Supplementary material

Table S1. Case-by-case tabulation of the individual subjects and their clinical outcome.

Image study	PVE	Diagnosis	Valve	Sex	Age	Race and ethnicity
S01	No	Discarded PVE	Mitral	M	80	Caucasian European
S02	Yes	Confirmed PVE	Aortic	M	87	Caucasian European
S03	No	Resolved PVE	Aortic	M	87	Caucasian European
S04	No	Discarded PVE	Mitral	M	80	Caucasian European
S05	No	Discarded PVE	Mitral	F	88	Caucasian European
S06	No	Discarded PVE	Mitral	F	81	Caucasian European
S07	Yes	Confirmed PVE	Aortic	M	53	Caucasian European
S08	Yes	Confirmed PVE	Aortic	M	53	Caucasian European
S09	No	Discarded PVE	Mitral	M	80	Caucasian European
S10	Yes	Confirmed PVE	Aortic	M	86	Caucasian European
S11	No	Resolved PVE	Mitral	M	79	Caucasian European
S12	No	Discarded PVE	Aortic	M	73	Caucasian European
S13	Yes	Confirmed PVE	Mitral	M	53	Caucasian European
S14	No	Discarded PVE	Mitral	M	85	Caucasian European
S15	Yes	Confirmed PVE	Mitral	F	73	Caucasian European
S16	Yes	Subacute infective endocarditis (S. Galloliticus)	Mitral	M	78	Caucasian European
S17	Yes	Confirmed PVE	Mitral	M	85	Caucasian European
S18	No	High suspicion of endocarditis	Mitral	M	86	Caucasian European
S19	No	Discarded PVE	Aortic	M	83	Caucasian European
S20	Yes	Confirmed PVE	Aortic	M	79	Caucasian European

Table S2. Non-parametric Spearman correlations (ρ) were calculated between the remaining radiomic features post-univariate and reproducibility analyses, with highly correlated features (ρ ≥ 0.9) discarded to mitigate multicollinearity issues.

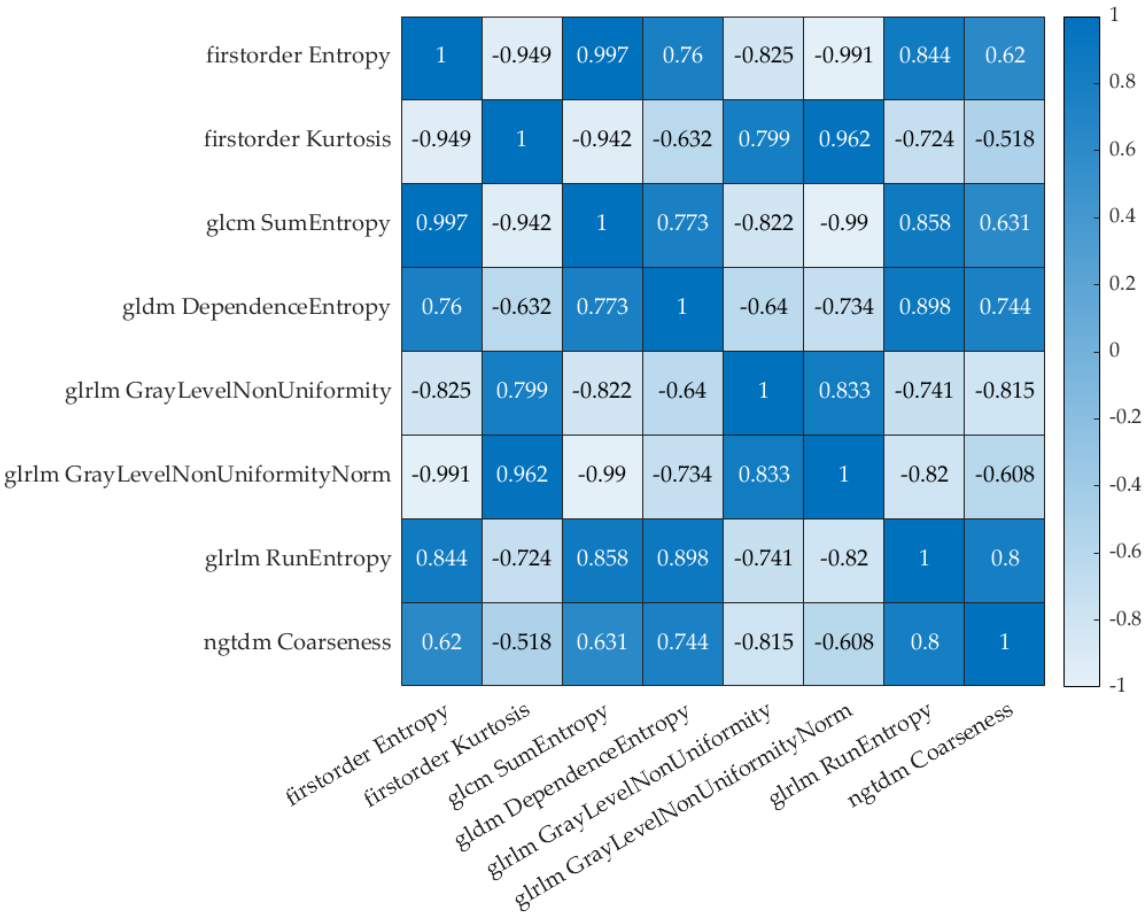

Table S3. Hyperparameters of the ML models for Confirmed PVE and Discarded PVE classification.

Method	Hyperparameters
Logistic regression	Regularization type: LASSO; Strength C=1; Balanced class distribution: activated
Neural network	Neurons in hidden layers: 10; Activation: ReLu; Solver: Adam; Regularization a=0.0001; Maximal number of iterations: 200; Replicable training: activated.
kNN	Number of neighbors: 5; Metric: Euclidean; Weight: Uniform.
Naive bayes	-
SVM linear	Cost (C): 1,00; Regression loss epsilon, 0,10; Kernel: linear; Numerical tolerance: 0.0010; Iteration limit: 100.
Random forest	Number of trees: 10; Replicable training: activated; Balance class distribution: activated; Do not split subsets smaller than: 5.
Gradient boosting	Number of trees: 10; Learning rate: 0.100; Replicable training: activated; Limit depth of individual trees: 3; Do not split subsets smaller than: 2; Fraction of training instances: 0.75
Decision tree	Induce binary tree: Activated; Min. number of instances in leaves: 2; Do not split subsets smaller than: 5; Limit the maximal tree depth to: 100; Stop when majority reaches [%]: 95.

Table S4. Performances of ML models based on all the extracted radiomic features for Confirmed PVE and Discarded PVE classification.

Method	AUC	Accuracy	F1-score	Precision	Recall	Specificity
Naive Bayes	0.869*	0.900*	0.900*	0.900*	0.900*	0.898*
Logistic Regression	0.818*	0.700	0.700	0.714	0.700	0.714
Decision tree	0.793*	0.750	0.751*	0.755*	0.750	0.755*
Neural Network	0.788*	0.700	0.700	0.714	0.700	0.714
Random Forest	0.778*	0.750	0.748	0.750	0.750	0.735
kNN	0.778*	0.800*	0.800*	0.800*	0.800*	0.796*
Gradient Boosting	0.768*	0.750	0.748	0.750	0.750	0.735
SVM linear	0.606	0.650	0.647	0.675	0.650	0.673

*Acceptable performance (>0.75)