm_GrayLevelNonUniformityNormalized	1.000e+00
original_glrlm_GrayLevelVariance	1.000e+00
original_glrlm_HighGrayLevelRunEmphasis	1.000e+00
original_glrlm_LongRunEmphasis	1.000e+00
original_glrlm_LongRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_LongRunLowGrayLevelEmphasis	1.000e+00
original_glrlm_LowGrayLevelRunEmphasis	1.347e+04
original_glrlm_RunEntropy	1.000e+00
original_glrlm_RunLengthNonUniformity	1.000e+00
original_glrlm_RunLengthNonUniformityNormalized	1.000e+00
original_glrlm_RunPercentage	1.000e+00
original_glrlm_RunVariance	2.628e+06
original_glrlm_ShortRunEmphasis	1.000e+00
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000e+00
original_glszm_GrayLevelNonUniformity	1.000e+00
original_glszm_GrayLevelNonUniformityNormalized	1.000e+00
original_glszm_GrayLevelVariance	1.000e+00
original_glszm_HighGrayLevelZoneEmphasis	1.000e+00
original_glszm_LargeAreaEmphasis	1.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	1.266e+00
original_glszm_LowGrayLevelZoneEmphasis	1.000e+00
original_glszm_SizeZoneNonUniformity	1.000e+00
original_glszm_SizeZoneNonUniformityNormalized	1.000e+00
original_glszm_SmallAreaEmphasis	1.000e+00
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000e+00
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000e+00
original_glszm_ZoneEntropy	4.827e+01
original_glszm_ZonePercentage	1.000e+00
original_glszm_ZoneVariance	1.000e+00
original_ngtdm_Busyness	2.281e+00
original_ngtdm_Coarseness	1.657e-01
original_ngtdm_Complexity	1.000e+00
original_ngtdm_Contrast	1.000e+00
original_ngtdm_Strength	1.000e+00
original_shape_Elongation	2.957e+00
original_shape_Flatness	1.000e+00
original_shape_LeastAxisLength	1.000e+00
original_shape_MajorAxisLength	6.528e-04
original_shape_Maximum2DDiameterColumn	1.000e+00
original_shape_Maximum2DDiameterRow	1.000e+00
original_shape_Maximum2DDiameterSlice	1.000e+00
original_shape_Maximum3DDiameter	1.000e+00
original_shape_MeshVolume	1.000e+00
original_shape_MinorAxisLength	1.000e+00
original_shape_Sphericity	1.000e+00
original_shape_SurfaceArea	1.000e+00
original_shape_SurfaceVolumeRatio	1.000e+00
original_shape_VoxelVolume	1.000e+00
	se(coef)
original_firstorder_10Percentile	2.025e+03
original_firstorder_90Percentile	1.328e+04
original_firstorder_Energy	1.868e+03

original_firstorder_Entropy	4.140e+03
original_firstorder_InterquartileRange	1.164e+04
original_firstorder_Kurtosis	2.343e+03
original_firstorder_Maximum	2.151e+03
original_firstorder_Mean	3.432e+03
original_firstorder_MeanAbsoluteDeviation	2.603e+03
original_firstorder_Median	6.619e+03
original_firstorder_Minimum	4.629e+03
original_firstorder_Range	2.512e+03
original_firstorder_RobustMeanAbsoluteDeviation	6.789e+03
original_firstorder_RootMeanSquared	2.666e+03
original_firstorder_Skewness	2.069e+03
original_firstorder_TotalEnergy	1.868e+03
original_firstorder_Uniformity	4.398e+03
original_firstorder_Variance	3.840e+03
original_glcm_Autocorrelation	5.516e+03
original_glcm_ClusterProminence	3.053e+04
original_glcm_ClusterShade	5.438e+03
original_glcm_ClusterTendency	3.180e+03
original_glcm_Contrast	4.011e+04
original_glcm_Correlation	4.529e+03
original_glcm_DifferenceAverage	8.427e+03
original_glcm_DifferenceEntropy	6.763e+03
original_glcm_DifferenceVariance	4.257e+04
original_glcm_Id	9.329e+03
original_glcm_Idm	9.468e+03
original_glcm_Idmn	7.508e+03
original_glcm_Idn	4.941e+03
original_glcm_Imc1	3.937e+03
original_glcm_Imc2	4.632e+03
original_glcm_InverseVariance	8.853e+03
original_glcm_JointAverage	5.148e+03
original_glcm_JointEnergy	4.953e+03
original_glcm_JointEntropy	4.768e+03
original_glcm_MCC	4.196e+03
original_glcm_MaximumProbability	5.613e+03
original_glcm_SumAverage	5.148e+03
original_glcm_SumEntropy	3.969e+03
original_glcm_SumSquares	3.927e+03
original_gldm_DependenceEntropy	5.270e+03
original_gldm_DependenceNonUniformity	4.051e+03
original_gldm_DependenceNonUniformityNormalized	7.479e+03
original_gldm_DependenceVariance	7.074e+03
original_gldm_GrayLevelNonUniformity	7.698e+03
original_gldm_GrayLevelVariance	3.830e+03
original_gldm_HighGrayLevelEmphasis	5.471e+03
original_gldm_LargeDependenceEmphasis	7.230e+03
original_gldm_LargeDependenceHighGrayLevelEmphasis	6.671e+03
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.012e+04
original_gldm_LowGrayLevelEmphasis	2.895e+03
original_gldm_SmallDependenceEmphasis	6.194e+03
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.281e+03
original_gldm_SmallDependenceLowGrayLevelEmphasis	4.800e+03
original_glrlm_GrayLevelNonUniformity	5.247e+03
original_glrlm_GrayLevelNonUniformityNormalized	4.191e+03
original_glrlm_GrayLevelVariance	3.821e+03

original_glrlm_HighGrayLevelRunEmphasis	5.487e+03
original_glrlm_LongRunEmphasis	8.466e+03
original_glrlm_LongRunHighGrayLevelEmphasis	7.851e+03
original_glrlm_LongRunLowGrayLevelEmphasis	4.102e+03
original_glrlm_LowGrayLevelRunEmphasis	3.294e+03
original_glrlm_RunEntropy	4.683e+03
original_glrlm_RunLengthNonUniformity	2.925e+03
original_glrlm_RunLengthNonUniformityNormalized	6.632e+03
original_glrlm_RunPercentage	6.999e+03
original_glrlm_RunVariance	9.148e+03
original_glrlm_ShortRunEmphasis	6.805e+03
original_glrlm_ShortRunHighGrayLevelEmphasis	4.992e+03
original_glrlm_ShortRunLowGrayLevelEmphasis	2.962e+03
original_glszm_GrayLevelNonUniformity	3.592e+03
original_glszm_GrayLevelNonUniformityNormalized	4.435e+03
original_glszm_GrayLevelVariance	3.801e+03
original_glszm_HighGrayLevelZoneEmphasis	5.422e+03
original_glszm_LargeAreaEmphasis	9.742e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	1.737e+04
original_glszm_LargeAreaLowGrayLevelEmphasis	9.959e+03
original_glszm_LowGrayLevelZoneEmphasis	5.934e+03
original_glszm_SizeZoneNonUniformity	2.467e+03
original_glszm_SizeZoneNonUniformityNormalized	6.107e+03
original_glszm_SmallAreaEmphasis	6.170e+03
original_glszm_SmallAreaHighGrayLevelEmphasis	5.392e+03
original_glszm_SmallAreaLowGrayLevelEmphasis	4.418e+03
original_glszm_ZoneEntropy	3.399e+03
original_glszm_ZonePercentage	6.325e+03
original_glszm_ZoneVariance	9.764e+03
original_ngtdm_Busyness	8.094e+03
original_ngtdm_Coarseness	6.276e+03
original_ngtdm_Complexity	9.982e+03
original_ngtdm_Contrast	1.894e+04
original_ngtdm_Strength	3.804e+03
original_shape_Elongation	5.381e+03
original_shape_Flatness	6.458e+03
original_shape_LeastAxisLength	3.034e+03
original_shape_MajorAxisLength	2.675e+03
original_shape_Maximum2DDiameterColumn	2.188e+03
original_shape_Maximum2DDiameterRow	3.756e+03
original_shape_Maximum2DDiameterSlice	2.517e+03
original_shape_Maximum3DDiameter	2.054e+03
original_shape_MeshVolume	5.789e+03
original_shape_MinorAxisLength	2.256e+03
original_shape_Sphericity	6.951e+03
original_shape_SurfaceArea	2.440e+03
original_shape_SurfaceVolumeRatio	6.610e+03
original_shape_VoxelVolume	5.686e+03

	z
original_firstorder_10Percentile	0.273
original_firstorder_90Percentile	0.019
original_firstorder_Energy	-0.002
original_firstorder_Entropy	-0.034
original_firstorder_InterquartileRange	-0.029
original_firstorder_Kurtosis	-0.010
original_firstorder_Maximum	0.087

```
original_firstorder_Mean                                          0.091
original_firstorder_MeanAbsoluteDeviation                         0.292
original_firstorder_Median                                       -0.063
original_firstorder_Minimum                                      -0.098
original_firstorder_Range                                        -0.205
original_firstorder_RobustMeanAbsoluteDeviation                   0.107
original_firstorder_RootMeanSquared                              -0.048
original_firstorder_Skewness                                      0.022
original_firstorder_TotalEnergy                                   0.000
original_firstorder_Uniformity                                    0.009
original_firstorder_Variance                                      0.262
original_glcm_Autocorrelation                                    -0.141
original_glcm_ClusterProminence                                   0.242
original_glcm_ClusterShade                                       -0.048
original_glcm_ClusterTendency                                    -0.506
original_glcm_Contrast                                           -0.324
original_glcm_Correlation                                         0.010
original_glcm_DifferenceAverage                                   0.028
original_glcm_DifferenceEntropy                                   0.078
original_glcm_DifferenceVariance                                  0.304
original_glcm_Id                                                  0.004
original_glcm_Idm                                                 0.036
original_glcm_Idmn                                               -0.002
original_glcm_Idn                                                 0.000
original_glcm_Imc1                                               -0.003
original_glcm_Imc2                                                0.006
original_glcm_InverseVariance                                     0.000
original_glcm_JointAverage                                        0.041
original_glcm_JointEnergy                                         0.000
original_glcm_JointEntropy                                        0.000
original_glcm_MCC                                                 0.006
original_glcm_MaximumProbability                                  0.000
original_glcm_SumAverage                                          0.000
original_glcm_SumEntropy                                          0.000
original_glcm_SumSquares                                          0.000
original_gldm_DependenceEntropy                                   0.000
original_gldm_DependenceNonUniformity                             0.001
original_gldm_DependenceNonUniformityNormalized                   0.000
original_gldm_DependenceVariance                                  0.000
original_gldm_GrayLevelNonUniformity                              0.004
original_gldm_GrayLevelVariance                                   0.000
original_gldm_HighGrayLevelEmphasis                               0.000
original_gldm_LargeDependenceEmphasis                             0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis                0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis                 0.000
original_gldm_LowGrayLevelEmphasis                                0.000
original_gldm_SmallDependenceEmphasis                             0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis                0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis                -0.001
original_glrlm_GrayLevelNonUniformity                            -0.001
original_glrlm_GrayLevelNonUniformityNormalized                   0.000
original_glrlm_GrayLevelVariance                                  0.000
original_glrlm_HighGrayLevelRunEmphasis                           0.000
original_glrlm_LongRunEmphasis                                    0.000
original_glrlm_LongRunHighGrayLevelEmphasis                       0.000
original_glrlm_LongRunLowGrayLevelEmphasis                        0.000
```

original_glrlm_LowGrayLevelRunEmphasis	0.003
original_glrlm_RunEntropy	0.000
original_glrlm_RunLengthNonUniformity	0.000
original_glrlm_RunLengthNonUniformityNormalized	0.000
original_glrlm_RunPercentage	0.000
original_glrlm_RunVariance	0.002
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.001
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	-0.003
original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	0.000
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.000

	p
original_firstorder_10Percentile	0.785
original_firstorder_90Percentile	0.985
original_firstorder_Energy	0.998
original_firstorder_Entropy	0.973
original_firstorder_InterquartileRange	0.977
original_firstorder_Kurtosis	0.992
original_firstorder_Maximum	0.931
original_firstorder_Mean	0.928
original_firstorder_MeanAbsoluteDeviation	0.771
original_firstorder_Median	0.950
original_firstorder_Minimum	0.922

original_firstorder_Range	0.838
original_firstorder_RobustMeanAbsoluteDeviation	0.915
original_firstorder_RootMeanSquared	0.962
original_firstorder_Skewness	0.982
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	0.993
original_firstorder_Variance	0.793
original_glcm_Autocorrelation	0.888
original_glcm_ClusterProminence	0.809
original_glcm_ClusterShade	0.962
original_glcm_ClusterTendency	0.613
original_glcm_Contrast	0.746
original_glcm_Correlation	0.992
original_glcm_DifferenceAverage	0.978
original_glcm_DifferenceEntropy	0.938
original_glcm_DifferenceVariance	0.761
original_glcm_Id	0.996
original_glcm_Idm	0.971
original_glcm_Idmn	0.999
original_glcm_Idn	1.000
original_glcm_Imc1	0.998
original_glcm_Imc2	0.996
original_glcm_InverseVariance	1.000
original_glcm_JointAverage	0.967
original_glcm_JointEnergy	1.000
original_glcm_JointEntropy	1.000
original_glcm_MCC	0.995
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	1.000
original_glcm_SumSquares	1.000
original_gldm_DependenceEntropy	1.000
original_gldm_DependenceNonUniformity	0.999
original_gldm_DependenceNonUniformityNormalized	1.000
original_gldm_DependenceVariance	1.000
original_gldm_GrayLevelNonUniformity	0.997
original_gldm_GrayLevelVariance	1.000
original_gldm_HighGrayLevelEmphasis	1.000
original_gldm_LargeDependenceEmphasis	1.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.000
original_gldm_LowGrayLevelEmphasis	1.000
original_gldm_SmallDependenceEmphasis	1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.999
original_glrlm_GrayLevelNonUniformity	0.999
original_glrlm_GrayLevelNonUniformityNormalized	1.000
original_glrlm_GrayLevelVariance	1.000
original_glrlm_HighGrayLevelRunEmphasis	1.000
original_glrlm_LongRunEmphasis	1.000
original_glrlm_LongRunHighGrayLevelEmphasis	1.000
original_glrlm_LongRunLowGrayLevelEmphasis	1.000
original_glrlm_LowGrayLevelRunEmphasis	0.998
original_glrlm_RunEntropy	1.000
original_glrlm_RunLengthNonUniformity	1.000
original_glrlm_RunLengthNonUniformityNormalized	1.000

```
original_glrlm_RunPercentage                          1.000
original_glrlm_RunVariance                            0.999
original_glrlm_ShortRunEmphasis                       1.000
original_glrlm_ShortRunHighGrayLevelEmphasis          1.000
original_glrlm_ShortRunLowGrayLevelEmphasis           1.000
original_glszm_GrayLevelNonUniformity                 1.000
original_glszm_GrayLevelNonUniformityNormalized       1.000
original_glszm_GrayLevelVariance                      1.000
original_glszm_HighGrayLevelZoneEmphasis              1.000
original_glszm_LargeAreaEmphasis                      1.000
original_glszm_LargeAreaHighGrayLevelEmphasis         1.000
original_glszm_LargeAreaLowGrayLevelEmphasis          1.000
original_glszm_LowGrayLevelZoneEmphasis               1.000
original_glszm_SizeZoneNonUniformity                  1.000
original_glszm_SizeZoneNonUniformityNormalized        1.000
original_glszm_SmallAreaEmphasis                      1.000
original_glszm_SmallAreaHighGrayLevelEmphasis         1.000
original_glszm_SmallAreaLowGrayLevelEmphasis          1.000
original_glszm_ZoneEntropy                            0.999
original_glszm_ZonePercentage                         1.000
original_glszm_ZoneVariance                           1.000
original_ngtdm_Busyness                               1.000
original_ngtdm_Coarseness                             1.000
original_ngtdm_Complexity                             1.000
original_ngtdm_Contrast                               1.000
original_ngtdm_Strength                               1.000
original_shape_Elongation                             1.000
original_shape_Flatness                               1.000
original_shape_LeastAxisLength                        1.000
original_shape_MajorAxisLength                        0.998
original_shape_Maximum2DDiameterColumn                1.000
original_shape_Maximum2DDiameterRow                   1.000
original_shape_Maximum2DDiameterSlice                 1.000
original_shape_Maximum3DDiameter                      1.000
original_shape_MeshVolume                             1.000
original_shape_MinorAxisLength                        1.000
original_shape_Sphericity                             1.000
original_shape_SurfaceArea                            1.000
original_shape_SurfaceVolumeRatio                     1.000
original_shape_VoxelVolume                            1.000


Likelihood ratio test=43.46  on 107 df, p=1
n= 26, number of events= 7



$model_list[[3]]$clusters
[1] 3.038082 1.100084 0.094832 0.282250 1.329060 0.966207
[7] 1.898649



$model_list[[4]]
$model_list[[4]]$vimp10
                              original_glcm_Idmn
                                     0.012059233
                 original_glszm_GrayLevelVariance
                                     0.011362803
```

```
                  original_glszm_SmallAreaHighGrayLevelEmphasis
                                      0.011179532
             original_glszm_GrayLevelNonUniformityNormalized
                                      0.010629719
       original_gldm_LargeDependenceHighGrayLevelEmphasis
                                      0.010446448
                                 original_firstorder_Range
                                      0.009163551
                  original_glszm_HighGrayLevelZoneEmphasis
                                      0.009126897
                             original_firstorder_Maximum
                                      0.008906972
                                        original_glcm_Idn
                                      0.006854336
                   original_glszm_SizeZoneNonUniformity
                                      0.005571439
            original_glrlm_ShortRunLowGrayLevelEmphasis
                                      0.004948318
                 original_glrlm_GrayLevelNonUniformity
                                      0.004838355
            original_glrlm_LongRunHighGrayLevelEmphasis
                                      0.004765047
                           original_ngtdm_Complexity
                                      0.004435159
       original_glszm_LargeAreaHighGrayLevelEmphasis
                                      0.004288542


$model_list[[4]]$treemodel
n= 360

node), split, n, deviance, yval
      * denotes terminal node

1) root 360 251.34380 1.0000000
  2) original_glszm_GrayLevelVariance< 0.04229695 234   73.02744 0.3782755
    4) original_glszm_GrayLevelVariance>=-0.4619976 114   19.88906 0.2045376 *
    5) original_glszm_GrayLevelVariance< -0.4619976 120   49.83017 0.5839564 *
  3) original_glszm_GrayLevelVariance>=0.04229695 126 144.79850 2.2987410 *

$model_list[[4]]$coxmodels
$model_list[[4]]$coxmodels[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                 coef
original_firstorder_10Percentile              -1.025e+02
original_firstorder_90Percentile               1.078e+02
original_firstorder_Energy                    -5.806e+01
original_firstorder_Entropy                   -2.056e+02
original_firstorder_InterquartileRange         3.832e+02
original_firstorder_Kurtosis                  -4.940e+00
original_firstorder_Maximum                    6.502e+01
original_firstorder_Mean                      -1.120e+02
original_firstorder_MeanAbsoluteDeviation      8.793e+01
```

```
original_firstorder_Median                                   2.233e+01
original_firstorder_Minimum                                  1.242e+02
original_firstorder_Range                                    0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation             -5.649e+02
original_firstorder_RootMeanSquared                          3.350e+00
original_firstorder_Skewness                                -3.062e+00
original_firstorder_TotalEnergy                              0.000e+00
original_firstorder_Uniformity                             -1.708e+02
original_firstorder_Variance                               -3.152e+02
original_glcm_Autocorrelation                               1.666e+03
original_glcm_ClusterProminence                            -1.694e+03
original_glcm_ClusterShade                                 -1.303e+02
original_glcm_ClusterTendency                               2.017e+02
original_glcm_Contrast                                      6.116e+03
original_glcm_Correlation                                  -2.243e+01
original_glcm_DifferenceAverage                            -1.608e+03
original_glcm_DifferenceEntropy                             1.192e+02
original_glcm_DifferenceVariance                           -3.388e+03
original_glcm_Id                                           -6.169e+03
original_glcm_Idm                                           4.914e+03
original_glcm_Idmn                                         -1.105e+01
original_glcm_Idn                                          -1.357e+02
original_glcm_Imc1                                         -1.711e+01
original_glcm_Imc2                                          2.989e+01
original_glcm_InverseVariance                             -5.705e+02
original_glcm_JointAverage                                 -1.376e+02
original_glcm_JointEnergy                                   7.018e+01
original_glcm_JointEntropy                                 -2.990e+02
original_glcm_MCC                                           2.985e+00
original_glcm_MaximumProbability                           2.748e+01
original_glcm_SumAverage                                    0.000e+00
original_glcm_SumEntropy                                    1.537e+02
original_glcm_SumSquares                                    0.000e+00
original_gldm_DependenceEntropy                            1.411e+02
original_gldm_DependenceNonUniformity                     -4.043e+01
original_gldm_DependenceNonUniformityNormalized            7.860e+01
original_gldm_DependenceVariance                          -7.239e+01
original_gldm_GrayLevelNonUniformity                       7.650e+01
original_gldm_GrayLevelVariance                            6.466e-01
original_gldm_HighGrayLevelEmphasis                       -1.669e+03
original_gldm_LargeDependenceEmphasis                     -1.181e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis        -1.772e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis          1.676e+02
original_gldm_LowGrayLevelEmphasis                         7.606e+02
original_gldm_SmallDependenceEmphasis                      1.435e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis        -2.711e+01
original_gldm_SmallDependenceLowGrayLevelEmphasis          2.421e+02
original_glrlm_GrayLevelNonUniformity                      1.941e+01
original_glrlm_GrayLevelNonUniformityNormalized           -6.411e+01
original_glrlm_GrayLevelVariance                           2.555e+02
original_glrlm_HighGrayLevelRunEmphasis                    4.917e+02
original_glrlm_LongRunEmphasis                             1.514e+02
original_glrlm_LongRunHighGrayLevelEmphasis                1.567e+02
original_glrlm_LongRunLowGrayLevelEmphasis                 4.551e+02
original_glrlm_LowGrayLevelRunEmphasis                    -3.789e+02
original_glrlm_RunEntropy                                 -1.186e+02
```

