**Figure S1** MRA images in three orthogonal planes of moyamoya disease patients with unilateral stenosis of the MCA. Top: recorded MRA images. Middle: labeled ground-truth corresponding to the MRA images, where the red marking indicates the location of severe stenosis or occlusion. Bottom: predicted probability maps, where the color corresponds to the stenosis probability value as shown by the color bar on the right. L, left; R, right; S, superior; I, inferior; A, anterior; P, posterior; MRA, magnetic resonance angiography; MCA, middle cerebral artery.
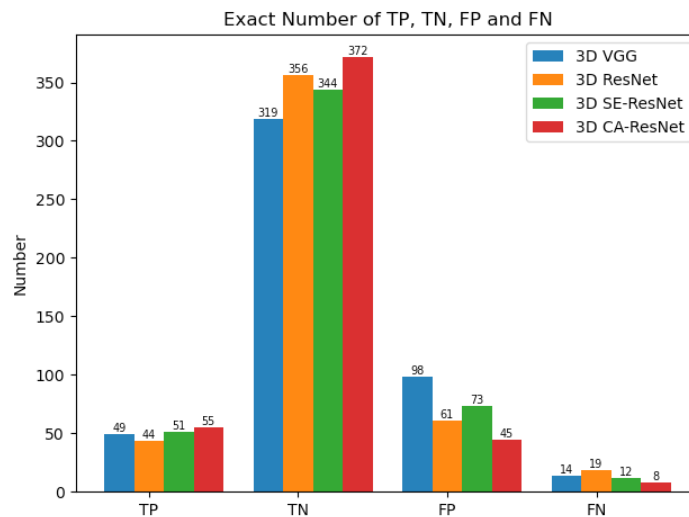
Figure S2 The bar graph with the extract number of four models. 3D, three-dimensional; VGG, visual geometry group; ResNet, residual network; SE-ResNet, squeeze-and-excitation residual network; CA-ResNet, coordinate attention residual network; TP, true positive; FP, false positive; TN, true negative; FN, false negative.

Table S1 Evaluation results of 3D CA-ResNet with different patch sizes

Indicators	Formula	Size 30×32×48	Size 45×48×72	Size 60×64×96
Sensitivity/TPR	TP/(TP + FN)	82.97%	79.54%	87.30%
Specificity	TN/(TN + FP)	74.58%	83.68%	89.21%
Accuracy	(TP + TN)/(TP + FN + TN + FP)	74.86%	83.18%	88.96%
Precision/PPV	TP/(TP + FP)	9.87%	40.23%	55.00%
NPV	TN/(TN + FN)	99.24%	96.73%	97.89%
AUC	–	0.8575	0.8911	0.9439

AUC, area under the receiver operating characteristic curve; 3D CA-ResNet, three-dimensional coordinate attention residual network; TPR, true positive rate; TP, true positive; FP, false positive; TN, true negative; FN, false negative; PPV, positive predictive value; NPV, negative predictive value.