

The constructed radiomics signature

The radiomics signature constructed by linear fitting based on the coefficient weights of the 31 radiomics features was as follows:

$$\begin{aligned} \text{Risk score} = & \text{CE-T1WI_exponential_firstorder_10Percentile} \times 0.09646 + \\ & \text{CE-T1WI_exponential_glcm_Correlation} \times (-0.55328) + \text{CE-T1WI_exponential_glcm_} \\ & \text{MCC} \times 0.31417 + \text{CE-T1WI_lbp.3D.m1_firstorder_Median} \times (-0.15658) + \\ & \text{CE-T1WI_lbp.3D.m1_glcm_ClusterShade} \times 0.2069 + \text{CE-T1WI_} \\ & \text{lbp.3D.m2_glrlm_RunEntropy} \times 0.15347 + \text{CE-T1WI_lbp.3D.m2_glszm_ZoneEntropy} \\ & \times 0.16898 + \text{CE-T1WI_logarithm_firstorder_Kurtosis} \times (-0.09303) + \text{CE-T1WI_} \\ & \text{original_glcm_ClusterShade} \times (-0.10796) + \text{CE-T1WI_original_glszm_LowGrayLevel} \\ & \text{ZoneEmphasis} \times (-0.03859) + \text{CE-T1WI_square_glrlm_RunLengthNonUniformity} \times \\ & 0.06094 + \text{CE-T1WI_wavelet.LLH_glcm_JointEnergy} \times (-0.02118) + \text{CE-T1WI_} \\ & \text{wavelet.LHH_gldm_DependenceEntropy} \times 0.11185 + \text{CE-T1WI_wavelet.HHL_} \\ & \text{firstorder_Kurtosis} \times (-0.00051) + \text{CE-T1WI_wavelet.HHL_glcm_MCC} \times (-0.17998) \\ & + \text{CE-T1WI_wavelet.HHL_glrlm_ShortRunHighGrayLevelEmphasis} \times 0.16793 + \text{CE-} \\ & \text{T1WI_wavelet.HHH_glcm_MCC} \times (-0.10809) + \text{CE-T1WI_wavelet.LLL_glcm_} \\ & \text{JointAverage} \times 0.14795 + \text{CE-T1WI_wavelet.LLL_glrlm_ShortRunLowGrayLevel} \\ & \text{Emphasis} \times (-0.01716) + \text{CE-T1WI_wavelet.LLL_glszm_LowGrayLevelZone} \\ & \text{Emphasis} \times (-0.15336) + \text{T2FLAIR_exponential_glcm_ClusterTendency} \times 0.00633 + \\ & \text{T2FLAIR_gradient_glcm_DifferenceVariance} \times (-0.15272) + \text{T2FLAIR_gradient_} \\ & \text{glszm_SmallAreaLowGrayLevelEmphasis} \times 0.00004 + \text{T2FLAIR_lbp.2D_glcm_} \\ & \text{Autocorrelation} \times (-0.07774) + \text{T2FLAIR_lbp.3D.m2_glcm_Autocorrelation} \times \\ & (-0.05196) + \text{T2FLAIR_lbp.3D.m2_glcm_ClusterShade} \times 0.15457 + \text{T2FLAIR_} \\ & \text{lbp.3D.k_firstorder_Variance} \times (-0.03765) + \text{T2FLAIR_lbp.3D.k_gldm_Large} \\ & \text{DependenceHighGrayLevelEmphasis} \times 0.05898 + \text{T2FLAIR_wavelet.LLH_glcm_} \\ & \text{Imc2} \times (-0.22901) + \text{T2FLAIR_wavelet.LHH_glcm_Imc2} \times (-0.01516) + \text{T2FLAIR_} \\ & \text{wavelet.LLL_glszm_HighGrayLevelZoneEmphasis} \times (-0.19333). \end{aligned}$$

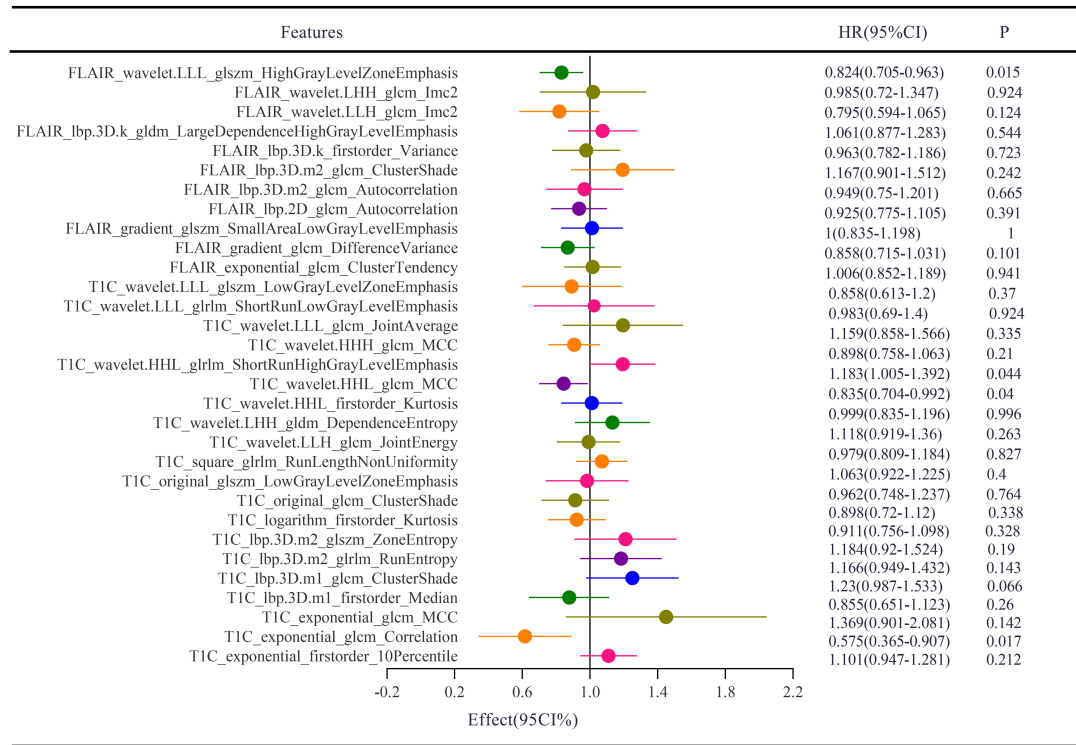


Figure S1. HR values with 95% CI and p values of each selected feature of the radiomics model on the forest plot in the training cohort