original_glrlm_RunLengthNonUniformity	1.735e+02
original_glrlm_RunLengthNonUniformityNormalized	-9.222e+01
original_glrlm_RunPercentage	-9.289e+02
original_glrlm_RunVariance	-3.598e+02
original_glrlm_ShortRunEmphasis	5.319e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	-2.868e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	-9.320e+02
original_glszm_GrayLevelNonUniformity	-2.364e+00
original_glszm_GrayLevelNonUniformityNormalized	7.094e+01
original_glszm_GrayLevelVariance	-6.408e+01
original_glszm_HighGrayLevelZoneEmphasis	1.586e+01
original_glszm_LargeAreaEmphasis	4.239e+03
original_glszm_LargeAreaHighGrayLevelEmphasis	9.380e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	6.967e+01
original_glszm_LowGrayLevelZoneEmphasis	4.243e+02
original_glszm_SizeZoneNonUniformity	2.129e+01
original_glszm_SizeZoneNonUniformityNormalized	-1.656e+01
original_glszm_SmallAreaEmphasis	1.911e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	5.107e+01
original_glszm_SmallAreaLowGrayLevelEmphasis	-2.421e+02
original_glszm_ZoneEntropy	6.405e+01
original_glszm_ZonePercentage	-9.550e+01
original_glszm_ZoneVariance	-4.263e+03
original_ngtdm_Busyness	-1.030e+02
original_ngtdm_Coarseness	-4.565e+00
original_ngtdm_Complexity	-6.158e+01
original_ngtdm_Contrast	-3.014e+02
original_ngtdm_Strength	-1.799e+01
original_shape_Elongation	1.029e+01
original_shape_Flatness	-1.228e+01
original_shape_LeastAxisLength	1.737e+01
original_shape_MajorAxisLength	-1.607e+01
original_shape_Maximum2DDiameterColumn	1.358e+01
original_shape_Maximum2DDiameterRow	1.948e+01
original_shape_Maximum2DDiameterSlice	-1.007e+01
original_shape_Maximum3DDiameter	5.490e+00
original_shape_MeshVolume	2.260e+03
original_shape_MinorAxisLength	1.344e+01
original_shape_Sphericity	2.190e+01
original_shape_SurfaceArea	-9.704e+01
original_shape_SurfaceVolumeRatio	1.775e+02
original_shape_VoxelVolume	-2.403e+03
	exp(coef)
original_firstorder_10Percentile	2.986e-45
original_firstorder_90Percentile	6.493e+46
original_firstorder_Energy	6.117e-26
original_firstorder_Entropy	5.064e-90
original_firstorder_InterquartileRange	2.598e+166
original_firstorder_Kurtosis	7.153e-03
original_firstorder_Maximum	1.724e+28
original_firstorder_Mean	2.280e-49
original_firstorder_MeanAbsoluteDeviation	1.535e+38
original_firstorder_Median	5.006e+09
original_firstorder_Minimum	8.469e+53
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	4.658e-246

original_firstorder_RootMeanSquared	2.849e+01
original_firstorder_Skewness	4.678e-02
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	6.387e-75
original_firstorder_Variance	1.330e-137
original_glcm_Autocorrelation	Inf
original_glcm_ClusterProminence	0.000e+00
original_glcm_ClusterShade	2.520e-57
original_glcm_ClusterTendency	3.905e+87
original_glcm_Contrast	Inf
original_glcm_Correlation	1.821e-10
original_glcm_DifferenceAverage	0.000e+00
original_glcm_DifferenceEntropy	5.584e+51
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	0.000e+00
original_glcm_Idm	Inf
original_glcm_Idmn	1.581e-05
original_glcm_Idn	1.200e-59
original_glcm_Imc1	3.695e-08
original_glcm_Imc2	9.620e+12
original_glcm_InverseVariance	1.638e-248
original_glcm_JointAverage	1.733e-60
original_glcm_JointEnergy	3.021e+30
original_glcm_JointEntropy	1.434e-130
original_glcm_MCC	1.978e+01
original_glcm_MaximumProbability	8.630e+11
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	5.907e+66
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	1.815e+61
original_gldm_DependenceNonUniformity	2.755e-18
original_gldm_DependenceNonUniformityNormalized	1.370e+34
original_gldm_DependenceVariance	3.636e-32
original_gldm_GrayLevelNonUniformity	1.680e+33
original_gldm_GrayLevelVariance	1.909e+00
original_gldm_HighGrayLevelEmphasis	0.000e+00
original_gldm_LargeDependenceEmphasis	4.892e-52
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.160e-77
original_gldm_LargeDependenceLowGrayLevelEmphasis	5.975e+72
original_gldm_LowGrayLevelEmphasis	Inf
original_gldm_SmallDependenceEmphasis	2.050e+62
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.684e-12
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.422e+105
original_glrlm_GrayLevelNonUniformity	2.701e+08
original_glrlm_GrayLevelNonUniformityNormalized	1.439e-28
original_glrlm_GrayLevelVariance	9.176e+110
original_glrlm_HighGrayLevelRunEmphasis	3.656e+213
original_glrlm_LongRunEmphasis	5.841e+65
original_glrlm_LongRunHighGrayLevelEmphasis	1.089e+68
original_glrlm_LongRunLowGrayLevelEmphasis	4.557e+197
original_glrlm_LowGrayLevelRunEmphasis	2.868e-165
original_glrlm_RunEntropy	2.982e-52
original_glrlm_RunLengthNonUniformity	2.315e+75
original_glrlm_RunLengthNonUniformityNormalized	8.891e-41
original_glrlm_RunPercentage	0.000e+00
original_glrlm_RunVariance	5.417e-157

original_glrlm_ShortRunEmphasis	9.598e+230
original_glrlm_ShortRunHighGrayLevelEmphasis	2.847e-125
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000e+00
original_glszm_GrayLevelNonUniformity	9.404e-02
original_glszm_GrayLevelNonUniformityNormalized	6.438e+30
original_glszm_GrayLevelVariance	1.481e-28
original_glszm_HighGrayLevelZoneEmphasis	7.756e+06
original_glszm_LargeAreaEmphasis	Inf
original_glszm_LargeAreaHighGrayLevelEmphasis	1.185e+04
original_glszm_LargeAreaLowGrayLevelEmphasis	1.806e+30
original_glszm_LowGrayLevelZoneEmphasis	1.826e+184
original_glszm_SizeZoneNonUniformity	1.765e+09
original_glszm_SizeZoneNonUniformityNormalized	6.458e-08
original_glszm_SmallAreaEmphasis	2.001e+08
original_glszm_SmallAreaHighGrayLevelEmphasis	1.505e+22
original_glszm_SmallAreaLowGrayLevelEmphasis	6.979e-106
original_glszm_ZoneEntropy	6.531e+27
original_glszm_ZonePercentage	3.360e-42
original_glszm_ZoneVariance	0.000e+00
original_ngtdm_Busyness	1.889e-45
original_ngtdm_Coarseness	1.040e-02
original_ngtdm_Complexity	1.799e-27
original_ngtdm_Contrast	1.212e-131
original_ngtdm_Strength	1.535e-08
original_shape_Elongation	2.942e+04
original_shape_Flatness	4.626e-06
original_shape_LeastAxisLength	3.482e+07
original_shape_MajorAxisLength	1.045e-07
original_shape_Maximum2DDiameterColumn	7.910e+05
original_shape_Maximum2DDiameterRow	2.887e+08
original_shape_Maximum2DDiameterSlice	4.222e-05
original_shape_Maximum3DDiameter	2.422e+02
original_shape_MeshVolume	Inf
original_shape_MinorAxisLength	6.839e+05
original_shape_Sphericity	3.234e+09
original_shape_SurfaceArea	7.201e-43
original_shape_SurfaceVolumeRatio	1.284e+77
original_shape_VoxelVolume	0.000e+00
	se(coef)
original_firstorder_10Percentile	1.598e-01
original_firstorder_90Percentile	1.382e-01
original_firstorder_Energy	1.435e-01
original_firstorder_Entropy	2.130e-01
original_firstorder_InterquartileRange	2.193e-01
original_firstorder_Kurtosis	2.276e-01
original_firstorder_Maximum	1.847e-01
original_firstorder_Mean	1.859e-01
original_firstorder_MeanAbsoluteDeviation	1.734e-01
original_firstorder_Median	2.205e-01
original_firstorder_Minimum	1.025e+00
original_firstorder_Range	2.316e-01
original_firstorder_RobustMeanAbsoluteDeviation	2.212e-01
original_firstorder_RootMeanSquared	1.819e-01
original_firstorder_Skewness	2.483e-01
original_firstorder_TotalEnergy	1.435e-01
original_firstorder_Uniformity	2.538e-01

original_firstorder_Variance	2.633e-01
original_glcm_Autocorrelation	6.511e-01
original_glcm_ClusterProminence	7.087e-01
original_glcm_ClusterShade	3.732e-01
original_glcm_ClusterTendency	2.255e-01
original_glcm_Contrast	6.450e-01
original_glcm_Correlation	2.230e-01
original_glcm_DifferenceAverage	2.330e-01
original_glcm_DifferenceEntropy	2.262e-01
original_glcm_DifferenceVariance	6.785e-01
original_glcm_Id	2.045e-01
original_glcm_Idm	2.036e-01
original_glcm_Idmn	3.304e-01
original_glcm_Idn	3.054e-01
original_glcm_Imc1	1.996e-01
original_glcm_Imc2	2.748e-01
original_glcm_InverseVariance	1.971e-01
original_glcm_JointAverage	9.676e-01
original_glcm_JointEnergy	2.723e-01
original_glcm_JointEntropy	2.083e-01
original_glcm_MCC	2.627e-01
original_glcm_MaximumProbability	2.354e-01
original_glcm_SumAverage	9.676e-01
original_glcm_SumEntropy	2.172e-01
original_glcm_SumSquares	2.698e-01
original_gldm_DependenceEntropy	2.449e-01
original_gldm_DependenceNonUniformity	1.480e-01
original_gldm_DependenceNonUniformityNormalized	2.355e-01
original_gldm_DependenceVariance	1.992e-01
original_gldm_GrayLevelNonUniformity	1.489e-01
original_gldm_GrayLevelVariance	2.628e-01
original_gldm_HighGrayLevelEmphasis	6.477e-01
original_gldm_LargeDependenceEmphasis	2.318e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.785e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	7.506e-01
original_gldm_LowGrayLevelEmphasis	2.005e-01
original_gldm_SmallDependenceEmphasis	2.604e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	2.160e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis	3.722e-01
original_glrlm_GrayLevelNonUniformity	1.454e-01
original_glrlm_GrayLevelNonUniformityNormalized	2.648e-01
original_glrlm_GrayLevelVariance	2.565e-01
original_glrlm_HighGrayLevelRunEmphasis	6.343e-01
original_glrlm_LongRunEmphasis	2.791e-01
original_glrlm_LongRunHighGrayLevelEmphasis	2.023e-01
original_glrlm_LongRunLowGrayLevelEmphasis	3.133e-01
original_glrlm_LowGrayLevelRunEmphasis	2.239e-01
original_glrlm_RunEntropy	2.719e-01
original_glrlm_RunLengthNonUniformity	1.394e-01
original_glrlm_RunLengthNonUniformityNormalized	2.372e-01
original_glrlm_RunPercentage	2.392e-01
original_glrlm_RunVariance	2.751e-01
original_glrlm_ShortRunEmphasis	2.412e-01
original_glrlm_ShortRunHighGrayLevelEmphasis	4.802e-01
original_glrlm_ShortRunLowGrayLevelEmphasis	2.019e-01
original_glszm_GrayLevelNonUniformity	1.516e-01

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original_glszm_GrayLevelNonUniformityNormalized        7.229e-01
original_glszm_GrayLevelVariance                       2.139e-01
original_glszm_HighGrayLevelZoneEmphasis               4.051e-01
original_glszm_LargeAreaEmphasis                       1.562e-01
original_glszm_LargeAreaHighGrayLevelEmphasis          1.068e-01
original_glszm_LargeAreaLowGrayLevelEmphasis           1.867e+00
original_glszm_LowGrayLevelZoneEmphasis                1.021e+00
original_glszm_SizeZoneNonUniformity                   1.521e-01
original_glszm_SizeZoneNonUniformityNormalized         2.785e-01
original_glszm_SmallAreaEmphasis                       3.156e-01
original_glszm_SmallAreaHighGrayLevelEmphasis          3.484e-01
original_glszm_SmallAreaLowGrayLevelEmphasis           9.048e-01
original_glszm_ZoneEntropy                             3.272e-01
original_glszm_ZonePercentage                          2.673e-01
original_glszm_ZoneVariance                            1.559e-01
original_ngtdm_Busyness                                9.388e-01
original_ngtdm_Coarseness                              6.453e-01
original_ngtdm_Complexity                              2.826e-01
original_ngtdm_Contrast                                5.344e-01
original_ngtdm_Strength                                4.727e-01
original_shape_Elongation                              2.002e-01
original_shape_Flatness                                2.445e-01
original_shape_LeastAxisLength                         1.750e-01
original_shape_MajorAxisLength                         2.047e-01
original_shape_Maximum2DDiameterColumn                 1.992e-01
original_shape_Maximum2DDiameterRow                    1.949e-01
original_shape_Maximum2DDiameterSlice                  1.868e-01
original_shape_Maximum3DDiameter                       1.869e-01
original_shape_MeshVolume                              1.460e-01
original_shape_MinorAxisLength                         1.917e-01
original_shape_Sphericity                              2.453e-01
original_shape_SurfaceArea                             1.252e-01
original_shape_SurfaceVolumeRatio                      2.370e-01
original_shape_VoxelVolume                             1.461e-01
                                                          z
original_firstorder_10Percentile                      -641.651
original_firstorder_90Percentile                       779.753
original_firstorder_Energy                            -404.612
original_firstorder_Entropy                           -965.414
original_firstorder_InterquartileRange                1747.585
original_firstorder_Kurtosis                           -21.701
original_firstorder_Maximum                            351.969
original_firstorder_Mean                              -602.466
original_firstorder_MeanAbsoluteDeviation              507.061
original_firstorder_Median                             101.289
original_firstorder_Minimum                            121.169
original_firstorder_Range                                0.000
original_firstorder_RobustMeanAbsoluteDeviation      -2554.065
original_firstorder_RootMeanSquared                     18.418
original_firstorder_Skewness                           -12.335
original_firstorder_TotalEnergy                          0.000
original_firstorder_Uniformity                        -673.162
original_firstorder_Variance                         -1196.921
original_glcm_Autocorrelation                         2558.575
original_glcm_ClusterProminence                      -2390.731
original_glcm_ClusterShade                            -349.170
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original_glcm_ClusterTendency                              894.467
original_glcm_Contrast                                    9483.382
original_glcm_Correlation                                 -100.564
original_glcm_DifferenceAverage                          -6902.725
original_glcm_DifferenceEntropy                            526.650
original_glcm_DifferenceVariance                         -4993.241
original_glcm_Id                                        -30167.870
original_glcm_Idm                                        24130.108
original_glcm_Idmn                                         -33.462
original_glcm_Idn                                         -444.301
original_glcm_Imc1                                         -85.755
original_glcm_Imc2                                         108.785
original_glcm_InverseVariance                            -2895.325
original_glcm_JointAverage                               -142.218
original_glcm_JointEnergy                                 257.711
original_glcm_JointEntropy                              -1435.096
original_glcm_MCC                                           11.362
original_glcm_MaximumProbability                          116.746
original_glcm_SumAverage                                    0.000
original_glcm_SumEntropy                                  707.955
original_glcm_SumSquares                                    0.000
original_gldm_DependenceEntropy                           576.004
original_gldm_DependenceNonUniformity                    -273.241
original_gldm_DependenceNonUniformityNormalized           333.770
original_gldm_DependenceVariance                         -363.457
original_gldm_GrayLevelNonUniformity                     513.737
original_gldm_GrayLevelVariance                            2.460
original_gldm_HighGrayLevelEmphasis                     -2577.456
original_gldm_LargeDependenceEmphasis                    -509.654
original_gldm_LargeDependenceHighGrayLevelEmphasis       -992.275
original_gldm_LargeDependenceLowGrayLevelEmphasis         223.254
original_gldm_LowGrayLevelEmphasis                       3793.210
original_gldm_SmallDependenceEmphasis                     551.009
original_gldm_SmallDependenceHighGrayLevelEmphasis       -125.490
original_gldm_SmallDependenceLowGrayLevelEmphasis         650.509
original_glrlm_GrayLevelNonUniformity                     133.520
original_glrlm_GrayLevelNonUniformityNormalized          -242.134
original_glrlm_GrayLevelVariance                          996.194
original_glrlm_HighGrayLevelRunEmphasis                   775.292
original_glrlm_LongRunEmphasis                            542.483
original_glrlm_LongRunHighGrayLevelEmphasis               774.317
original_glrlm_LongRunLowGrayLevelEmphasis               1452.458
original_glrlm_LowGrayLevelRunEmphasis                  -1692.156
original_glrlm_RunEntropy                                -436.288
original_glrlm_RunLengthNonUniformity                   1245.063
original_glrlm_RunLengthNonUniformityNormalized          -388.819
original_glrlm_RunPercentage                            -3882.608
original_glrlm_RunVariance                              -1308.028
original_glrlm_ShortRunEmphasis                          2205.471
original_glrlm_ShortRunHighGrayLevelEmphasis             -597.205
original_glrlm_ShortRunLowGrayLevelEmphasis             -4615.349
original_glszm_GrayLevelNonUniformity                     -15.597
original_glszm_GrayLevelNonUniformityNormalized           98.135
original_glszm_GrayLevelVariance                         -299.606
original_glszm_HighGrayLevelZoneEmphasis                   39.162
original_glszm_LargeAreaEmphasis                        27135.158
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original_glszm_LargeAreaHighGrayLevelEmphasis	87.847
original_glszm_LargeAreaLowGrayLevelEmphasis	37.321
original_glszm_LowGrayLevelZoneEmphasis	415.454
original_glszm_SizeZoneNonUniformity	140.021
original_glszm_SizeZoneNonUniformityNormalized	-59.446
original_glszm_SmallAreaEmphasis	60.562
original_glszm_SmallAreaHighGrayLevelEmphasis	146.565
original_glszm_SmallAreaLowGrayLevelEmphasis	-267.605
original_glszm_ZoneEntropy	195.739
original_glszm_ZonePercentage	-357.330
original_glszm_ZoneVariance	-27344.619
original_ngtdm_Busyness	-109.698
original_ngtdm_Coarseness	-7.075
original_ngtdm_Complexity	-217.937
original_ngtdm_Contrast	-564.104
original_ngtdm_Strength	-38.065
original_shape_Elongation	51.391
original_shape_Flatness	-50.236
original_shape_LeastAxisLength	99.248
original_shape_MajorAxisLength	-78.533
original_shape_Maximum2DDiameterColumn	68.172
original_shape_Maximum2DDiameterRow	99.977
original_shape_Maximum2DDiameterSlice	-53.922
original_shape_Maximum3DDiameter	29.366
original_shape_MeshVolume	15484.625
original_shape_MinorAxisLength	70.095
original_shape_Sphericity	89.278
original_shape_SurfaceArea	-774.767
original_shape_SurfaceVolumeRatio	749.151
original_shape_VoxelVolume	-16445.554

