

Table S1. Radiomic features used in the calculation.

Features class	Radiomics features
Histogram Features (n=14)	Energy, Entropy, Kurtosis, Maximum, Mean, Mean absolute deviation (MAD), Median, Minimum, Range, Root mean square (RMS), Skewness, Standard deviation, Uniformity, Variance
Gray level co-occurrence matrix (GLCM) (n=9)	Energy, Contrast, Entropy, Homogeneity, Correlation, SumAverage, Variance, Dissimilarity, Autocorrelation
Gray level run-length matrix (GLRLM) (n=13)	Short run emphasis (SRE), Long run emphasis (LRE), Gray level nonuniformity (GLN), Run length nonuniformity (RLN), Run percentage (RP), Low gray level run emphasis (LGRE), High gray level run emphasis (HGRE), Short run low gray level emphasis (SRLGE), Short run high gray level emphasis (SRHGE), Long run low gray level emphasis (LRLGE), Long run high gray level emphasis (LRHGE), Gray level variance (GLV), Run length variance (RLV)
Gray level size zone matrix (GLSZM) (n=13)	Small zone emphasis (SZE), Large zone emphasis (LZE), Gray level nonuniformity (GLN), Zone size nonuniformity (ZSN), Zone percentage (ZP), Low gray level zone emphasis (LGZE), High gray level zone emphasis (HGZE), Small zone low gray level emphasis (SZLGE), Small zone high gray level emphasis (SZHGE), Large zone low gray level emphasis (LZLGE), Large zone high gray level emphasis (LZHGE), Gray level variance (GLV), Zone size variance (ZSV)
Neighborhood gray-tone difference matrix (NGTDM) (n=5)	Coarseness, Contrast, Busyness, Complexity, Strength
Wavelet Features* (n=432)	HHH, HHL, HLH, HLL, LHH, LHL, LLH, LLL

*The decompositions were performed by applying either a low-pass filter (scaling function, L) or high-pass filter (wavelet function, H) in the x y, or z direction. The eight wavelet decomposition filters consisted of a combination of three using either a low-pass filter (L) or high-pass filter (H) in each direction.

Table S2. AUCs, sensitivity, specificity, and accuracy of a proposed rupture prediction model from training and test images with top combinations of LASSO ranking.

LASSO ranking combinations	Training images (n=104)				Test images (n=54)			
	AUC	Accuracy	Sensitivity	Specificity	AUC	Accuracy	Sensitivity	Specificity
1+2	0.985	0.952	0.957	0.946	0.867	0.956	0.500	0.964
1+2+3	0.990	0.948	0.969	0.926	0.971	0.948	0.700	0.953
1+2+3+4	0.993	0.946	0.970	0.922	0.897	0.969	0.300	0.981
2+3+4	0.987	0.941	0.961	0.920	0.862	0.963	0.200	0.977
1+3+4	0.991	0.939	0.969	0.908	0.875	0.946	0.200	0.960
1+3	0.982	0.938	0.952	0.926	0.672	0.939	0.200	0.953
1+4	0.939	0.873	0.878	0.868	0.625	0.922	0.200	0.936
2+3	0.984	0.941	0.969	0.916	0.957	0.946	0.700	0.951
2+4	0.968	0.922	0.939	0.906	0.758	0.939	0.500	0.947
3+4	0.978	0.943	0.956	0.934	0.840	0.935	0.300	0.951