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	< 2e-16
original_firstorder_Energy	< 2e-16
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	< 2e-16
original_firstorder_Maximum	< 2e-16
original_firstorder_Mean	< 2e-16
original_firstorder_MeanAbsoluteDeviation	< 2e-16
original_firstorder_Median	< 2e-16
original_firstorder_Minimum	< 2e-16
original_firstorder_Range	1.0000
original_firstorder_RobustMeanAbsoluteDeviation	< 2e-16
original_firstorder_RootMeanSquared	< 2e-16
original_firstorder_Skewness	< 2e-16
original_firstorder_TotalEnergy	1.0000
original_firstorder_Uniformity	< 2e-16
original_firstorder_Variance	< 2e-16
original_glcm_Autocorrelation	< 2e-16
original_glcm_ClusterProminence	< 2e-16
original_glcm_ClusterShade	< 2e-16
original_glcm_ClusterTendency	< 2e-16
original_glcm_Contrast	< 2e-16
original_glcm_Correlation	< 2e-16
original_glcm_DifferenceAverage	< 2e-16

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original_glcm_DifferenceEntropy                         < 2e-16
original_glcm_DifferenceVariance                        < 2e-16
original_glcm_Id                                        < 2e-16
original_glcm_Idm                                       < 2e-16
original_glcm_Idmn                                      < 2e-16
original_glcm_Idn                                       < 2e-16
original_glcm_Imc1                                      < 2e-16
original_glcm_Imc2                                      < 2e-16
original_glcm_InverseVariance                           < 2e-16
original_glcm_JointAverage                              < 2e-16
original_glcm_JointEnergy                               < 2e-16
original_glcm_JointEntropy                              < 2e-16
original_glcm_MCC                                       < 2e-16
original_glcm_MaximumProbability                        < 2e-16
original_glcm_SumAverage                                  1.0000
original_glcm_SumEntropy                                < 2e-16
original_glcm_SumSquares                                  1.0000
original_gldm_DependenceEntropy                         < 2e-16
original_gldm_DependenceNonUniformity                   < 2e-16
original_gldm_DependenceNonUniformityNormalized         < 2e-16
original_gldm_DependenceVariance                        < 2e-16
original_gldm_GrayLevelNonUniformity                    < 2e-16
original_gldm_GrayLevelVariance                           0.0139
original_gldm_HighGrayLevelEmphasis                     < 2e-16
original_gldm_LargeDependenceEmphasis                   < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis      < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis       < 2e-16
original_gldm_LowGrayLevelEmphasis                      < 2e-16
original_gldm_SmallDependenceEmphasis                   < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis      < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis       < 2e-16
original_glrlm_GrayLevelNonUniformity                   < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized         < 2e-16
original_glrlm_GrayLevelVariance                        < 2e-16
original_glrlm_HighGrayLevelRunEmphasis                 < 2e-16
original_glrlm_LongRunEmphasis                          < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis             < 2e-16
original_glrlm_LongRunLowGrayLevelEmphasis              < 2e-16
original_glrlm_LowGrayLevelRunEmphasis                  < 2e-16
original_glrlm_RunEntropy                               < 2e-16
original_glrlm_RunLengthNonUniformity                   < 2e-16
original_glrlm_RunLengthNonUniformityNormalized         < 2e-16
original_glrlm_RunPercentage                            < 2e-16
original_glrlm_RunVariance                              < 2e-16
original_glrlm_ShortRunEmphasis                         < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis            < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis             < 2e-16
original_glszm_GrayLevelNonUniformity                   < 2e-16
original_glszm_GrayLevelNonUniformityNormalized         < 2e-16
original_glszm_GrayLevelVariance                        < 2e-16
original_glszm_HighGrayLevelZoneEmphasis                < 2e-16
original_glszm_LargeAreaEmphasis                        < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis           < 2e-16
original_glszm_LargeAreaLowGrayLevelEmphasis            < 2e-16
original_glszm_LowGrayLevelZoneEmphasis                 < 2e-16
original_glszm_SizeZoneNonUniformity                    < 2e-16
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original_glszm_SizeZoneNonUniformityNormalized        < 2e-16
original_glszm_SmallAreaEmphasis                      < 2e-16
original_glszm_SmallAreaHighGrayLevelEmphasis         < 2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis          < 2e-16
original_glszm_ZoneEntropy                            < 2e-16
original_glszm_ZonePercentage                         < 2e-16
original_glszm_ZoneVariance                           < 2e-16
original_ngtdm_Busyness                               < 2e-16
original_ngtdm_Coarseness                           1.49e-12
original_ngtdm_Complexity                             < 2e-16
original_ngtdm_Contrast                               < 2e-16
original_ngtdm_Strength                               < 2e-16
original_shape_Elongation                             < 2e-16
original_shape_Flatness                               < 2e-16
original_shape_LeastAxisLength                        < 2e-16
original_shape_MajorAxisLength                        < 2e-16
original_shape_Maximum2DDiameterColumn                < 2e-16
original_shape_Maximum2DDiameterRow                   < 2e-16
original_shape_Maximum2DDiameterSlice                 < 2e-16
original_shape_Maximum3DDiameter                      < 2e-16
original_shape_MeshVolume                             < 2e-16
original_shape_MinorAxisLength                        < 2e-16
original_shape_Sphericity                             < 2e-16
original_shape_SurfaceArea                            < 2e-16
original_shape_SurfaceVolumeRatio                     < 2e-16
original_shape_VoxelVolume                            < 2e-16


Likelihood ratio test=240.5  on 107 df, p=2.85e-12
n= 126, number of events= 31


$model_list[[4]]$coxmodels[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                       coef
original_firstorder_10Percentile                    6.594e+02
original_firstorder_90Percentile                   -2.824e+02
original_firstorder_Energy                         -4.858e+01
original_firstorder_Entropy                        -9.184e+02
original_firstorder_InterquartileRange             -1.119e+03
original_firstorder_Kurtosis                        3.050e+00
original_firstorder_Maximum                        -1.952e+00
original_firstorder_Mean                            1.946e+02
original_firstorder_MeanAbsoluteDeviation           1.460e+03
original_firstorder_Median                         -2.082e+02
original_firstorder_Minimum                         2.243e+02
original_firstorder_Range                           0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation     1.180e+03
original_firstorder_RootMeanSquared                 4.586e+01
original_firstorder_Skewness                       -9.218e+00
original_firstorder_TotalEnergy                     0.000e+00
original_firstorder_Uniformity                     -2.669e+02
original_firstorder_Variance                        5.761e+03
original_glcm_Autocorrelation                       2.587e+03
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original_glcm_ClusterProminence                       -2.559e+05
original_glcm_ClusterShade                            -7.578e+03
original_glcm_ClusterTendency                         -2.355e+04
original_glcm_Contrast                                 1.107e+04
original_glcm_Correlation                              2.932e+01
original_glcm_DifferenceAverage                       -6.533e+03
original_glcm_DifferenceEntropy                       -7.764e+00
original_glcm_DifferenceVariance                      -2.270e+03
original_glcm_Id                                      -2.724e+04
original_glcm_Idm                                      2.235e+04
original_glcm_Idmn                                    -1.775e+01
original_glcm_Idn                                      1.792e+01
original_glcm_Imc1                                    -3.116e+00
original_glcm_Imc2                                    -9.682e+01
original_glcm_InverseVariance                         -2.485e+03
original_glcm_JointAverage                             1.539e+02
original_glcm_JointEnergy                              7.618e+01
original_glcm_JointEntropy                             2.312e+02
original_glcm_MCC                                     -6.331e+00
original_glcm_MaximumProbability                       4.505e+01
original_glcm_SumAverage                               0.000e+00
original_glcm_SumEntropy                               1.554e+02
original_glcm_SumSquares                               2.781e+04
original_gldm_DependenceEntropy                        2.417e+01
original_gldm_DependenceNonUniformity                 -6.009e+01
original_gldm_DependenceNonUniformityNormalized        1.160e+02
original_gldm_DependenceVariance                       1.586e+01
original_gldm_GrayLevelNonUniformity                  -9.178e+01
original_gldm_GrayLevelVariance                       -2.930e+03
original_gldm_HighGrayLevelEmphasis                   -9.789e+02
original_gldm_LargeDependenceEmphasis                 -4.877e+01
original_gldm_LargeDependenceHighGrayLevelEmphasis    -2.933e+01
original_gldm_LargeDependenceLowGrayLevelEmphasis      6.883e+01
original_gldm_LowGrayLevelEmphasis                     1.458e+02
original_gldm_SmallDependenceEmphasis                 -4.183e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis    -6.198e+01
original_gldm_SmallDependenceLowGrayLevelEmphasis     -2.630e+01
original_glrlm_GrayLevelNonUniformity                 -5.485e+00
original_glrlm_GrayLevelNonUniformityNormalized        5.707e+01
original_glrlm_GrayLevelVariance                      -3.400e+03
original_glrlm_HighGrayLevelRunEmphasis               -1.570e+03
original_glrlm_LongRunEmphasis                        -3.326e+01
original_glrlm_LongRunHighGrayLevelEmphasis           -4.482e+01
original_glrlm_LongRunLowGrayLevelEmphasis            -3.327e+01
original_glrlm_LowGrayLevelRunEmphasis                -3.900e+02
original_glrlm_RunEntropy                              5.883e+02
original_glrlm_RunLengthNonUniformity                 2.667e+02
original_glrlm_RunLengthNonUniformityNormalized        4.533e+02
original_glrlm_RunPercentage                           2.554e+01
original_glrlm_RunVariance                             1.937e+00
original_glrlm_ShortRunEmphasis                       -2.026e+02
original_glrlm_ShortRunHighGrayLevelEmphasis          -3.408e+01
original_glrlm_ShortRunLowGrayLevelEmphasis            2.694e+02
original_glszm_GrayLevelNonUniformity                 -2.740e+01
original_glszm_GrayLevelNonUniformityNormalized       -1.376e-01
original_glszm_GrayLevelVariance                       2.409e+02
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original_glszm_HighGrayLevelZoneEmphasis              1.574e+02
original_glszm_LargeAreaEmphasis                     -6.096e+03
original_glszm_LargeAreaHighGrayLevelEmphasis         3.965e+01
original_glszm_LargeAreaLowGrayLevelEmphasis          8.528e+00
original_glszm_LowGrayLevelZoneEmphasis              -5.691e+00
original_glszm_SizeZoneNonUniformity                  1.427e+02
original_glszm_SizeZoneNonUniformityNormalized       -3.391e+01
original_glszm_SmallAreaEmphasis                      3.117e+01
original_glszm_SmallAreaHighGrayLevelEmphasis        -4.096e+01
original_glszm_SmallAreaLowGrayLevelEmphasis         -2.538e+00
original_glszm_ZoneEntropy                           -6.085e+01
original_glszm_ZonePercentage                        -5.158e+01
original_glszm_ZoneVariance                           6.154e+03
original_ngtdm_Busyness                              -1.326e+01
original_ngtdm_Coarseness                             1.759e+01
original_ngtdm_Complexity                            -1.712e+02
original_ngtdm_Contrast                              -2.897e+01
original_ngtdm_Strength                               1.516e+02
original_shape_Elongation                            -1.586e+01
original_shape_Flatness                               2.537e+01
original_shape_LeastAxisLength                       -6.518e+01
original_shape_MajorAxisLength                       -1.997e+01
original_shape_Maximum2DDiameterColumn                2.416e+01
original_shape_Maximum2DDiameterRow                   2.305e+01
original_shape_Maximum2DDiameterSlice                 1.093e+01
original_shape_Maximum3DDiameter                     -6.329e+00
original_shape_MeshVolume                            -3.636e+03
original_shape_MinorAxisLength                        4.078e+01
original_shape_Sphericity                            -2.967e+01
original_shape_SurfaceArea                           -1.125e+02
original_shape_SurfaceVolumeRatio                     1.245e+02
original_shape_VoxelVolume                            3.570e+03
                                                      exp(coef)
original_firstorder_10Percentile                     2.448e+286
original_firstorder_90Percentile                     2.282e-123
original_firstorder_Energy                            8.008e-22
original_firstorder_Entropy                           0.000e+00
original_firstorder_InterquartileRange                0.000e+00
original_firstorder_Kurtosis                          2.111e+01
original_firstorder_Maximum                           1.419e-01
original_firstorder_Mean                              3.237e+84
original_firstorder_MeanAbsoluteDeviation                  Inf
original_firstorder_Median                            3.887e-91
original_firstorder_Minimum                           2.714e+97
original_firstorder_Range                             1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation            Inf
original_firstorder_RootMeanSquared                   8.228e+19
original_firstorder_Skewness                          9.926e-05
original_firstorder_TotalEnergy                       1.000e+00
original_firstorder_Uniformity                        1.206e-116
original_firstorder_Variance                               Inf
original_glcm_Autocorrelation                              Inf
original_glcm_ClusterProminence                       0.000e+00
original_glcm_ClusterShade                            0.000e+00
original_glcm_ClusterTendency                         0.000e+00
original_glcm_Contrast                                     Inf
```

```
original_glcm_Correlation                                    5.410e+12
original_glcm_DifferenceAverage                              0.000e+00
original_glcm_DifferenceEntropy                              4.246e-04
original_glcm_DifferenceVariance                             0.000e+00
original_glcm_Id                                             0.000e+00
original_glcm_Idm                                                  Inf
original_glcm_Idmn                                           1.950e-08
original_glcm_Idn                                            6.077e+07
original_glcm_Imc1                                           4.431e-02
original_glcm_Imc2                                           8.927e-43
original_glcm_InverseVariance                                0.000e+00
original_glcm_JointAverage                                   7.077e+66
original_glcm_JointEnergy                                    1.212e+33
original_glcm_JointEntropy                                  2.513e+100
original_glcm_MCC                                            1.781e-03
original_glcm_MaximumProbability                            3.664e+19
original_glcm_SumAverage                                     1.000e+00
original_glcm_SumEntropy                                     3.220e+67
original_glcm_SumSquares                                           Inf
original_gldm_DependenceEntropy                              3.145e+10
original_gldm_DependenceNonUniformity                       8.026e-27
original_gldm_DependenceNonUniformityNormalized             2.393e+50
original_gldm_DependenceVariance                            7.721e+06
original_gldm_GrayLevelNonUniformity                        1.378e-40
original_gldm_GrayLevelVariance                             0.000e+00
original_gldm_HighGrayLevelEmphasis                         0.000e+00
original_gldm_LargeDependenceEmphasis                       6.610e-22
original_gldm_LargeDependenceHighGrayLevelEmphasis          1.836e-13
original_gldm_LargeDependenceLowGrayLevelEmphasis           7.814e+29
original_gldm_LowGrayLevelEmphasis                          2.177e+63
original_gldm_SmallDependenceEmphasis                       6.836e-19
original_gldm_SmallDependenceHighGrayLevelEmphasis          1.211e-27
original_gldm_SmallDependenceLowGrayLevelEmphasis           3.801e-12
original_glrlm_GrayLevelNonUniformity                       4.150e-03
original_glrlm_GrayLevelNonUniformityNormalized             6.127e+24
original_glrlm_GrayLevelVariance                            0.000e+00
original_glrlm_HighGrayLevelRunEmphasis                     0.000e+00
original_glrlm_LongRunEmphasis                              3.586e-15
original_glrlm_LongRunHighGrayLevelEmphasis                 3.431e-20
original_glrlm_LongRunLowGrayLevelEmphasis                  3.573e-15
original_glrlm_LowGrayLevelRunEmphasis                     4.282e-170
original_glrlm_RunEntropy                                   3.101e+255
original_glrlm_RunLengthNonUniformity                      6.807e+115
original_glrlm_RunLengthNonUniformityNormalized            7.286e+196
original_glrlm_RunPercentage                                1.237e+11
original_glrlm_RunVariance                                  6.940e+00
original_glrlm_ShortRunEmphasis                             1.016e-88
original_glrlm_ShortRunHighGrayLevelEmphasis                1.583e-15
original_glrlm_ShortRunLowGrayLevelEmphasis                1.009e+117
original_glszm_GrayLevelNonUniformity                       1.254e-12
original_glszm_GrayLevelNonUniformityNormalized             8.714e-01
original_glszm_GrayLevelVariance                           4.001e+104
original_glszm_HighGrayLevelZoneEmphasis                    2.375e+68
original_glszm_LargeAreaEmphasis                            0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis               1.658e+17
original_glszm_LargeAreaLowGrayLevelEmphasis                5.054e+03
```

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original_glszm_LowGrayLevelZoneEmphasis          3.377e-03
original_glszm_SizeZoneNonUniformity             9.087e+61
original_glszm_SizeZoneNonUniformityNormalized   1.874e-15
original_glszm_SmallAreaEmphasis                 3.436e+13
original_glszm_SmallAreaHighGrayLevelEmphasis    1.625e-18
original_glszm_SmallAreaLowGrayLevelEmphasis     7.903e-02
original_glszm_ZoneEntropy                       3.761e-27
original_glszm_ZonePercentage                    3.977e-23
original_glszm_ZoneVariance                           Inf
original_ngtdm_Busyness                          1.748e-06
original_ngtdm_Coarseness                        4.346e+07
original_ngtdm_Complexity                        4.660e-75
original_ngtdm_Contrast                          2.611e-13
original_ngtdm_Strength                          6.673e+65
original_shape_Elongation                        1.297e-07
original_shape_Flatness                          1.038e+11
original_shape_LeastAxisLength                   4.946e-29
original_shape_MajorAxisLength                   2.122e-09
original_shape_Maximum2DDiameterColumn           3.102e+10
original_shape_Maximum2DDiameterRow              1.022e+10
original_shape_Maximum2DDiameterSlice            5.607e+04
original_shape_Maximum3DDiameter                 1.784e-03
original_shape_MeshVolume                        0.000e+00
original_shape_MinorAxisLength                   5.120e+17
original_shape_Sphericity                        1.306e-13
original_shape_SurfaceArea                       1.427e-49
original_shape_SurfaceVolumeRatio                1.157e+54
original_shape_VoxelVolume                            Inf

                                                 se(coef)
original_firstorder_10Percentile                 3.272e+02
original_firstorder_90Percentile                 9.834e+01
original_firstorder_Energy                       5.725e+02
original_firstorder_Entropy                      9.005e+01
original_firstorder_InterquartileRange           3.135e+02
original_firstorder_Kurtosis                     8.705e+01
original_firstorder_Maximum                      1.966e+02
original_firstorder_Mean                         1.139e+02
original_firstorder_MeanAbsoluteDeviation        2.890e+02
original_firstorder_Median                       7.617e+01
original_firstorder_Minimum                      1.465e+02
original_firstorder_Range                        2.187e+02
original_firstorder_RobustMeanAbsoluteDeviation  3.119e+02
original_firstorder_RootMeanSquared              1.415e+02
original_firstorder_Skewness                     6.512e+01
original_firstorder_TotalEnergy                  5.725e+02
original_firstorder_Uniformity                   6.547e+01
original_firstorder_Variance                     2.002e+03
original_glcm_Autocorrelation                    2.162e+02
original_glcm_ClusterProminence                  5.515e+05
original_glcm_ClusterShade                       2.281e+04
original_glcm_ClusterTendency                    2.302e+03
original_glcm_Contrast                           1.500e+03
original_glcm_Correlation                        1.815e+02
original_glcm_DifferenceAverage                  1.179e+02
original_glcm_DifferenceEntropy                  6.585e+01
original_glcm_DifferenceVariance                 1.915e+03
```

original_glcm_Id	6.092e+01
original_glcm_Idm	6.192e+01
original_glcm_Idmn	7.630e+01
original_glcm_Idn	6.778e+01
original_glcm_Imc1	9.655e+01
original_glcm_Imc2	1.604e+02
original_glcm_InverseVariance	5.876e+01
original_glcm_JointAverage	1.285e+02
original_glcm_JointEnergy	5.320e+01
original_glcm_JointEntropy	7.397e+01
original_glcm_MCC	1.214e+02
original_glcm_MaximumProbability	6.039e+01
original_glcm_SumAverage	1.285e+02
original_glcm_SumEntropy	7.886e+01
original_glcm_SumSquares	2.044e+03
original_gldm_DependenceEntropy	1.059e+02
original_gldm_DependenceNonUniformity	2.664e+02
original_gldm_DependenceNonUniformityNormalized	1.385e+02
original_gldm_DependenceVariance	2.861e+02
original_gldm_GrayLevelNonUniformity	1.593e+02
original_gldm_GrayLevelVariance	1.920e+03
original_gldm_HighGrayLevelEmphasis	2.156e+02
original_gldm_LargeDependenceEmphasis	2.385e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis	2.346e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.699e+02
original_gldm_LowGrayLevelEmphasis	6.880e+01
original_gldm_SmallDependenceEmphasis	5.848e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis	2.232e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis	7.268e+01
original_glrlm_GrayLevelNonUniformity	1.733e+02
original_glrlm_GrayLevelNonUniformityNormalized	6.020e+01
original_glrlm_GrayLevelVariance	1.864e+03
original_glrlm_HighGrayLevelRunEmphasis	2.129e+02
original_glrlm_LongRunEmphasis	7.584e+01
original_glrlm_LongRunHighGrayLevelEmphasis	2.507e+02
original_glrlm_LongRunLowGrayLevelEmphasis	1.066e+02
original_glrlm_LowGrayLevelRunEmphasis	6.750e+01
original_glrlm_RunEntropy	1.331e+02
original_glrlm_RunLengthNonUniformity	2.796e+02
original_glrlm_RunLengthNonUniformityNormalized	2.103e+02
original_glrlm_RunPercentage	1.756e+02
original_glrlm_RunVariance	8.816e+01
original_glrlm_ShortRunEmphasis	1.629e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	2.248e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	6.226e+01
original_glszm_GrayLevelNonUniformity	2.261e+02
original_glszm_GrayLevelNonUniformityNormalized	1.315e+02
original_glszm_GrayLevelVariance	1.199e+03
original_glszm_HighGrayLevelZoneEmphasis	1.982e+02
original_glszm_LargeAreaEmphasis	1.451e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	2.360e+02
original_glszm_LargeAreaLowGrayLevelEmphasis	2.059e+02
original_glszm_LowGrayLevelZoneEmphasis	6.704e+01
original_glszm_SizeZoneNonUniformity	4.773e+02
original_glszm_SizeZoneNonUniformityNormalized	1.014e+02
original_glszm_SmallAreaEmphasis	9.112e+01

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original_glszm_SmallAreaHighGrayLevelEmphasis        2.208e+02
original_glszm_SmallAreaLowGrayLevelEmphasis         1.008e+02
original_glszm_ZoneEntropy                           1.897e+02
original_glszm_ZonePercentage                        5.466e+01
original_glszm_ZoneVariance                          1.450e+02
original_ngtdm_Busyness                              2.038e+02
original_ngtdm_Coarseness                            4.021e+01
original_ngtdm_Complexity                            1.694e+03
original_ngtdm_Contrast                              2.362e+02
original_ngtdm_Strength                              3.311e+02
original_shape_Elongation                            1.006e+02
original_shape_Flatness                              7.827e+01
original_shape_LeastAxisLength                       1.023e+02
original_shape_MajorAxisLength                       2.125e+02
original_shape_Maximum2DDiameterColumn               1.784e+02
original_shape_Maximum2DDiameterRow                  1.616e+02
original_shape_Maximum2DDiameterSlice                1.926e+02
original_shape_Maximum3DDiameter                     2.054e+02
original_shape_MeshVolume                            1.829e+02
original_shape_MinorAxisLength                        1.791e+02
original_shape_Sphericity                            2.228e+02
original_shape_SurfaceArea                           3.995e+02
original_shape_SurfaceVolumeRatio                    2.175e+02
original_shape_VoxelVolume                           1.832e+02
                                                          z
original_firstorder_10Percentile                      2.016
original_firstorder_90Percentile                     -2.872
original_firstorder_Energy                           -0.085
original_firstorder_Entropy                         -10.199
original_firstorder_InterquartileRange               -3.569
original_firstorder_Kurtosis                          0.035
original_firstorder_Maximum                          -0.010
original_firstorder_Mean                              1.708
original_firstorder_MeanAbsoluteDeviation             5.053
original_firstorder_Median                           -2.733
original_firstorder_Minimum                           1.531
original_firstorder_Range                             0.000
original_firstorder_RobustMeanAbsoluteDeviation       3.783
original_firstorder_RootMeanSquared                   0.324
original_firstorder_Skewness                         -0.142
original_firstorder_TotalEnergy                       0.000
original_firstorder_Uniformity                       -4.077
original_firstorder_Variance                          2.878
original_glcm_Autocorrelation                        11.968
original_glcm_ClusterProminence                      -0.464
original_glcm_ClusterShade                           -0.332
original_glcm_ClusterTendency                       -10.232
original_glcm_Contrast                                7.379
original_glcm_Correlation                             0.162
original_glcm_DifferenceAverage                     -55.393
original_glcm_DifferenceEntropy                      -0.118
original_glcm_DifferenceVariance                     -1.185
original_glcm_Id                                   -447.188
original_glcm_Idm                                   360.959
original_glcm_Idmn                                   -0.233
original_glcm_Idn                                     0.264
```

original_glcm_Imc1	-0.032
original_glcm_Imc2	-0.604
original_glcm_InverseVariance	-42.286
original_glcm_JointAverage	1.198
original_glcm_JointEnergy	1.432
original_glcm_JointEntropy	3.125
original_glcm_MCC	-0.052
original_glcm_MaximumProbability	0.746
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	1.971
original_glcm_SumSquares	13.607
original_gldm_DependenceEntropy	0.228
original_gldm_DependenceNonUniformity	-0.226
original_gldm_DependenceNonUniformityNormalized	0.838
original_gldm_DependenceVariance	0.055
original_gldm_GrayLevelNonUniformity	-0.576
original_gldm_GrayLevelVariance	-1.526
original_gldm_HighGrayLevelEmphasis	-4.541
original_gldm_LargeDependenceEmphasis	-0.204
original_gldm_LargeDependenceHighGrayLevelEmphasis	-0.125
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.405
original_gldm_LowGrayLevelEmphasis	2.120
original_gldm_SmallDependenceEmphasis	-0.715
original_gldm_SmallDependenceHighGrayLevelEmphasis	-0.278
original_gldm_SmallDependenceLowGrayLevelEmphasis	-0.362
original_glrlm_GrayLevelNonUniformity	-0.032
original_glrlm_GrayLevelNonUniformityNormalized	0.948
original_glrlm_GrayLevelVariance	-1.824
original_glrlm_HighGrayLevelRunEmphasis	-7.375
original_glrlm_LongRunEmphasis	-0.439
original_glrlm_LongRunHighGrayLevelEmphasis	-0.179
original_glrlm_LongRunLowGrayLevelEmphasis	-0.312
original_glrlm_LowGrayLevelRunEmphasis	-5.778
original_glrlm_RunEntropy	4.419
original_glrlm_RunLengthNonUniformity	0.954
original_glrlm_RunLengthNonUniformityNormalized	2.156
original_glrlm_RunPercentage	0.145
original_glrlm_RunVariance	0.022
original_glrlm_ShortRunEmphasis	-1.244
original_glrlm_ShortRunHighGrayLevelEmphasis	-0.152
original_glrlm_ShortRunLowGrayLevelEmphasis	4.327
original_glszm_GrayLevelNonUniformity	-0.121
original_glszm_GrayLevelNonUniformityNormalized	-0.001
original_glszm_GrayLevelVariance	0.201
original_glszm_HighGrayLevelZoneEmphasis	0.794
original_glszm_LargeAreaEmphasis	-42.009
original_glszm_LargeAreaHighGrayLevelEmphasis	0.168
original_glszm_LargeAreaLowGrayLevelEmphasis	0.041
original_glszm_LowGrayLevelZoneEmphasis	-0.085
original_glszm_SizeZoneNonUniformity	0.299
original_glszm_SizeZoneNonUniformityNormalized	-0.334
original_glszm_SmallAreaEmphasis	0.342
original_glszm_SmallAreaHighGrayLevelEmphasis	-0.186
original_glszm_SmallAreaLowGrayLevelEmphasis	-0.025
original_glszm_ZoneEntropy	-0.321
original_glszm_ZonePercentage	-0.944

original_glszm_ZoneVariance	42.435
original_ngtdm_Busyness	-0.065
original_ngtdm_Coarseness	0.437
original_ngtdm_Complexity	-0.101
original_ngtdm_Contrast	-0.123
original_ngtdm_Strength	0.458
original_shape_Elongation	-0.158
original_shape_Flatness	0.324
original_shape_LeastAxisLength	-0.637
original_shape_MajorAxisLength	-0.094
original_shape_Maximum2DDiameterColumn	0.135
original_shape_Maximum2DDiameterRow	0.143
original_shape_Maximum2DDiameterSlice	0.057
original_shape_Maximum3DDiameter	-0.031
original_shape_MeshVolume	-19.878
original_shape_MinorAxisLength	0.228
original_shape_Sphericity	-0.133
original_shape_SurfaceArea	-0.282
original_shape_SurfaceVolumeRatio	0.572
original_shape_VoxelVolume	19.488

	p
original_firstorder_10Percentile	0.043847
original_firstorder_90Percentile	0.004082
original_firstorder_Energy	0.932379
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	0.000358
original_firstorder_Kurtosis	0.972053
original_firstorder_Maximum	0.992077
original_firstorder_Mean	0.087690
original_firstorder_MeanAbsoluteDeviation	4.34e-07
original_firstorder_Median	0.006276
original_firstorder_Minimum	0.125737
original_firstorder_Range	1.000000
original_firstorder_RobustMeanAbsoluteDeviation	0.000155
original_firstorder_RootMeanSquared	0.745894
original_firstorder_Skewness	0.887430
original_firstorder_TotalEnergy	1.000000
original_firstorder_Uniformity	4.57e-05
original_firstorder_Variance	0.004001
original_glcm_Autocorrelation	< 2e-16
original_glcm_ClusterProminence	0.642580
original_glcm_ClusterShade	0.739690
original_glcm_ClusterTendency	< 2e-16
original_glcm_Contrast	1.59e-13
original_glcm_Correlation	0.871686
original_glcm_DifferenceAverage	< 2e-16
original_glcm_DifferenceEntropy	0.906142
original_glcm_DifferenceVariance	0.235861
original_glcm_Id	< 2e-16
original_glcm_Idm	< 2e-16
original_glcm_Idmn	0.816007
original_glcm_Idn	0.791450
original_glcm_Imc1	0.974250
original_glcm_Imc2	0.546123
original_glcm_InverseVariance	< 2e-16
original_glcm_JointAverage	0.231010

original_glcm_JointEnergy	0.152133
original_glcm_JointEntropy	0.001777
original_glcm_MCC	0.958425
original_glcm_MaximumProbability	0.455672
original_glcm_SumAverage	1.000000
original_glcm_SumEntropy	0.048704
original_glcm_SumSquares	< 2e-16
original_gldm_DependenceEntropy	0.819483
original_gldm_DependenceNonUniformity	0.821522
original_gldm_DependenceNonUniformityNormalized	0.402187
original_gldm_DependenceVariance	0.955799
original_gldm_GrayLevelNonUniformity	0.564530
original_gldm_GrayLevelVariance	0.127010
original_gldm_HighGrayLevelEmphasis	5.59e-06
original_gldm_LargeDependenceEmphasis	0.837964
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.900518
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.685345
original_gldm_LowGrayLevelEmphasis	0.034015
original_gldm_SmallDependenceEmphasis	0.474496
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.781290
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.717515
original_glrlm_GrayLevelNonUniformity	0.974745
original_glrlm_GrayLevelNonUniformityNormalized	0.343046
original_glrlm_GrayLevelVariance	0.068138
original_glrlm_HighGrayLevelRunEmphasis	1.64e-13
original_glrlm_LongRunEmphasis	0.660956
original_glrlm_LongRunHighGrayLevelEmphasis	0.858097
original_glrlm_LongRunLowGrayLevelEmphasis	0.755051
original_glrlm_LowGrayLevelRunEmphasis	7.56e-09
original_glrlm_RunEntropy	9.94e-06
original_glrlm_RunLengthNonUniformity	0.340053
original_glrlm_RunLengthNonUniformityNormalized	0.031121
original_glrlm_RunPercentage	0.884343
original_glrlm_RunVariance	0.982469
original_glrlm_ShortRunEmphasis	0.213512
original_glrlm_ShortRunHighGrayLevelEmphasis	0.879489
original_glrlm_ShortRunLowGrayLevelEmphasis	1.51e-05
original_glszm_GrayLevelNonUniformity	0.903535
original_glszm_GrayLevelNonUniformityNormalized	0.999165
original_glszm_GrayLevelVariance	0.840737
original_glszm_HighGrayLevelZoneEmphasis	0.427056
original_glszm_LargeAreaEmphasis	< 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis	0.866600
original_glszm_LargeAreaLowGrayLevelEmphasis	0.966970
original_glszm_LowGrayLevelZoneEmphasis	0.932350
original_glszm_SizeZoneNonUniformity	0.765021
original_glszm_SizeZoneNonUniformityNormalized	0.738157
original_glszm_SmallAreaEmphasis	0.732298
original_glszm_SmallAreaHighGrayLevelEmphasis	0.852802
original_glszm_SmallAreaLowGrayLevelEmphasis	0.979905
original_glszm_ZoneEntropy	0.748456
original_glszm_ZonePercentage	0.345367
original_glszm_ZoneVariance	< 2e-16
original_ngtdm_Busyness	0.948129
original_ngtdm_Coarseness	0.661797
original_ngtdm_Complexity	0.919501

```
original_ngtdm_Contrast                                    0.902384
original_ngtdm_Strength                                    0.647076
original_shape_Elongation                                  0.874775
original_shape_Flatness                                    0.745872
original_shape_LeastAxisLength                             0.523916
original_shape_MajorAxisLength                             0.925119
original_shape_Maximum2DDiameterColumn                     0.892302
original_shape_Maximum2DDiameterRow                        0.886612
original_shape_Maximum2DDiameterSlice                      0.954735
original_shape_Maximum3DDiameter                           0.975416
original_shape_MeshVolume                                   < 2e-16
original_shape_MinorAxisLength                             0.819849
original_shape_Sphericity                                  0.894096
original_shape_SurfaceArea                                 0.778290
original_shape_SurfaceVolumeRatio                          0.567032
original_shape_VoxelVolume                                 < 2e-16


Likelihood ratio test=75.87  on 107 df, p=0.9901
n= 120, number of events= 8


$model_list[[4]]$coxmodels[[3]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)


                                                                coef
original_firstorder_10Percentile                           -3.301e+02
original_firstorder_90Percentile                           -1.788e+02
original_firstorder_Energy                                  3.804e+00
original_firstorder_Entropy                                 2.790e+02
original_firstorder_InterquartileRange                      2.638e+02
original_firstorder_Kurtosis                               -2.806e+00
original_firstorder_Maximum                                -7.775e+00
original_firstorder_Mean                                    7.873e+02
original_firstorder_MeanAbsoluteDeviation                   3.328e+01
original_firstorder_Median                                 -3.376e+02
original_firstorder_Minimum                                -2.280e+02
original_firstorder_Range                                   0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation            -3.182e+02
original_firstorder_RootMeanSquared                        -1.647e+01
original_firstorder_Skewness                               -1.787e+00
original_firstorder_TotalEnergy                             0.000e+00
original_firstorder_Uniformity                              3.217e+02
original_firstorder_Variance                                2.309e+03
original_glcm_Autocorrelation                              -4.587e+03
original_glcm_ClusterProminence                             3.517e+04
original_glcm_ClusterShade                                  2.796e+03
original_glcm_ClusterTendency                              -8.804e+02
original_glcm_Contrast                                      3.995e+03
original_glcm_Correlation                                  -2.062e+00
original_glcm_DifferenceAverage                             6.696e+02
original_glcm_DifferenceEntropy                             1.472e+02
original_glcm_DifferenceVariance                           -6.065e+03
original_glcm_Id                                            3.451e+03
original_glcm_Idm                                          -2.464e+03
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original_glcm_Idmn                                        -1.184e+02
original_glcm_Idn                                          7.654e+01
original_glcm_Imc1                                         2.195e+02
original_glcm_Imc2                                         4.359e+01
original_glcm_InverseVariance                             4.008e+02
original_glcm_JointAverage                               -1.501e+02
original_glcm_JointEnergy                                -3.512e+02
original_glcm_JointEntropy                               -2.482e+02
original_glcm_MCC                                          6.756e+00
original_glcm_MaximumProbability                         -2.803e+01
original_glcm_SumAverage                                  0.000e+00
original_glcm_SumEntropy                                  7.742e+01
original_glcm_SumSquares                                  0.000e+00
original_gldm_DependenceEntropy                          -1.087e+02
original_gldm_DependenceNonUniformity                    -2.389e+02
original_gldm_DependenceNonUniformityNormalized          1.722e+02
original_gldm_DependenceVariance                         -1.182e+01
original_gldm_GrayLevelNonUniformity                      7.167e+01
original_gldm_GrayLevelVariance                          -3.564e+02
original_gldm_HighGrayLevelEmphasis                       7.758e+03
original_gldm_LargeDependenceEmphasis                     2.672e+02
original_gldm_LargeDependenceHighGrayLevelEmphasis      -2.454e+02
original_gldm_LargeDependenceLowGrayLevelEmphasis       -2.425e+03
original_gldm_LowGrayLevelEmphasis                      -5.261e+03
original_gldm_SmallDependenceEmphasis                     2.847e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis        1.613e+02
original_gldm_SmallDependenceLowGrayLevelEmphasis         3.390e+02
original_glrlm_GrayLevelNonUniformity                    -1.422e+02
original_glrlm_GrayLevelNonUniformityNormalized          -2.701e+00
original_glrlm_GrayLevelVariance                         -5.047e+02
original_glrlm_HighGrayLevelRunEmphasis                  -1.872e+03
original_glrlm_LongRunEmphasis                            8.356e+02
original_glrlm_LongRunHighGrayLevelEmphasis             -4.201e+01
original_glrlm_LongRunLowGrayLevelEmphasis                1.891e+02
original_glrlm_LowGrayLevelRunEmphasis                    2.092e+04
original_glrlm_RunEntropy                                 2.996e+02
original_glrlm_RunLengthNonUniformity                     3.319e+02
original_glrlm_RunLengthNonUniformityNormalized         -2.055e+02
original_glrlm_RunPercentage                             -6.493e+01
original_glrlm_RunVariance                               -6.821e+02
original_glrlm_ShortRunEmphasis                           1.039e+03
original_glrlm_ShortRunHighGrayLevelEmphasis            -1.240e+03
original_glrlm_ShortRunLowGrayLevelEmphasis             -1.447e+04
original_glszm_GrayLevelNonUniformity                    -6.571e+01
original_glszm_GrayLevelNonUniformityNormalized           2.842e+01
original_glszm_GrayLevelVariance                          1.201e+02
original_glszm_HighGrayLevelZoneEmphasis                -2.216e+01
original_glszm_LargeAreaEmphasis                        -1.731e+03
original_glszm_LargeAreaHighGrayLevelEmphasis           -1.151e+02
original_glszm_LargeAreaLowGrayLevelEmphasis            -9.612e+02
original_glszm_LowGrayLevelZoneEmphasis                 -1.062e+02
original_glszm_SizeZoneNonUniformity                    -6.047e+01
original_glszm_SizeZoneNonUniformityNormalized           1.523e+01
original_glszm_SmallAreaEmphasis                         -5.620e+01
original_glszm_SmallAreaHighGrayLevelEmphasis           -3.679e+01
original_glszm_SmallAreaLowGrayLevelEmphasis            -4.543e+01
```

original_glszm_ZoneEntropy	-6.596e+01
original_glszm_ZonePercentage	-4.235e+02
original_glszm_ZoneVariance	1.996e+03
original_ngtdm_Busyness	-3.868e+01
original_ngtdm_Coarseness	2.122e+01
original_ngtdm_Complexity	-1.876e+02
original_ngtdm_Contrast	-1.072e+02
original_ngtdm_Strength	6.553e+01
original_shape_Elongation	3.443e+01
original_shape_Flatness	-2.305e+01
original_shape_LeastAxisLength	4.296e+01
original_shape_MajorAxisLength	5.009e+01
original_shape_Maximum2DDiameterColumn	-4.185e+00
original_shape_Maximum2DDiameterRow	-1.996e+01
original_shape_Maximum2DDiameterSlice	-1.013e+01
original_shape_Maximum3DDiameter	1.529e+01
original_shape_MeshVolume	-1.430e+04
original_shape_MinorAxisLength	-3.775e+01
original_shape_Sphericity	-5.958e+01
original_shape_SurfaceArea	-2.442e+02
original_shape_SurfaceVolumeRatio	-1.548e+02
original_shape_VoxelVolume	1.442e+04
	exp(coef)
original_firstorder_10Percentile	4.378e-144
original_firstorder_90Percentile	2.153e-78
original_firstorder_Energy	4.486e+01
original_firstorder_Entropy	1.458e+121
original_firstorder_InterquartileRange	3.632e+114
original_firstorder_Kurtosis	6.042e-02
original_firstorder_Maximum	4.203e-04
original_firstorder_Mean	Inf
original_firstorder_MeanAbsoluteDeviation	2.833e+14
original_firstorder_Median	2.398e-147
original_firstorder_Minimum	9.518e-100
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	6.108e-139
original_firstorder_RootMeanSquared	7.033e-08
original_firstorder_Skewness	1.674e-01
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	5.321e+139
original_firstorder_Variance	Inf
original_glcm_Autocorrelation	0.000e+00
original_glcm_ClusterProminence	Inf
original_glcm_ClusterShade	Inf
original_glcm_ClusterTendency	0.000e+00
original_glcm_Contrast	Inf
original_glcm_Correlation	1.272e-01
original_glcm_DifferenceAverage	6.333e+290
original_glcm_DifferenceEntropy	8.250e+63
original_glcm_DifferenceVariance	0.000e+00
original_glcm_Id	Inf
original_glcm_Idm	0.000e+00
original_glcm_Idmn	3.828e-52
original_glcm_Idn	1.747e+33
original_glcm_Imc1	2.200e+95
original_glcm_Imc2	8.567e+18

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original_glcm_InverseVariance                              1.146e+174
original_glcm_JointAverage                                  6.578e-66
original_glcm_JointEnergy                                  3.129e-153
original_glcm_JointEntropy                                 1.559e-108
original_glcm_MCC                                            8.591e+02
original_glcm_MaximumProbability                            6.735e-13
original_glcm_SumAverage                                    1.000e+00
original_glcm_SumEntropy                                    4.202e+33
original_glcm_SumSquares                                    1.000e+00
original_gldm_DependenceEntropy                             6.238e-48
original_gldm_DependenceNonUniformity                      1.768e-104
original_gldm_DependenceNonUniformityNormalized             6.316e+74
original_gldm_DependenceVariance                            7.367e-06
original_gldm_GrayLevelNonUniformity                        1.332e+31
original_gldm_GrayLevelVariance                            1.679e-155
original_gldm_HighGrayLevelEmphasis                               Inf
original_gldm_LargeDependenceEmphasis                      1.160e+116
original_gldm_LargeDependenceHighGrayLevelEmphasis         2.570e-107
original_gldm_LargeDependenceLowGrayLevelEmphasis           0.000e+00
original_gldm_LowGrayLevelEmphasis                          0.000e+00
original_gldm_SmallDependenceEmphasis                      4.461e+123
original_gldm_SmallDependenceHighGrayLevelEmphasis          1.078e+70
original_gldm_SmallDependenceLowGrayLevelEmphasis          1.626e+147
original_glrlm_GrayLevelNonUniformity                       1.756e-62
original_glrlm_GrayLevelNonUniformityNormalized             6.712e-02
original_glrlm_GrayLevelVariance                           6.192e-220
original_glrlm_HighGrayLevelRunEmphasis                     0.000e+00
original_glrlm_LongRunEmphasis                                    Inf
original_glrlm_LongRunHighGrayLevelEmphasis                 5.710e-19
original_glrlm_LongRunLowGrayLevelEmphasis                  1.286e+82
original_glrlm_LowGrayLevelRunEmphasis                            Inf
original_glrlm_RunEntropy                                  1.324e+130
original_glrlm_RunLengthNonUniformity                      1.454e+144
original_glrlm_RunLengthNonUniformityNormalized             5.672e-90
original_glrlm_RunPercentage                                6.359e-29
original_glrlm_RunVariance                                 6.154e-297
original_glrlm_ShortRunEmphasis                                   Inf
original_glrlm_ShortRunHighGrayLevelEmphasis                0.000e+00
original_glrlm_ShortRunLowGrayLevelEmphasis                 0.000e+00
original_glszm_GrayLevelNonUniformity                       2.908e-29
original_glszm_GrayLevelNonUniformityNormalized             2.207e+12
original_glszm_GrayLevelVariance                            1.428e+52
original_glszm_HighGrayLevelZoneEmphasis                    2.388e-10
original_glszm_LargeAreaEmphasis                            0.000e+00
original_glszm_LargeAreaHighGrayLevelEmphasis               1.037e-50
original_glszm_LargeAreaLowGrayLevelEmphasis                0.000e+00
original_glszm_LowGrayLevelZoneEmphasis                     7.386e-47
original_glszm_SizeZoneNonUniformity                        5.465e-27
original_glszm_SizeZoneNonUniformityNormalized              4.102e+06
original_glszm_SmallAreaEmphasis                            3.905e-25
original_glszm_SmallAreaHighGrayLevelEmphasis               1.054e-16
original_glszm_SmallAreaLowGrayLevelEmphasis                1.855e-20
original_glszm_ZoneEntropy                                  2.250e-29
original_glszm_ZonePercentage                              1.160e-184
original_glszm_ZoneVariance                                       Inf
original_ngtdm_Busyness                                     1.589e-17
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original_ngtdm_Coarseness	1.642e+09
original_ngtdm_Complexity	3.466e-82
original_ngtdm_Contrast	2.821e-47
original_ngtdm_Strength	2.882e+28
original_shape_Elongation	8.990e+14
original_shape_Flatness	9.762e-11
original_shape_LeastAxisLength	4.526e+18
original_shape_MajorAxisLength	5.688e+21
original_shape_Maximum2DDiameterColumn	1.522e-02
original_shape_Maximum2DDiameterRow	2.148e-09
original_shape_Maximum2DDiameterSlice	3.971e-05
original_shape_Maximum3DDiameter	4.351e+06
original_shape_MeshVolume	0.000e+00
original_shape_MinorAxisLength	4.023e-17
original_shape_Sphericity	1.335e-26
original_shape_SurfaceArea	8.873e-107
original_shape_SurfaceVolumeRatio	5.743e-68
original_shape_VoxelVolume	Inf
	se(coef)
original_firstorder_10Percentile	3.390e+07
original_firstorder_90Percentile	1.074e+07
original_firstorder_Energy	6.359e+07
original_firstorder_Entropy	2.417e+07
original_firstorder_InterquartileRange	4.659e+07
original_firstorder_Kurtosis	3.199e+07
original_firstorder_Maximum	6.069e+07
original_firstorder_Mean	1.112e+07
original_firstorder_MeanAbsoluteDeviation	9.255e+07
original_firstorder_Median	8.539e+06
original_firstorder_Minimum	5.380e+07
original_firstorder_Range	5.585e+07
original_firstorder_RobustMeanAbsoluteDeviation	5.277e+07
original_firstorder_RootMeanSquared	1.948e+07
original_firstorder_Skewness	3.622e+07
original_firstorder_TotalEnergy	6.359e+07
original_firstorder_Uniformity	1.679e+07
original_firstorder_Variance	4.268e+08
original_glcm_Autocorrelation	4.523e+07
original_glcm_ClusterProminence	7.196e+09
original_glcm_ClusterShade	8.297e+08
original_glcm_ClusterTendency	3.345e+08
original_glcm_Contrast	7.345e+08
original_glcm_Correlation	1.150e+07
original_glcm_DifferenceAverage	5.618e+07
original_glcm_DifferenceEntropy	3.148e+07
original_glcm_DifferenceVariance	8.586e+08
original_glcm_Id	2.011e+07
original_glcm_Idm	2.092e+07
original_glcm_Idmn	5.137e+07
original_glcm_Idn	2.810e+07
original_glcm_Imc1	1.860e+07
original_glcm_Imc2	2.422e+07
original_glcm_InverseVariance	1.237e+07
original_glcm_JointAverage	5.085e+07
original_glcm_JointEnergy	1.674e+07
original_glcm_JointEntropy	2.302e+07

original_glcm_MCC	1.843e+07
original_glcm_MaximumProbability	1.650e+07
original_glcm_SumAverage	5.085e+07
original_glcm_SumEntropy	2.554e+07
original_glcm_SumSquares	4.092e+08
original_gldm_DependenceEntropy	8.373e+06
original_gldm_DependenceNonUniformity	2.062e+07
original_gldm_DependenceNonUniformityNormalized	1.029e+07
original_gldm_DependenceVariance	7.994e+06
original_gldm_GrayLevelNonUniformity	1.074e+07
original_gldm_GrayLevelVariance	4.312e+08
original_gldm_HighGrayLevelEmphasis	4.587e+07
original_gldm_LargeDependenceEmphasis	9.175e+06
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.074e+07
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.423e+08
original_gldm_LowGrayLevelEmphasis	3.538e+08
original_gldm_SmallDependenceEmphasis	2.047e+07
original_gldm_SmallDependenceHighGrayLevelEmphasis	3.119e+07
original_gldm_SmallDependenceLowGrayLevelEmphasis	7.942e+07
original_glrlm_GrayLevelNonUniformity	1.276e+07
original_glrlm_GrayLevelNonUniformityNormalized	1.140e+07
original_glrlm_GrayLevelVariance	3.628e+08
original_glrlm_HighGrayLevelRunEmphasis	4.707e+07
original_glrlm_LongRunEmphasis	3.525e+07
original_glrlm_LongRunHighGrayLevelEmphasis	3.416e+07
original_glrlm_LongRunLowGrayLevelEmphasis	4.287e+08
original_glrlm_LowGrayLevelRunEmphasis	2.860e+08
original_glrlm_RunEntropy	7.835e+06
original_glrlm_RunLengthNonUniformity	1.985e+07
original_glrlm_RunLengthNonUniformityNormalized	8.772e+06
original_glrlm_RunPercentage	9.230e+06
original_glrlm_RunVariance	4.792e+07
original_glrlm_ShortRunEmphasis	9.735e+06
original_glrlm_ShortRunHighGrayLevelEmphasis	3.284e+07
original_glrlm_ShortRunLowGrayLevelEmphasis	2.355e+08
original_glszm_GrayLevelNonUniformity	1.580e+07
original_glszm_GrayLevelNonUniformityNormalized	3.707e+07
original_glszm_GrayLevelVariance	1.674e+08
original_glszm_HighGrayLevelZoneEmphasis	4.581e+07
original_glszm_LargeAreaEmphasis	1.040e+07
original_glszm_LargeAreaHighGrayLevelEmphasis	1.320e+07
original_glszm_LargeAreaLowGrayLevelEmphasis	6.744e+07
original_glszm_LowGrayLevelZoneEmphasis	9.980e+07
original_glszm_SizeZoneNonUniformity	2.949e+07
original_glszm_SizeZoneNonUniformityNormalized	1.692e+07
original_glszm_SmallAreaEmphasis	1.813e+07
original_glszm_SmallAreaHighGrayLevelEmphasis	5.744e+07
original_glszm_SmallAreaLowGrayLevelEmphasis	6.034e+07
original_glszm_ZoneEntropy	2.447e+07
original_glszm_ZonePercentage	2.507e+07
original_glszm_ZoneVariance	1.039e+07
original_ngtdm_Busyness	2.624e+07
original_ngtdm_Coarseness	7.984e+07
original_ngtdm_Complexity	2.648e+08
original_ngtdm_Contrast	2.910e+08
original_ngtdm_Strength	6.845e+07

original_shape_Elongation	2.437e+07
original_shape_Flatness	1.840e+07
original_shape_LeastAxisLength	1.545e+07
original_shape_MajorAxisLength	1.577e+07
original_shape_Maximum2DDiameterColumn	1.768e+07
original_shape_Maximum2DDiameterRow	1.479e+07
original_shape_Maximum2DDiameterSlice	1.381e+07
original_shape_Maximum3DDiameter	1.777e+07
original_shape_MeshVolume	1.370e+07
original_shape_MinorAxisLength	1.332e+07
original_shape_Sphericity	8.756e+06
original_shape_SurfaceArea	1.698e+07
original_shape_SurfaceVolumeRatio	8.470e+06
original_shape_VoxelVolume	1.374e+07

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original_firstorder_10Percentile	0.000
original_firstorder_90Percentile	0.000
original_firstorder_Energy	0.000
original_firstorder_Entropy	0.000
original_firstorder_InterquartileRange	0.000
original_firstorder_Kurtosis	0.000
original_firstorder_Maximum	0.000
original_firstorder_Mean	0.000
original_firstorder_MeanAbsoluteDeviation	0.000
original_firstorder_Median	0.000
original_firstorder_Minimum	0.000
original_firstorder_Range	0.000
original_firstorder_RobustMeanAbsoluteDeviation	0.000
original_firstorder_RootMeanSquared	0.000
original_firstorder_Skewness	0.000
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	0.000
original_firstorder_Variance	0.000
original_glcm_Autocorrelation	0.000
original_glcm_ClusterProminence	0.000
original_glcm_ClusterShade	0.000
original_glcm_ClusterTendency	0.000
original_glcm_Contrast	0.000
original_glcm_Correlation	0.000
original_glcm_DifferenceAverage	0.000
original_glcm_DifferenceEntropy	0.000
original_glcm_DifferenceVariance	0.000
original_glcm_Id	0.000
original_glcm_Idm	0.000
original_glcm_Idmn	0.000
original_glcm_Idn	0.000
original_glcm_Imc1	0.000
original_glcm_Imc2	0.000
original_glcm_InverseVariance	0.000
original_glcm_JointAverage	0.000
original_glcm_JointEnergy	0.000
original_glcm_JointEntropy	0.000
original_glcm_MCC	0.000
original_glcm_MaximumProbability	0.000
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	0.000

original_glcm_SumSquares	0.000
original_gldm_DependenceEntropy	0.000
original_gldm_DependenceNonUniformity	0.000
original_gldm_DependenceNonUniformityNormalized	0.000
original_gldm_DependenceVariance	0.000
original_gldm_GrayLevelNonUniformity	0.000
original_gldm_GrayLevelVariance	0.000
original_gldm_HighGrayLevelEmphasis	0.000
original_gldm_LargeDependenceEmphasis	0.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	0.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	0.000
original_gldm_LowGrayLevelEmphasis	0.000
original_gldm_SmallDependenceEmphasis	0.000
original_gldm_SmallDependenceHighGrayLevelEmphasis	0.000
original_gldm_SmallDependenceLowGrayLevelEmphasis	0.000
original_glrlm_GrayLevelNonUniformity	0.000
original_glrlm_GrayLevelNonUniformityNormalized	0.000
original_glrlm_GrayLevelVariance	0.000
original_glrlm_HighGrayLevelRunEmphasis	0.000
original_glrlm_LongRunEmphasis	0.000
original_glrlm_LongRunHighGrayLevelEmphasis	0.000
original_glrlm_LongRunLowGrayLevelEmphasis	0.000
original_glrlm_LowGrayLevelRunEmphasis	0.000
original_glrlm_RunEntropy	0.000
original_glrlm_RunLengthNonUniformity	0.000
original_glrlm_RunLengthNonUniformityNormalized	0.000
original_glrlm_RunPercentage	0.000
original_glrlm_RunVariance	0.000
original_glrlm_ShortRunEmphasis	0.000
original_glrlm_ShortRunHighGrayLevelEmphasis	0.000
original_glrlm_ShortRunLowGrayLevelEmphasis	0.000
original_glszm_GrayLevelNonUniformity	0.000
original_glszm_GrayLevelNonUniformityNormalized	0.000
original_glszm_GrayLevelVariance	0.000
original_glszm_HighGrayLevelZoneEmphasis	0.000
original_glszm_LargeAreaEmphasis	0.000
original_glszm_LargeAreaHighGrayLevelEmphasis	0.000
original_glszm_LargeAreaLowGrayLevelEmphasis	0.000
original_glszm_LowGrayLevelZoneEmphasis	0.000
original_glszm_SizeZoneNonUniformity	0.000
original_glszm_SizeZoneNonUniformityNormalized	0.000
original_glszm_SmallAreaEmphasis	0.000
original_glszm_SmallAreaHighGrayLevelEmphasis	0.000
original_glszm_SmallAreaLowGrayLevelEmphasis	0.000
original_glszm_ZoneEntropy	0.000
original_glszm_ZonePercentage	0.000
original_glszm_ZoneVariance	0.000
original_ngtdm_Busyness	0.000
original_ngtdm_Coarseness	0.000
original_ngtdm_Complexity	0.000
original_ngtdm_Contrast	0.000
original_ngtdm_Strength	0.000
original_shape_Elongation	0.000
original_shape_Flatness	0.000
original_shape_LeastAxisLength	0.000
original_shape_MajorAxisLength	0.000

original_shape_Maximum2DDiameterColumn	0.000
original_shape_Maximum2DDiameterRow	0.000
original_shape_Maximum2DDiameterSlice	0.000
original_shape_Maximum3DDiameter	0.000
original_shape_MeshVolume	-0.001
original_shape_MinorAxisLength	0.000
original_shape_Sphericity	0.000
original_shape_SurfaceArea	0.000
original_shape_SurfaceVolumeRatio	0.000
original_shape_VoxelVolume	0.001

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original_firstorder_10Percentile	1.000
original_firstorder_90Percentile	1.000
original_firstorder_Energy	1.000
original_firstorder_Entropy	1.000
original_firstorder_InterquartileRange	1.000
original_firstorder_Kurtosis	1.000
original_firstorder_Maximum	1.000
original_firstorder_Mean	1.000
original_firstorder_MeanAbsoluteDeviation	1.000
original_firstorder_Median	1.000
original_firstorder_Minimum	1.000
original_firstorder_Range	1.000
original_firstorder_RobustMeanAbsoluteDeviation	1.000
original_firstorder_RootMeanSquared	1.000
original_firstorder_Skewness	1.000
original_firstorder_TotalEnergy	1.000
original_firstorder_Uniformity	1.000
original_firstorder_Variance	1.000
original_glcm_Autocorrelation	1.000
original_glcm_ClusterProminence	1.000
original_glcm_ClusterShade	1.000
original_glcm_ClusterTendency	1.000
original_glcm_Contrast	1.000
original_glcm_Correlation	1.000
original_glcm_DifferenceAverage	1.000
original_glcm_DifferenceEntropy	1.000
original_glcm_DifferenceVariance	1.000
original_glcm_Id	1.000
original_glcm_Idm	1.000
original_glcm_Idmn	1.000
original_glcm_Idn	1.000
original_glcm_Imc1	1.000
original_glcm_Imc2	1.000
original_glcm_InverseVariance	1.000
original_glcm_JointAverage	1.000
original_glcm_JointEnergy	1.000
original_glcm_JointEntropy	1.000
original_glcm_MCC	1.000
original_glcm_MaximumProbability	1.000
original_glcm_SumAverage	1.000
original_glcm_SumEntropy	1.000
original_glcm_SumSquares	1.000
original_gldm_DependenceEntropy	1.000
original_gldm_DependenceNonUniformity	1.000
original_gldm_DependenceNonUniformityNormalized	1.000

original_gldm_DependenceVariance	1.000
original_gldm_GrayLevelNonUniformity	1.000
original_gldm_GrayLevelVariance	1.000
original_gldm_HighGrayLevelEmphasis	1.000
original_gldm_LargeDependenceEmphasis	1.000
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.000
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.000
original_gldm_LowGrayLevelEmphasis	1.000
original_gldm_SmallDependenceEmphasis	1.000
original_gldm_SmallDependenceHighGrayLevelEmphasis	1.000
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.000
original_glrlm_GrayLevelNonUniformity	1.000
original_glrlm_GrayLevelNonUniformityNormalized	1.000
original_glrlm_GrayLevelVariance	1.000
original_glrlm_HighGrayLevelRunEmphasis	1.000
original_glrlm_LongRunEmphasis	1.000
original_glrlm_LongRunHighGrayLevelEmphasis	1.000
original_glrlm_LongRunLowGrayLevelEmphasis	1.000
original_glrlm_LowGrayLevelRunEmphasis	1.000
original_glrlm_RunEntropy	1.000
original_glrlm_RunLengthNonUniformity	1.000
original_glrlm_RunLengthNonUniformityNormalized	1.000
original_glrlm_RunPercentage	1.000
original_glrlm_RunVariance	1.000
original_glrlm_ShortRunEmphasis	1.000
original_glrlm_ShortRunHighGrayLevelEmphasis	1.000
original_glrlm_ShortRunLowGrayLevelEmphasis	1.000
original_glszm_GrayLevelNonUniformity	1.000
original_glszm_GrayLevelNonUniformityNormalized	1.000
original_glszm_GrayLevelVariance	1.000
original_glszm_HighGrayLevelZoneEmphasis	1.000
original_glszm_LargeAreaEmphasis	1.000
original_glszm_LargeAreaHighGrayLevelEmphasis	1.000
original_glszm_LargeAreaLowGrayLevelEmphasis	1.000
original_glszm_LowGrayLevelZoneEmphasis	1.000
original_glszm_SizeZoneNonUniformity	1.000
original_glszm_SizeZoneNonUniformityNormalized	1.000
original_glszm_SmallAreaEmphasis	1.000
original_glszm_SmallAreaHighGrayLevelEmphasis	1.000
original_glszm_SmallAreaLowGrayLevelEmphasis	1.000
original_glszm_ZoneEntropy	1.000
original_glszm_ZonePercentage	1.000
original_glszm_ZoneVariance	1.000
original_ngtdm_Busyness	1.000
original_ngtdm_Coarseness	1.000
original_ngtdm_Complexity	1.000
original_ngtdm_Contrast	1.000
original_ngtdm_Strength	1.000
original_shape_Elongation	1.000
original_shape_Flatness	1.000
original_shape_LeastAxisLength	1.000
original_shape_MajorAxisLength	1.000
original_shape_Maximum2DDiameterColumn	1.000
original_shape_Maximum2DDiameterRow	1.000
original_shape_Maximum2DDiameterSlice	1.000
original_shape_Maximum3DDiameter	1.000

```
original_shape_MeshVolume                        0.999
original_shape_MinorAxisLength                   1.000
original_shape_Sphericity                        1.000
original_shape_SurfaceArea                       1.000
original_shape_SurfaceVolumeRatio                1.000
original_shape_VoxelVolume                       0.999


Likelihood ratio test=18.78  on 107 df, p=1
n= 114, number of events= 2



$model_list[[4]]$clusters
[1] 2.298741 0.583956 0.204538



$model_list[[5]]
$model_list[[5]]$vimp10
                              original_glcm_Idmn
                                      0.008589193
                    original_firstorder_Maximum
                                      0.008236651
     original_glrlm_ShortRunLowGrayLevelEmphasis
                                      0.008140504
             original_glszm_GrayLevelVariance
                                      0.004134350
       original_shape_Maximum2DDiameterColumn
                                      0.003429267
         original_glrlm_LowGrayLevelRunEmphasis
                                      0.003397218
             original_gldm_GrayLevelVariance
                                      0.002948529
      original_glszm_LowGrayLevelZoneEmphasis
                                      0.002692135
             original_gldm_DependenceVariance
                                      0.002595987
                   original_shape_Sphericity
                                      0.002371643
             original_shape_MajorAxisLength
                                      0.002339594
                 original_shape_VoxelVolume
                                      0.002275495
                 original_ngtdm_Coarseness
                                      0.002211397
             original_glcm_MaximumProbability
                                      0.001858855
original_gldm_LargeDependenceHighGrayLevelEmphasis
                                      0.001762708


$model_list[[5]]$treemodel
n= 361

node), split, n, deviance, yval
      * denotes terminal node

1) root 361 276.13440 1.0000000
  2) original_shape_Maximum2DDiameterColumn< 0.09631652 224  98.63371 0.5087286 *
```

```
   3) original_shape_Maximum2DDiameterColumn>=0.09631652 137 156.58110 1.8804440 *

$model_list[[5]]$coxmodels
$model_list[[5]]$coxmodels[[1]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)
```

	coef
original_firstorder_10Percentile	6.452e+01
original_firstorder_90Percentile	-1.151e+01
original_firstorder_Energy	-3.876e+00
original_firstorder_Entropy	-1.258e+02
original_firstorder_InterquartileRange	-2.708e+01
original_firstorder_Kurtosis	-4.582e+00
original_firstorder_Maximum	1.169e+01
original_firstorder_Mean	-8.673e+00
original_firstorder_MeanAbsoluteDeviation	6.374e-03
original_firstorder_Median	6.365e+00
original_firstorder_Minimum	-1.422e+01
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	6.334e+01
original_firstorder_RootMeanSquared	-3.464e+01
original_firstorder_Skewness	-2.905e+00
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-7.139e+01
original_firstorder_Variance	-3.782e+02
original_glcm_Autocorrelation	1.057e+02
original_glcm_ClusterProminence	-6.676e+02
original_glcm_ClusterShade	6.138e+01
original_glcm_ClusterTendency	1.658e+02
original_glcm_Contrast	-2.040e+02
original_glcm_Correlation	-1.390e+00
original_glcm_DifferenceAverage	-3.449e+02
original_glcm_DifferenceEntropy	-1.233e+01
original_glcm_DifferenceVariance	6.333e+02
original_glcm_Id	-2.507e+03
original_glcm_Idm	2.128e+03
original_glcm_Idmn	6.782e+00
original_glcm_Idn	-2.442e+01
original_glcm_Imc1	2.649e-01
original_glcm_Imc2	-2.533e+01
original_glcm_InverseVariance	-2.391e+02
original_glcm_JointAverage	-8.572e+00
original_glcm_JointEnergy	5.465e+01
original_glcm_JointEntropy	-1.098e+02
original_glcm_MCC	8.556e+00
original_glcm_MaximumProbability	1.896e+01
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	6.717e+01
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	8.931e+01
original_gldm_DependenceNonUniformity	-9.298e+00
original_gldm_DependenceNonUniformityNormalized	3.492e+01
original_gldm_DependenceVariance	-2.263e+01

```
original_gldm_GrayLevelNonUniformity                    -3.197e+00
original_gldm_GrayLevelVariance                          5.451e+02
original_gldm_HighGrayLevelEmphasis                     -3.717e+02
original_gldm_LargeDependenceEmphasis                    7.256e+01
original_gldm_LargeDependenceHighGrayLevelEmphasis       2.667e+01
original_gldm_LargeDependenceLowGrayLevelEmphasis        2.353e+02
original_gldm_LowGrayLevelEmphasis                      -2.081e+02
original_gldm_SmallDependenceEmphasis                    6.695e+00
original_gldm_SmallDependenceHighGrayLevelEmphasis      -2.321e+00
original_gldm_SmallDependenceLowGrayLevelEmphasis        2.260e+01
original_glrlm_GrayLevelNonUniformity                    1.800e+01
original_glrlm_GrayLevelNonUniformityNormalized         -3.063e+01
original_glrlm_GrayLevelVariance                        -1.360e+02
original_glrlm_HighGrayLevelRunEmphasis                  2.462e+02
original_glrlm_LongRunEmphasis                          -1.027e+02
original_glrlm_LongRunHighGrayLevelEmphasis             -4.726e+00
original_glrlm_LongRunLowGrayLevelEmphasis               2.406e+01
original_glrlm_LowGrayLevelRunEmphasis                  -4.269e+02
original_glrlm_RunEntropy                                5.148e+01
original_glrlm_RunLengthNonUniformity                   -6.400e-01
original_glrlm_RunLengthNonUniformityNormalized         -8.020e+01
original_glrlm_RunPercentage                             2.562e+02
original_glrlm_RunVariance                               8.343e+01
original_glrlm_ShortRunEmphasis                         -2.762e+01
original_glrlm_ShortRunHighGrayLevelEmphasis             1.567e+01
original_glrlm_ShortRunLowGrayLevelEmphasis              4.936e+02
original_glszm_GrayLevelNonUniformity                    6.421e+00
original_glszm_GrayLevelNonUniformityNormalized          1.216e+01
original_glszm_GrayLevelVariance                         7.814e+00
original_glszm_HighGrayLevelZoneEmphasis                 9.886e+00
original_glszm_LargeAreaEmphasis                         5.157e+02
original_glszm_LargeAreaHighGrayLevelEmphasis           -1.415e+01
original_glszm_LargeAreaLowGrayLevelEmphasis            -6.412e+01
original_glszm_LowGrayLevelZoneEmphasis                 -6.101e+01
original_glszm_SizeZoneNonUniformity                     3.916e+00
original_glszm_SizeZoneNonUniformityNormalized           3.102e+01
original_glszm_SmallAreaEmphasis                        -2.040e+01
original_glszm_SmallAreaHighGrayLevelEmphasis           -1.384e+01
original_glszm_SmallAreaLowGrayLevelEmphasis             2.995e+01
original_glszm_ZoneEntropy                               1.379e+01
original_glszm_ZonePercentage                           -1.126e+01
original_glszm_ZoneVariance                             -4.902e+02
original_ngtdm_Busyness                                  6.773e+00
original_ngtdm_Coarseness                               -2.210e+01
original_ngtdm_Complexity                               -8.334e+00
original_ngtdm_Contrast                                  3.812e+01
original_ngtdm_Strength                                  2.727e+00
original_shape_Elongation                                1.336e+00
original_shape_Flatness                                  5.360e+00
original_shape_LeastAxisLength                          -1.184e+01
original_shape_MajorAxisLength                           6.363e+00
original_shape_Maximum2DDiameterColumn                   6.793e-02
original_shape_Maximum2DDiameterRow                      7.650e-01
original_shape_Maximum2DDiameterSlice                    1.087e+00
original_shape_Maximum3DDiameter                         1.949e+00
original_shape_MeshVolume                                8.851e+02
```

original_shape_MinorAxisLength	1.274e+00
original_shape_Sphericity	9.383e+00
original_shape_SurfaceArea	1.525e+00
original_shape_SurfaceVolumeRatio	1.248e+01
original_shape_VoxelVolume	-8.976e+02
	exp(coef)
original_firstorder_10Percentile	1.054e+28
original_firstorder_90Percentile	1.002e-05
original_firstorder_Energy	2.073e-02
original_firstorder_Entropy	2.265e-55
original_firstorder_InterquartileRange	1.729e-12
original_firstorder_Kurtosis	1.023e-02
original_firstorder_Maximum	1.192e+05
original_firstorder_Mean	1.711e-04
original_firstorder_MeanAbsoluteDeviation	1.006e+00
original_firstorder_Median	5.812e+02
original_firstorder_Minimum	6.648e-07
original_firstorder_Range	1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	3.226e+27
original_firstorder_RootMeanSquared	9.064e-16
original_firstorder_Skewness	5.472e-02
original_firstorder_TotalEnergy	1.000e+00
original_firstorder_Uniformity	9.882e-32
original_firstorder_Variance	5.755e-165
original_glcm_Autocorrelation	8.048e+45
original_glcm_ClusterProminence	1.130e-290
original_glcm_ClusterShade	4.523e+26
original_glcm_ClusterTendency	9.877e+71
original_glcm_Contrast	2.630e-89
original_glcm_Correlation	2.492e-01
original_glcm_DifferenceAverage	1.702e-150
original_glcm_DifferenceEntropy	4.423e-06
original_glcm_DifferenceVariance	1.085e+275
original_glcm_Id	0.000e+00
original_glcm_Idm	Inf
original_glcm_Idmn	8.820e+02
original_glcm_Idn	2.486e-11
original_glcm_Imc1	1.303e+00
original_glcm_Imc2	9.981e-12
original_glcm_InverseVariance	1.430e-104
original_glcm_JointAverage	1.894e-04
original_glcm_JointEnergy	5.428e+23
original_glcm_JointEntropy	2.067e-48
original_glcm_MCC	5.196e+03
original_glcm_MaximumProbability	1.707e+08
original_glcm_SumAverage	1.000e+00
original_glcm_SumEntropy	1.482e+29
original_glcm_SumSquares	1.000e+00
original_gldm_DependenceEntropy	6.093e+38
original_gldm_DependenceNonUniformity	9.158e-05
original_gldm_DependenceNonUniformityNormalized	1.471e+15
original_gldm_DependenceVariance	1.493e-10
original_gldm_GrayLevelNonUniformity	4.090e-02
original_gldm_GrayLevelVariance	5.541e+236
original_gldm_HighGrayLevelEmphasis	3.916e-162
original_gldm_LargeDependenceEmphasis	3.251e+31

original_gldm_LargeDependenceHighGrayLevelEmphasis	3.844e+11
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.546e+102
original_gldm_LowGrayLevelEmphasis	4.341e-91
original_gldm_SmallDependenceEmphasis	8.085e+02
original_gldm_SmallDependenceHighGrayLevelEmphasis	9.813e-02
original_gldm_SmallDependenceLowGrayLevelEmphasis	6.519e+09
original_glrlm_GrayLevelNonUniformity	6.594e+07
original_glrlm_GrayLevelNonUniformityNormalized	4.982e-14
original_glrlm_GrayLevelVariance	8.563e-60
original_glrlm_HighGrayLevelRunEmphasis	8.657e+106
original_glrlm_LongRunEmphasis	2.535e-45
original_glrlm_LongRunHighGrayLevelEmphasis	8.863e-03
original_glrlm_LongRunLowGrayLevelEmphasis	2.812e+10
original_glrlm_LowGrayLevelRunEmphasis	4.088e-186
original_glrlm_RunEntropy	2.274e+22
original_glrlm_RunLengthNonUniformity	5.273e-01
original_glrlm_RunLengthNonUniformityNormalized	1.471e-35
original_glrlm_RunPercentage	1.826e+111
original_glrlm_RunVariance	1.712e+36
original_glrlm_ShortRunEmphasis	1.012e-12
original_glrlm_ShortRunHighGrayLevelEmphasis	6.379e+06
original_glrlm_ShortRunLowGrayLevelEmphasis	2.302e+214
original_glszm_GrayLevelNonUniformity	6.146e+02
original_glszm_GrayLevelNonUniformityNormalized	1.906e+05
original_glszm_GrayLevelVariance	2.475e+03
original_glszm_HighGrayLevelZoneEmphasis	1.965e+04
original_glszm_LargeAreaEmphasis	9.457e+223
original_glszm_LargeAreaHighGrayLevelEmphasis	7.125e-07
original_glszm_LargeAreaLowGrayLevelEmphasis	1.417e-28
original_glszm_LowGrayLevelZoneEmphasis	3.194e-27
original_glszm_SizeZoneNonUniformity	5.020e+01
original_glszm_SizeZoneNonUniformityNormalized	2.976e+13
original_glszm_SmallAreaEmphasis	1.383e-09
original_glszm_SmallAreaHighGrayLevelEmphasis	9.739e-07
original_glszm_SmallAreaLowGrayLevelEmphasis	1.017e+13
original_glszm_ZoneEntropy	9.773e+05
original_glszm_ZonePercentage	1.286e-05
original_glszm_ZoneVariance	1.308e-213
original_ngtdm_Busyness	8.736e+02
original_ngtdm_Coarseness	2.535e-10
original_ngtdm_Complexity	2.401e-04
original_ngtdm_Contrast	3.607e+16
original_ngtdm_Strength	1.529e+01
original_shape_Elongation	3.806e+00
original_shape_Flatness	2.126e+02
original_shape_LeastAxisLength	7.187e-06
original_shape_MajorAxisLength	5.797e+02
original_shape_Maximum2DDiameterColumn	1.070e+00
original_shape_Maximum2DDiameterRow	2.149e+00
original_shape_Maximum2DDiameterSlice	2.965e+00
original_shape_Maximum3DDiameter	7.025e+00
original_shape_MeshVolume	Inf
original_shape_MinorAxisLength	3.575e+00
original_shape_Sphericity	1.188e+04
original_shape_SurfaceArea	4.596e+00
original_shape_SurfaceVolumeRatio	2.640e+05

original_shape_VoxelVolume	0.000e+00
	se(coef)
original_firstorder_10Percentile	5.226e-01
original_firstorder_90Percentile	2.524e-01
original_firstorder_Energy	3.688e-01
original_firstorder_Entropy	2.233e-01
original_firstorder_InterquartileRange	6.928e-01
original_firstorder_Kurtosis	1.812e-01
original_firstorder_Maximum	2.172e-01
original_firstorder_Mean	2.499e-01
original_firstorder_MeanAbsoluteDeviation	3.895e-01
original_firstorder_Median	2.040e-01
original_firstorder_Minimum	2.668e-01
original_firstorder_Range	2.566e-01
original_firstorder_RobustMeanAbsoluteDeviation	7.209e-01
original_firstorder_RootMeanSquared	3.227e-01
original_firstorder_Skewness	1.729e-01
original_firstorder_TotalEnergy	3.688e-01
original_firstorder_Uniformity	1.513e-01
original_firstorder_Variance	8.399e-01
original_glcm_Autocorrelation	2.343e-01
original_glcm_ClusterProminence	9.430e+00
original_glcm_ClusterShade	1.433e+00
original_glcm_ClusterTendency	7.793e-01
original_glcm_Contrast	1.925e+00
original_glcm_Correlation	2.246e-01
original_glcm_DifferenceAverage	3.064e-01
original_glcm_DifferenceEntropy	1.996e-01
original_glcm_DifferenceVariance	2.104e+00
original_glcm_Id	1.825e-01
original_glcm_Idm	1.903e-01
original_glcm_Idmn	4.489e-01
original_glcm_Idn	2.980e-01
original_glcm_Imc1	1.843e-01
original_glcm_Imc2	2.621e-01
original_glcm_InverseVariance	1.305e-01
original_glcm_JointAverage	2.692e-01
original_glcm_JointEnergy	1.100e-01
original_glcm_JointEntropy	2.023e-01
original_glcm_MCC	2.364e-01
original_glcm_MaximumProbability	1.457e-01
original_glcm_SumAverage	2.692e-01
original_glcm_SumEntropy	1.990e-01
original_glcm_SumSquares	9.038e-01
original_gldm_DependenceEntropy	1.382e-01
original_gldm_DependenceNonUniformity	7.977e-02
original_gldm_DependenceNonUniformityNormalized	8.565e-02
original_gldm_DependenceVariance	1.897e-01
original_gldm_GrayLevelNonUniformity	1.312e-01
original_gldm_GrayLevelVariance	8.392e-01
original_gldm_HighGrayLevelEmphasis	2.341e-01
original_gldm_LargeDependenceEmphasis	1.993e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	1.756e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	1.200e+00
original_gldm_LowGrayLevelEmphasis	1.310e+00
original_gldm_SmallDependenceEmphasis	2.069e-01

```
original_gldm_SmallDependenceHighGrayLevelEmphasis      3.256e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis       1.048e+00
original_glrlm_GrayLevelNonUniformity                   1.118e-01
original_glrlm_GrayLevelNonUniformityNormalized         1.570e-01
original_glrlm_GrayLevelVariance                        6.344e-01
original_glrlm_HighGrayLevelRunEmphasis                 2.362e-01
original_glrlm_LongRunEmphasis                          6.300e-02
original_glrlm_LongRunHighGrayLevelEmphasis             9.404e-02
original_glrlm_LongRunLowGrayLevelEmphasis              7.085e-01
original_glrlm_LowGrayLevelRunEmphasis                  1.268e+00
original_glrlm_RunEntropy                               1.964e-01
original_glrlm_RunLengthNonUniformity                   1.639e-01
original_glrlm_RunLengthNonUniformityNormalized         1.936e-01
original_glrlm_RunPercentage                            2.007e-01
original_glrlm_RunVariance                              5.627e-02
original_glrlm_ShortRunEmphasis                         1.983e-01
original_glrlm_ShortRunHighGrayLevelEmphasis            2.566e-01
original_glrlm_ShortRunLowGrayLevelEmphasis             1.282e+00
original_glszm_GrayLevelNonUniformity                   1.841e-01
original_glszm_GrayLevelNonUniformityNormalized         2.444e-01
original_glszm_GrayLevelVariance                        3.119e-01
original_glszm_HighGrayLevelZoneEmphasis                2.748e-01
original_glszm_LargeAreaEmphasis                        1.238e-01
original_glszm_LargeAreaHighGrayLevelEmphasis           1.175e-01
original_glszm_LargeAreaLowGrayLevelEmphasis            6.336e-01
original_glszm_LowGrayLevelZoneEmphasis                 1.020e+00
original_glszm_SizeZoneNonUniformity                    2.297e-01
original_glszm_SizeZoneNonUniformityNormalized          2.508e-01
original_glszm_SmallAreaEmphasis                        2.680e-01
original_glszm_SmallAreaHighGrayLevelEmphasis           2.668e-01
original_glszm_SmallAreaLowGrayLevelEmphasis            1.045e+00
original_glszm_ZoneEntropy                              2.591e-01
original_glszm_ZonePercentage                           2.082e-01
original_glszm_ZoneVariance                             1.238e-01
original_ngtdm_Busyness                                 4.340e-01
original_ngtdm_Coarseness                               1.202e+00
original_ngtdm_Complexity                               5.439e-01
original_ngtdm_Contrast                                 1.654e+00
original_ngtdm_Strength                                 4.565e-01
original_shape_Elongation                               1.824e-01
original_shape_Flatness                                 2.153e-01
original_shape_LeastAxisLength                          2.343e-01
original_shape_MajorAxisLength                          2.114e-01
original_shape_Maximum2DDiameterColumn                  2.233e-01
original_shape_Maximum2DDiameterRow                     2.394e-01
original_shape_Maximum2DDiameterSlice                   2.336e-01
original_shape_Maximum3DDiameter                        2.091e-01
original_shape_MeshVolume                               1.487e-01
original_shape_MinorAxisLength                          2.260e-01
original_shape_Sphericity                               2.480e-01
original_shape_SurfaceArea                              1.456e-01
original_shape_SurfaceVolumeRatio                       1.953e-01
original_shape_VoxelVolume                              1.492e-01
                                                          z
original_firstorder_10Percentile                       123.466
original_firstorder_90Percentile                       -45.603
```

```
original_firstorder_Energy                                  -10.510
original_firstorder_Entropy                                -563.553
original_firstorder_InterquartileRange                      -39.094
original_firstorder_Kurtosis                                -25.295
original_firstorder_Maximum                                  53.814
original_firstorder_Mean                                    -34.701
original_firstorder_MeanAbsoluteDeviation                     0.016
original_firstorder_Median                                   31.204
original_firstorder_Minimum                                 -53.316
original_firstorder_Range                                     0.000
original_firstorder_RobustMeanAbsoluteDeviation              87.863
original_firstorder_RootMeanSquared                        -107.346
original_firstorder_Skewness                                -16.805
original_firstorder_TotalEnergy                               0.000
original_firstorder_Uniformity                             -471.755
original_firstorder_Variance                               -450.253
original_glcm_Autocorrelation                               451.091
original_glcm_ClusterProminence                             -70.801
original_glcm_ClusterShade                                   42.830
original_glcm_ClusterTendency                               212.734
original_glcm_Contrast                                     -105.955
original_glcm_Correlation                                    -6.188
original_glcm_DifferenceAverage                           -1125.651
original_glcm_DifferenceEntropy                             -61.773
original_glcm_DifferenceVariance                            301.019
original_glcm_Id                                         -13739.078
original_glcm_Idm                                         11181.253
original_glcm_Idmn                                           15.107
original_glcm_Idn                                           -81.952
original_glcm_Imc1                                            1.437
original_glcm_Imc2                                          -96.627
original_glcm_InverseVariance                             -1832.268
original_glcm_JointAverage                                  -31.841
original_glcm_JointEnergy                                   496.990
original_glcm_JointEntropy                                 -542.633
original_glcm_MCC                                            36.185
original_glcm_MaximumProbability                            130.131
original_glcm_SumAverage                                      0.000
original_glcm_SumEntropy                                    337.567
original_glcm_SumSquares                                      0.000
original_gldm_DependenceEntropy                             646.036
original_gldm_DependenceNonUniformity                      -116.567
original_gldm_DependenceNonUniformityNormalized            407.740
original_gldm_DependenceVariance                           -119.290
original_gldm_GrayLevelNonUniformity                        -24.364
original_gldm_GrayLevelVariance                             649.559
original_gldm_HighGrayLevelEmphasis                       -1587.715
original_gldm_LargeDependenceEmphasis                       364.090
original_gldm_LargeDependenceHighGrayLevelEmphasis          151.890
original_gldm_LargeDependenceLowGrayLevelEmphasis           196.055
original_gldm_LowGrayLevelEmphasis                         -158.806
original_gldm_SmallDependenceEmphasis                        32.364
original_gldm_SmallDependenceHighGrayLevelEmphasis           -7.130
original_gldm_SmallDependenceLowGrayLevelEmphasis            21.567
original_glrlm_GrayLevelNonUniformity                       160.983
original_glrlm_GrayLevelNonUniformityNormalized           -195.123
```

original_glrlm_GrayLevelVariance	-214.380
original_glrlm_HighGrayLevelRunEmphasis	1042.352
original_glrlm_LongRunEmphasis	-1629.999
original_glrlm_LongRunHighGrayLevelEmphasis	-50.252
original_glrlm_LongRunLowGrayLevelEmphasis	33.957
original_glrlm_LowGrayLevelRunEmphasis	-336.714
original_glrlm_RunEntropy	262.119
original_glrlm_RunLengthNonUniformity	-3.906
original_glrlm_RunLengthNonUniformityNormalized	-414.183
original_glrlm_RunPercentage	1276.598
original_glrlm_RunVariance	1482.666
original_glrlm_ShortRunEmphasis	-139.299
original_glrlm_ShortRunHighGrayLevelEmphasis	61.073
original_glrlm_ShortRunLowGrayLevelEmphasis	384.988
original_glszm_GrayLevelNonUniformity	34.870
original_glszm_GrayLevelNonUniformityNormalized	49.746
original_glszm_GrayLevelVariance	25.051
original_glszm_HighGrayLevelZoneEmphasis	35.977
original_glszm_LargeAreaEmphasis	4166.668
original_glszm_LargeAreaHighGrayLevelEmphasis	-120.466
original_glszm_LargeAreaLowGrayLevelEmphasis	-101.201
original_glszm_LowGrayLevelZoneEmphasis	-59.813
original_glszm_SizeZoneNonUniformity	17.046
original_glszm_SizeZoneNonUniformityNormalized	123.724
original_glszm_SmallAreaEmphasis	-76.113
original_glszm_SmallAreaHighGrayLevelEmphasis	-51.886
original_glszm_SmallAreaLowGrayLevelEmphasis	28.664
original_glszm_ZoneEntropy	53.223
original_glszm_ZonePercentage	-54.079
original_glszm_ZoneVariance	-3960.433
original_ngtdm_Busyness	15.604
original_ngtdm_Coarseness	-18.376
original_ngtdm_Complexity	-15.322
original_ngtdm_Contrast	23.050
original_ngtdm_Strength	5.974
original_shape_Elongation	7.328
original_shape_Flatness	24.895
original_shape_LeastAxisLength	-50.556
original_shape_MajorAxisLength	30.100
original_shape_Maximum2DDiameterColumn	0.304
original_shape_Maximum2DDiameterRow	3.195
original_shape_Maximum2DDiameterSlice	4.653
original_shape_Maximum3DDiameter	9.321
original_shape_MeshVolume	5950.349
original_shape_MinorAxisLength	5.638
original_shape_Sphericity	37.834
original_shape_SurfaceArea	10.475
original_shape_SurfaceVolumeRatio	63.913
original_shape_VoxelVolume	-6017.659

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	< 2e-16
original_firstorder_Energy	< 2e-16
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	< 2e-16

```
original_firstorder_Maximum                                    < 2e-16
original_firstorder_Mean                                       < 2e-16
original_firstorder_MeanAbsoluteDeviation                       0.9869
original_firstorder_Median                                     < 2e-16
original_firstorder_Minimum                                    < 2e-16
original_firstorder_Range                                       1.0000
original_firstorder_RobustMeanAbsoluteDeviation                < 2e-16
original_firstorder_RootMeanSquared                            < 2e-16
original_firstorder_Skewness                                   < 2e-16
original_firstorder_TotalEnergy                                 1.0000
original_firstorder_Uniformity                                 < 2e-16
original_firstorder_Variance                                   < 2e-16
original_glcm_Autocorrelation                                  < 2e-16
original_glcm_ClusterProminence                               < 2e-16
original_glcm_ClusterShade                                     < 2e-16
original_glcm_ClusterTendency                                  < 2e-16
original_glcm_Contrast                                         < 2e-16
original_glcm_Correlation                                      6.08e-10
original_glcm_DifferenceAverage                               < 2e-16
original_glcm_DifferenceEntropy                               < 2e-16
original_glcm_DifferenceVariance                              < 2e-16
original_glcm_Id                                              < 2e-16
original_glcm_Idm                                             < 2e-16
original_glcm_Idmn                                            < 2e-16
original_glcm_Idn                                             < 2e-16
original_glcm_Imc1                                              0.1507
original_glcm_Imc2                                            < 2e-16
original_glcm_InverseVariance                                 < 2e-16
original_glcm_JointAverage                                    < 2e-16
original_glcm_JointEnergy                                     < 2e-16
original_glcm_JointEntropy                                    < 2e-16
original_glcm_MCC                                             < 2e-16
original_glcm_MaximumProbability                             < 2e-16
original_glcm_SumAverage                                       1.0000
original_glcm_SumEntropy                                      < 2e-16
original_glcm_SumSquares                                       1.0000
original_gldm_DependenceEntropy                              < 2e-16
original_gldm_DependenceNonUniformity                        < 2e-16
original_gldm_DependenceNonUniformityNormalized              < 2e-16
original_gldm_DependenceVariance                             < 2e-16
original_gldm_GrayLevelNonUniformity                         < 2e-16
original_gldm_GrayLevelVariance                              < 2e-16
original_gldm_HighGrayLevelEmphasis                          < 2e-16
original_gldm_LargeDependenceEmphasis                        < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis           < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis            < 2e-16
original_gldm_LowGrayLevelEmphasis                           < 2e-16
original_gldm_SmallDependenceEmphasis                        < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis           1.00e-12
original_gldm_SmallDependenceLowGrayLevelEmphasis            < 2e-16
original_glrlm_GrayLevelNonUniformity                        < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized              < 2e-16
original_glrlm_GrayLevelVariance                             < 2e-16
original_glrlm_HighGrayLevelRunEmphasis                      < 2e-16
original_glrlm_LongRunEmphasis                               < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis                  < 2e-16
```

```
original_glrlm_LongRunLowGrayLevelEmphasis              < 2e-16
original_glrlm_LowGrayLevelRunEmphasis                  < 2e-16
original_glrlm_RunEntropy                               < 2e-16
original_glrlm_RunLengthNonUniformity                   9.38e-05
original_glrlm_RunLengthNonUniformityNormalized         < 2e-16
original_glrlm_RunPercentage                            < 2e-16
original_glrlm_RunVariance                              < 2e-16
original_glrlm_ShortRunEmphasis                         < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis            < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis             < 2e-16
original_glszm_GrayLevelNonUniformity                   < 2e-16
original_glszm_GrayLevelNonUniformityNormalized         < 2e-16
original_glszm_GrayLevelVariance                        < 2e-16
original_glszm_HighGrayLevelZoneEmphasis                < 2e-16
original_glszm_LargeAreaEmphasis                        < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis           < 2e-16
original_glszm_LargeAreaLowGrayLevelEmphasis            < 2e-16
original_glszm_LowGrayLevelZoneEmphasis                 < 2e-16
original_glszm_SizeZoneNonUniformity                    < 2e-16
original_glszm_SizeZoneNonUniformityNormalized          < 2e-16
original_glszm_SmallAreaEmphasis                        < 2e-16
original_glszm_SmallAreaHighGrayLevelEmphasis           < 2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis            < 2e-16
original_glszm_ZoneEntropy                              < 2e-16
original_glszm_ZonePercentage                           < 2e-16
original_glszm_ZoneVariance                             < 2e-16
original_ngtdm_Busyness                                 < 2e-16
original_ngtdm_Coarseness                               < 2e-16
original_ngtdm_Complexity                               < 2e-16
original_ngtdm_Contrast                                 < 2e-16
original_ngtdm_Strength                                 2.31e-09
original_shape_Elongation                               2.34e-13
original_shape_Flatness                                 < 2e-16
original_shape_LeastAxisLength                          < 2e-16
original_shape_MajorAxisLength                          < 2e-16
original_shape_Maximum2DDiameterColumn                   0.7610
original_shape_Maximum2DDiameterRow                      0.0014
original_shape_Maximum2DDiameterSlice                   3.27e-06
original_shape_Maximum3DDiameter                        < 2e-16
original_shape_MeshVolume                               < 2e-16
original_shape_MinorAxisLength                          1.72e-08
original_shape_Sphericity                               < 2e-16
original_shape_SurfaceArea                              < 2e-16
original_shape_SurfaceVolumeRatio                       < 2e-16
original_shape_VoxelVolume                              < 2e-16


Likelihood ratio test=136.2  on 107 df, p=0.02976
n= 137, number of events= 32


$model_list[[5]]$coxmodels[[2]]
Call:
coxph(formula = as.formula(paste("Surv(df_train$time, df_train$event) ~",
    paste(predict.factors, collapse = "+"))), data = df_train,
    x = TRUE)

                                                coef
```

original_firstorder_10Percentile	4.276e+01
original_firstorder_90Percentile	1.165e+01
original_firstorder_Energy	-6.823e-01
original_firstorder_Entropy	-6.341e+01
original_firstorder_InterquartileRange	-6.109e+01
original_firstorder_Kurtosis	-2.383e-02
original_firstorder_Maximum	1.049e+01
original_firstorder_Mean	-2.325e+01
original_firstorder_MeanAbsoluteDeviation	7.340e+01
original_firstorder_Median	-2.097e+00
original_firstorder_Minimum	5.284e+01
original_firstorder_Range	0.000e+00
original_firstorder_RobustMeanAbsoluteDeviation	6.898e+01
original_firstorder_RootMeanSquared	-2.011e+01
original_firstorder_Skewness	-4.302e-01
original_firstorder_TotalEnergy	0.000e+00
original_firstorder_Uniformity	-2.458e+01
original_firstorder_Variance	3.792e+03
original_glcm_Autocorrelation	-9.183e+02
original_glcm_ClusterProminence	7.514e+03
original_glcm_ClusterShade	1.071e+03
original_glcm_ClusterTendency	-2.647e+02
original_glcm_Contrast	4.219e+02
original_glcm_Correlation	-7.379e-01
original_glcm_DifferenceAverage	1.618e+02
original_glcm_DifferenceEntropy	-2.191e+01
original_glcm_DifferenceVariance	-5.247e+02
original_glcm_Id	1.312e+03
original_glcm_Idm	-1.143e+03
original_glcm_Idmn	-4.345e+00
original_glcm_Idn	-1.079e+00
original_glcm_Imc1	-8.884e+00
original_glcm_Imc2	-2.066e+01
original_glcm_InverseVariance	9.805e+01
original_glcm_JointAverage	5.837e+01
original_glcm_JointEnergy	-1.504e+01
original_glcm_JointEntropy	-1.509e+01
original_glcm_MCC	-7.264e-01
original_glcm_MaximumProbability	6.518e+00
original_glcm_SumAverage	0.000e+00
original_glcm_SumEntropy	1.636e+01
original_glcm_SumSquares	0.000e+00
original_gldm_DependenceEntropy	1.263e+01
original_gldm_DependenceNonUniformity	-1.107e+02
original_gldm_DependenceNonUniformityNormalized	1.731e+01
original_gldm_DependenceVariance	-2.792e+01
original_gldm_GrayLevelNonUniformity	9.746e+00
original_gldm_GrayLevelVariance	-3.537e+03
original_gldm_HighGrayLevelEmphasis	1.366e+03
original_gldm_LargeDependenceEmphasis	6.215e+01
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.292e+01
original_gldm_LargeDependenceLowGrayLevelEmphasis	-3.798e+01
original_gldm_LowGrayLevelEmphasis	2.593e+01
original_gldm_SmallDependenceEmphasis	2.830e+01
original_gldm_SmallDependenceHighGrayLevelEmphasis	-1.252e+01
original_gldm_SmallDependenceLowGrayLevelEmphasis	4.137e-01

original_glrlm_GrayLevelNonUniformity	-7.080e+01
original_glrlm_GrayLevelNonUniformityNormalized	1.015e+01
original_glrlm_GrayLevelVariance	-9.982e+01
original_glrlm_HighGrayLevelRunEmphasis	-5.147e+02
original_glrlm_LongRunEmphasis	6.916e+01
original_glrlm_LongRunHighGrayLevelEmphasis	-2.335e+01
original_glrlm_LongRunLowGrayLevelEmphasis	1.203e+01
original_glrlm_LowGrayLevelRunEmphasis	1.342e+02
original_glrlm_RunEntropy	4.338e+01
original_glrlm_RunLengthNonUniformity	1.067e+02
original_glrlm_RunLengthNonUniformityNormalized	-1.805e+02
original_glrlm_RunPercentage	4.252e+01
original_glrlm_RunVariance	-7.333e+01
original_glrlm_ShortRunEmphasis	1.648e+02
original_glrlm_ShortRunHighGrayLevelEmphasis	1.063e+02
original_glrlm_ShortRunLowGrayLevelEmphasis	-1.352e+02
original_glszm_GrayLevelNonUniformity	1.454e+01
original_glszm_GrayLevelNonUniformityNormalized	6.831e+00
original_glszm_GrayLevelVariance	8.126e+00
original_glszm_HighGrayLevelZoneEmphasis	-9.302e+00
original_glszm_LargeAreaEmphasis	-7.176e+02
original_glszm_LargeAreaHighGrayLevelEmphasis	8.233e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	-4.684e+00
original_glszm_LowGrayLevelZoneEmphasis	-7.807e+00
original_glszm_SizeZoneNonUniformity	-2.269e+01
original_glszm_SizeZoneNonUniformityNormalized	-2.339e+01
original_glszm_SmallAreaEmphasis	2.502e+01
original_glszm_SmallAreaHighGrayLevelEmphasis	-1.883e+01
original_glszm_SmallAreaLowGrayLevelEmphasis	3.994e+00
original_glszm_ZoneEntropy	7.767e+00
original_glszm_ZonePercentage	-2.037e+01
original_glszm_ZoneVariance	7.257e+02
original_ngtdm_Busyness	1.229e+00
original_ngtdm_Coarseness	4.072e+00
original_ngtdm_Complexity	-7.246e+01
original_ngtdm_Contrast	-2.820e+01
original_ngtdm_Strength	1.327e+00
original_shape_Elongation	3.560e+00
original_shape_Flatness	-3.839e-01
original_shape_LeastAxisLength	2.036e+00
original_shape_MajorAxisLength	1.640e+01
original_shape_Maximum2DDiameterColumn	1.908e+00
original_shape_Maximum2DDiameterRow	-7.495e+00
original_shape_Maximum2DDiameterSlice	-5.251e+00
original_shape_Maximum3DDiameter	1.753e+00
original_shape_MeshVolume	3.521e+03
original_shape_MinorAxisLength	5.732e+00
original_shape_Sphericity	8.093e+00
original_shape_SurfaceArea	1.037e+02
original_shape_SurfaceVolumeRatio	4.667e+01
original_shape_VoxelVolume	-3.530e+03
	exp(coef)
original_firstorder_10Percentile	3.713e+18
original_firstorder_90Percentile	1.148e+05
original_firstorder_Energy	5.055e-01
original_firstorder_Entropy	2.902e-28

```
original_firstorder_InterquartileRange            2.938e-27
original_firstorder_Kurtosis                      9.765e-01
original_firstorder_Maximum                       3.579e+04
original_firstorder_Mean                          8.024e-11
original_firstorder_MeanAbsoluteDeviation         7.512e+31
original_firstorder_Median                        1.228e-01
original_firstorder_Minimum                       8.868e+22
original_firstorder_Range                         1.000e+00
original_firstorder_RobustMeanAbsoluteDeviation   9.067e+29
original_firstorder_RootMeanSquared               1.851e-09
original_firstorder_Skewness                      6.504e-01
original_firstorder_TotalEnergy                   1.000e+00
original_firstorder_Uniformity                    2.119e-11
original_firstorder_Variance                           Inf
original_glcm_Autocorrelation                     0.000e+00
original_glcm_ClusterProminence                        Inf
original_glcm_ClusterShade                             Inf
original_glcm_ClusterTendency                    1.049e-115
original_glcm_Contrast                           1.643e+183
original_glcm_Correlation                         4.781e-01
original_glcm_DifferenceAverage                   1.842e+70
original_glcm_DifferenceEntropy                   3.057e-10
original_glcm_DifferenceVariance                 1.373e-228
original_glcm_Id                                       Inf
original_glcm_Idm                                 0.000e+00
original_glcm_Idmn                                1.297e-02
original_glcm_Idn                                 3.398e-01
original_glcm_Imc1                                1.386e-04
original_glcm_Imc2                                1.062e-09
original_glcm_InverseVariance                     3.816e+42
original_glcm_JointAverage                        2.243e+25
original_glcm_JointEnergy                         2.936e-07
original_glcm_JointEntropy                        2.785e-07
original_glcm_MCC                                 4.837e-01
original_glcm_MaximumProbability                  6.770e+02
original_glcm_SumAverage                          1.000e+00
original_glcm_SumEntropy                          1.273e+07
original_glcm_SumSquares                          1.000e+00
original_gldm_DependenceEntropy                   3.058e+05
original_gldm_DependenceNonUniformity             8.738e-49
original_gldm_DependenceNonUniformityNormalized   3.309e+07
original_gldm_DependenceVariance                  7.483e-13
original_gldm_GrayLevelNonUniformity              1.709e+04
original_gldm_GrayLevelVariance                   0.000e+00
original_gldm_HighGrayLevelEmphasis                    Inf
original_gldm_LargeDependenceEmphasis             9.828e+26
original_gldm_LargeDependenceHighGrayLevelEmphasis 1.980e+14
original_gldm_LargeDependenceLowGrayLevelEmphasis  3.212e-17
original_gldm_LowGrayLevelEmphasis                1.822e+11
original_gldm_SmallDependenceEmphasis             1.949e+12
original_gldm_SmallDependenceHighGrayLevelEmphasis 3.656e-06
original_gldm_SmallDependenceLowGrayLevelEmphasis  1.512e+00
original_glrlm_GrayLevelNonUniformity             1.793e-31
original_glrlm_GrayLevelNonUniformityNormalized   2.568e+04
original_glrlm_GrayLevelVariance                  4.471e-44
original_glrlm_HighGrayLevelRunEmphasis           3.011e-224
```

original_glrlm_LongRunEmphasis	1.086e+30
original_glrlm_LongRunHighGrayLevelEmphasis	7.263e-11
original_glrlm_LongRunLowGrayLevelEmphasis	1.684e+05
original_glrlm_LowGrayLevelRunEmphasis	1.892e+58
original_glrlm_RunEntropy	6.936e+18
original_glrlm_RunLengthNonUniformity	2.162e+46
original_glrlm_RunLengthNonUniformityNormalized	3.900e-79
original_glrlm_RunPercentage	2.925e+18
original_glrlm_RunVariance	1.426e-32
original_glrlm_ShortRunEmphasis	3.721e+71
original_glrlm_ShortRunHighGrayLevelEmphasis	1.510e+46
original_glrlm_ShortRunLowGrayLevelEmphasis	1.990e-59
original_glszm_GrayLevelNonUniformity	2.063e+06
original_glszm_GrayLevelNonUniformityNormalized	9.257e+02
original_glszm_GrayLevelVariance	3.382e+03
original_glszm_HighGrayLevelZoneEmphasis	9.128e-05
original_glszm_LargeAreaEmphasis	2.231e-312
original_glszm_LargeAreaHighGrayLevelEmphasis	3.763e+03
original_glszm_LargeAreaLowGrayLevelEmphasis	9.245e-03
original_glszm_LowGrayLevelZoneEmphasis	4.068e-04
original_glszm_SizeZoneNonUniformity	1.396e-10
original_glszm_SizeZoneNonUniformityNormalized	6.927e-11
original_glszm_SmallAreaEmphasis	7.311e+10
original_glszm_SmallAreaHighGrayLevelEmphasis	6.622e-09
original_glszm_SmallAreaLowGrayLevelEmphasis	5.427e+01
original_glszm_ZoneEntropy	2.362e+03
original_glszm_ZonePercentage	1.428e-09
original_glszm_ZoneVariance	Inf
original_ngtdm_Busyness	3.419e+00
original_ngtdm_Coarseness	5.869e+01
original_ngtdm_Complexity	3.387e-32
original_ngtdm_Contrast	5.661e-13
original_ngtdm_Strength	3.771e+00
original_shape_Elongation	3.517e+01
original_shape_Flatness	6.812e-01
original_shape_LeastAxisLength	7.663e+00
original_shape_MajorAxisLength	1.323e+07
original_shape_Maximum2DDiameterColumn	6.737e+00
original_shape_Maximum2DDiameterRow	5.560e-04
original_shape_Maximum2DDiameterSlice	5.243e-03
original_shape_Maximum3DDiameter	5.770e+00
original_shape_MeshVolume	Inf
original_shape_MinorAxisLength	3.086e+02
original_shape_Sphericity	3.272e+03
original_shape_SurfaceArea	1.047e+45
original_shape_SurfaceVolumeRatio	1.854e+20
original_shape_VoxelVolume	0.000e+00
	se(coef)
original_firstorder_10Percentile	6.207e-01
original_firstorder_90Percentile	3.207e-01
original_firstorder_Energy	3.486e+00
original_firstorder_Entropy	2.982e-01
original_firstorder_InterquartileRange	6.130e-01
original_firstorder_Kurtosis	2.088e-01
original_firstorder_Maximum	7.266e-01
original_firstorder_Mean	3.500e-01

original_firstorder_MeanAbsoluteDeviation	6.761e-01
original_firstorder_Median	2.540e-01
original_firstorder_Minimum	2.695e-01
original_firstorder_Range	5.213e-01
original_firstorder_RobustMeanAbsoluteDeviation	6.727e-01
original_firstorder_RootMeanSquared	4.398e-01
original_firstorder_Skewness	2.347e-01
original_firstorder_TotalEnergy	3.486e+00
original_firstorder_Uniformity	2.710e-01
original_firstorder_Variance	1.938e+00
original_glcm_Autocorrelation	2.901e-01
original_glcm_ClusterProminence	6.821e+01
original_glcm_ClusterShade	9.085e+00
original_glcm_ClusterTendency	3.120e+00
original_glcm_Contrast	2.344e+00
original_glcm_Correlation	3.692e-01
original_glcm_DifferenceAverage	3.765e-01
original_glcm_DifferenceEntropy	2.803e-01
original_glcm_DifferenceVariance	2.737e+00
original_glcm_Id	2.582e-01
original_glcm_Idm	2.567e-01
original_glcm_Idmn	2.819e-01
original_glcm_Idn	2.653e-01
original_glcm_Imc1	3.260e-01
original_glcm_Imc2	3.153e-01
original_glcm_InverseVariance	3.075e-01
original_glcm_JointAverage	2.482e-01
original_glcm_JointEnergy	2.728e-01
original_glcm_JointEntropy	2.902e-01
original_glcm_MCC	3.349e-01
original_glcm_MaximumProbability	2.881e-01
original_glcm_SumAverage	2.482e-01
original_glcm_SumEntropy	3.016e-01
original_glcm_SumSquares	2.979e+00
original_gldm_DependenceEntropy	2.736e-01
original_gldm_DependenceNonUniformity	2.081e+00
original_gldm_DependenceNonUniformityNormalized	3.136e-01
original_gldm_DependenceVariance	2.940e-01
original_gldm_GrayLevelNonUniformity	1.213e+00
original_gldm_GrayLevelVariance	1.943e+00
original_gldm_HighGrayLevelEmphasis	2.918e-01
original_gldm_LargeDependenceEmphasis	3.169e-01
original_gldm_LargeDependenceHighGrayLevelEmphasis	3.143e-01
original_gldm_LargeDependenceLowGrayLevelEmphasis	5.491e-01
original_gldm_LowGrayLevelEmphasis	1.569e-01
original_gldm_SmallDependenceEmphasis	3.593e-01
original_gldm_SmallDependenceHighGrayLevelEmphasis	5.177e-01
original_gldm_SmallDependenceLowGrayLevelEmphasis	1.698e-01
original_glrlm_GrayLevelNonUniformity	1.401e+00
original_glrlm_GrayLevelNonUniformityNormalized	2.385e-01
original_glrlm_GrayLevelVariance	1.558e+00
original_glrlm_HighGrayLevelRunEmphasis	2.920e-01
original_glrlm_LongRunEmphasis	4.114e-01
original_glrlm_LongRunHighGrayLevelEmphasis	3.855e-01
original_glrlm_LongRunLowGrayLevelEmphasis	3.666e-01
original_glrlm_LowGrayLevelRunEmphasis	1.595e-01

original_glrlm_RunEntropy	2.736e-01
original_glrlm_RunLengthNonUniformity	1.909e+00
original_glrlm_RunLengthNonUniformityNormalized	3.265e-01
original_glrlm_RunPercentage	3.146e-01
original_glrlm_RunVariance	4.827e-01
original_glrlm_ShortRunEmphasis	3.280e-01
original_glrlm_ShortRunHighGrayLevelEmphasis	3.058e-01
original_glrlm_ShortRunLowGrayLevelEmphasis	1.422e-01
original_glszm_GrayLevelNonUniformity	1.594e+00
original_glszm_GrayLevelNonUniformityNormalized	2.772e-01
original_glszm_GrayLevelVariance	6.239e-01
original_glszm_HighGrayLevelZoneEmphasis	3.111e-01
original_glszm_LargeAreaEmphasis	9.166e-01
original_glszm_LargeAreaHighGrayLevelEmphasis	1.899e+00
original_glszm_LargeAreaLowGrayLevelEmphasis	6.309e-01
original_glszm_LowGrayLevelZoneEmphasis	2.341e-01
original_glszm_SizeZoneNonUniformity	2.107e+00
original_glszm_SizeZoneNonUniformityNormalized	2.509e-01
original_glszm_SmallAreaEmphasis	2.195e-01
original_glszm_SmallAreaHighGrayLevelEmphasis	3.399e-01
original_glszm_SmallAreaLowGrayLevelEmphasis	3.234e-01
original_glszm_ZoneEntropy	3.898e-01
original_glszm_ZonePercentage	3.453e-01
original_glszm_ZoneVariance	9.242e-01
original_ngtdm_Busyness	6.049e-01
original_ngtdm_Coarseness	1.363e-01
original_ngtdm_Complexity	1.293e+00
original_ngtdm_Contrast	8.977e-01
original_ngtdm_Strength	4.879e-01
original_shape_Elongation	4.050e-01
original_shape_Flatness	2.476e-01
original_shape_LeastAxisLength	4.428e-01
original_shape_MajorAxisLength	6.967e-01
original_shape_Maximum2DDiameterColumn	7.177e-01
original_shape_Maximum2DDiameterRow	7.134e-01
original_shape_Maximum2DDiameterSlice	8.375e-01
original_shape_Maximum3DDiameter	8.020e-01
original_shape_MeshVolume	1.304e+00
original_shape_MinorAxisLength	7.891e-01
original_shape_Sphericity	3.539e-01
original_shape_SurfaceArea	2.455e+00
original_shape_SurfaceVolumeRatio	3.058e-01
original_shape_VoxelVolume	1.308e+00
	z
original_firstorder_10Percentile	68.891
original_firstorder_90Percentile	36.327
original_firstorder_Energy	-0.196
original_firstorder_Entropy	-212.643
original_firstorder_InterquartileRange	-99.668
original_firstorder_Kurtosis	-0.114
original_firstorder_Maximum	14.431
original_firstorder_Mean	-66.416
original_firstorder_MeanAbsoluteDeviation	108.559
original_firstorder_Median	-8.257
original_firstorder_Minimum	196.043
original_firstorder_Range	0.000

original_firstorder_RobustMeanAbsoluteDeviation	102.541
original_firstorder_RootMeanSquared	-45.719
original_firstorder_Skewness	-1.833
original_firstorder_TotalEnergy	0.000
original_firstorder_Uniformity	-90.690
original_firstorder_Variance	1956.688
original_glcm_Autocorrelation	-3165.084
original_glcm_ClusterProminence	110.163
original_glcm_ClusterShade	117.912
original_glcm_ClusterTendency	-84.849
original_glcm_Contrast	180.001
original_glcm_Correlation	-1.999
original_glcm_DifferenceAverage	429.735
original_glcm_DifferenceEntropy	-78.147
original_glcm_DifferenceVariance	-191.666
original_glcm_Id	5082.186
original_glcm_Idm	-4452.350
original_glcm_Idmn	-15.412
original_glcm_Idn	-4.069
original_glcm_Imc1	-27.255
original_glcm_Imc2	-65.540
original_glcm_InverseVariance	318.882
original_glcm_JointAverage	235.151
original_glcm_JointEnergy	-55.133
original_glcm_JointEntropy	-52.020
original_glcm_MCC	-2.169
original_glcm_MaximumProbability	22.625
original_glcm_SumAverage	0.000
original_glcm_SumEntropy	54.237
original_glcm_SumSquares	0.000
original_gldm_DependenceEntropy	46.168
original_gldm_DependenceNonUniformity	-53.176
original_gldm_DependenceNonUniformityNormalized	55.215
original_gldm_DependenceVariance	-94.962
original_gldm_GrayLevelNonUniformity	8.035
original_gldm_GrayLevelVariance	-1820.317
original_gldm_HighGrayLevelEmphasis	4679.530
original_gldm_LargeDependenceEmphasis	196.099
original_gldm_LargeDependenceHighGrayLevelEmphasis	104.731
original_gldm_LargeDependenceLowGrayLevelEmphasis	-69.164
original_gldm_LowGrayLevelEmphasis	165.278
original_gldm_SmallDependenceEmphasis	78.748
original_gldm_SmallDependenceHighGrayLevelEmphasis	-24.184
original_gldm_SmallDependenceLowGrayLevelEmphasis	2.436
original_glrlm_GrayLevelNonUniformity	-50.534
original_glrlm_GrayLevelNonUniformityNormalized	42.569
original_glrlm_GrayLevelVariance	-64.053
original_glrlm_HighGrayLevelRunEmphasis	-1762.748
original_glrlm_LongRunEmphasis	168.092
original_glrlm_LongRunHighGrayLevelEmphasis	-60.552
original_glrlm_LongRunLowGrayLevelEmphasis	32.824
original_glrlm_LowGrayLevelRunEmphasis	841.358
original_glrlm_RunEntropy	158.544
original_glrlm_RunLengthNonUniformity	55.898
original_glrlm_RunLengthNonUniformityNormalized	-552.977
original_glrlm_RunPercentage	135.139

original_glrlm_RunVariance	-151.912
original_glrlm_ShortRunEmphasis	502.421
original_glrlm_ShortRunHighGrayLevelEmphasis	347.740
original_glrlm_ShortRunLowGrayLevelEmphasis	-950.598
original_glszm_GrayLevelNonUniformity	9.124
original_glszm_GrayLevelNonUniformityNormalized	24.638
original_glszm_GrayLevelVariance	13.025
original_glszm_HighGrayLevelZoneEmphasis	-29.900
original_glszm_LargeAreaEmphasis	-782.887
original_glszm_LargeAreaHighGrayLevelEmphasis	4.335
original_glszm_LargeAreaLowGrayLevelEmphasis	-7.424
original_glszm_LowGrayLevelZoneEmphasis	-33.345
original_glszm_SizeZoneNonUniformity	-10.770
original_glszm_SizeZoneNonUniformityNormalized	-93.251
original_glszm_SmallAreaEmphasis	113.947
original_glszm_SmallAreaHighGrayLevelEmphasis	-55.410
original_glszm_SmallAreaLowGrayLevelEmphasis	12.351
original_glszm_ZoneEntropy	19.928
original_glszm_ZonePercentage	-58.989
original_glszm_ZoneVariance	785.179
original_ngtdm_Busyness	2.032
original_ngtdm_Coarseness	29.886
original_ngtdm_Complexity	-56.028
original_ngtdm_Contrast	-31.414
original_ngtdm_Strength	2.721
original_shape_Elongation	8.791
original_shape_Flatness	-1.551
original_shape_LeastAxisLength	4.598
original_shape_MajorAxisLength	23.535
original_shape_Maximum2DDiameterColumn	2.658
original_shape_Maximum2DDiameterRow	-10.505
original_shape_Maximum2DDiameterSlice	-6.269
original_shape_Maximum3DDiameter	2.185
original_shape_MeshVolume	2699.606
original_shape_MinorAxisLength	7.264
original_shape_Sphericity	22.865
original_shape_SurfaceArea	42.227
original_shape_SurfaceVolumeRatio	152.594
original_shape_VoxelVolume	-2698.737

	p
original_firstorder_10Percentile	< 2e-16
original_firstorder_90Percentile	< 2e-16
original_firstorder_Energy	0.84482
original_firstorder_Entropy	< 2e-16
original_firstorder_InterquartileRange	< 2e-16
original_firstorder_Kurtosis	0.90914
original_firstorder_Maximum	< 2e-16
original_firstorder_Mean	< 2e-16
original_firstorder_MeanAbsoluteDeviation	< 2e-16
original_firstorder_Median	< 2e-16
original_firstorder_Minimum	< 2e-16
original_firstorder_Range	1.00000
original_firstorder_RobustMeanAbsoluteDeviation	< 2e-16
original_firstorder_RootMeanSquared	< 2e-16
original_firstorder_Skewness	0.06676
original_firstorder_TotalEnergy	1.00000

```
original_firstorder_Uniformity                              < 2e-16
original_firstorder_Variance                                < 2e-16
original_glcm_Autocorrelation                               < 2e-16
original_glcm_ClusterProminence                             < 2e-16
original_glcm_ClusterShade                                  < 2e-16
original_glcm_ClusterTendency                               < 2e-16
original_glcm_Contrast                                      < 2e-16
original_glcm_Correlation                                     0.04561
original_glcm_DifferenceAverage                             < 2e-16
original_glcm_DifferenceEntropy                             < 2e-16
original_glcm_DifferenceVariance                            < 2e-16
original_glcm_Id                                            < 2e-16
original_glcm_Idm                                           < 2e-16
original_glcm_Idmn                                          < 2e-16
original_glcm_Idn                                            4.73e-05
original_glcm_Imc1                                          < 2e-16
original_glcm_Imc2                                          < 2e-16
original_glcm_InverseVariance                               < 2e-16
original_glcm_JointAverage                                  < 2e-16
original_glcm_JointEnergy                                   < 2e-16
original_glcm_JointEntropy                                  < 2e-16
original_glcm_MCC                                            0.03010
original_glcm_MaximumProbability                            < 2e-16
original_glcm_SumAverage                                    1.00000
original_glcm_SumEntropy                                    < 2e-16
original_glcm_SumSquares                                    1.00000
original_gldm_DependenceEntropy                             < 2e-16
original_gldm_DependenceNonUniformity                       < 2e-16
original_gldm_DependenceNonUniformityNormalized             < 2e-16
original_gldm_DependenceVariance                            < 2e-16
original_gldm_GrayLevelNonUniformity                         9.33e-16
original_gldm_GrayLevelVariance                             < 2e-16
original_gldm_HighGrayLevelEmphasis                         < 2e-16
original_gldm_LargeDependenceEmphasis                       < 2e-16
original_gldm_LargeDependenceHighGrayLevelEmphasis          < 2e-16
original_gldm_LargeDependenceLowGrayLevelEmphasis           < 2e-16
original_gldm_LowGrayLevelEmphasis                          < 2e-16
original_gldm_SmallDependenceEmphasis                       < 2e-16
original_gldm_SmallDependenceHighGrayLevelEmphasis          < 2e-16
original_gldm_SmallDependenceLowGrayLevelEmphasis           0.01486
original_glrlm_GrayLevelNonUniformity                       < 2e-16
original_glrlm_GrayLevelNonUniformityNormalized             < 2e-16
original_glrlm_GrayLevelVariance                            < 2e-16
original_glrlm_HighGrayLevelRunEmphasis                     < 2e-16
original_glrlm_LongRunEmphasis                              < 2e-16
original_glrlm_LongRunHighGrayLevelEmphasis                 < 2e-16
original_glrlm_LongRunLowGrayLevelEmphasis                  < 2e-16
original_glrlm_LowGrayLevelRunEmphasis                      < 2e-16
original_glrlm_RunEntropy                                   < 2e-16
original_glrlm_RunLengthNonUniformity                       < 2e-16
original_glrlm_RunLengthNonUniformityNormalized             < 2e-16
original_glrlm_RunPercentage                                < 2e-16
original_glrlm_RunVariance                                  < 2e-16
original_glrlm_ShortRunEmphasis                             < 2e-16
original_glrlm_ShortRunHighGrayLevelEmphasis                < 2e-16
original_glrlm_ShortRunLowGrayLevelEmphasis                 < 2e-16
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original_glszm_GrayLevelNonUniformity                < 2e-16
original_glszm_GrayLevelNonUniformityNormalized      < 2e-16
original_glszm_GrayLevelVariance                     < 2e-16
original_glszm_HighGrayLevelZoneEmphasis             < 2e-16
original_glszm_LargeAreaEmphasis                     < 2e-16
original_glszm_LargeAreaHighGrayLevelEmphasis        1.46e-05
original_glszm_LargeAreaLowGrayLevelEmphasis         1.14e-13
original_glszm_LowGrayLevelZoneEmphasis              < 2e-16
original_glszm_SizeZoneNonUniformity                 < 2e-16
original_glszm_SizeZoneNonUniformityNormalized       < 2e-16
original_glszm_SmallAreaEmphasis                     < 2e-16
original_glszm_SmallAreaHighGrayLevelEmphasis        < 2e-16
original_glszm_SmallAreaLowGrayLevelEmphasis         < 2e-16
original_glszm_ZoneEntropy                           < 2e-16
original_glszm_ZonePercentage                        < 2e-16
original_glszm_ZoneVariance                          < 2e-16
original_ngtdm_Busyness                              0.04213
original_ngtdm_Coarseness                            < 2e-16
original_ngtdm_Complexity                            < 2e-16
original_ngtdm_Contrast                              < 2e-16
original_ngtdm_Strength                              0.00651
original_shape_Elongation                            < 2e-16
original_shape_Flatness                              0.12100
original_shape_LeastAxisLength                        4.26e-06
original_shape_MajorAxisLength                       < 2e-16
original_shape_Maximum2DDiameterColumn               0.00786
original_shape_Maximum2DDiameterRow                  < 2e-16
original_shape_Maximum2DDiameterSlice                3.63e-10
original_shape_Maximum3DDiameter                     0.02886
original_shape_MeshVolume                            < 2e-16
original_shape_MinorAxisLength                        3.75e-13
original_shape_Sphericity                            < 2e-16
original_shape_SurfaceArea                           < 2e-16
original_shape_SurfaceVolumeRatio                    < 2e-16
original_shape_VoxelVolume                           < 2e-16

Likelihood ratio test=137.3  on 107 df, p=0.0257
n= 224, number of events= 15


$model_list[[5]]$clusters
[1] 1.880444 0.508729



$time
Time difference of 1.5903 mins
```