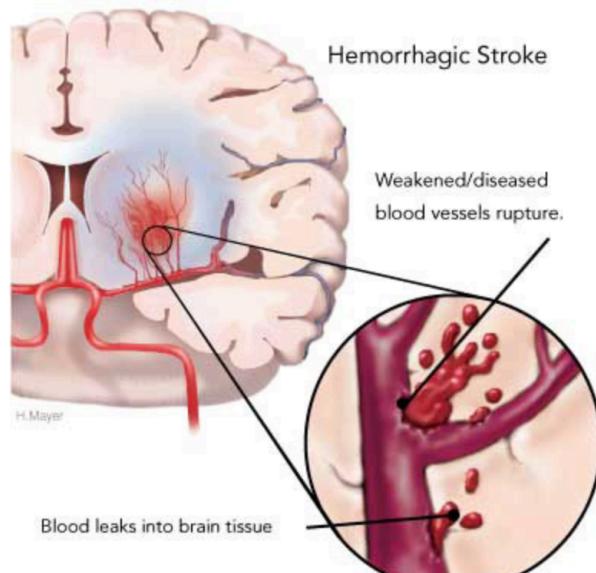


Automated Intracerebral Hemorrhage Segmentation of CT Scans

John Muschelli
2015-08-08

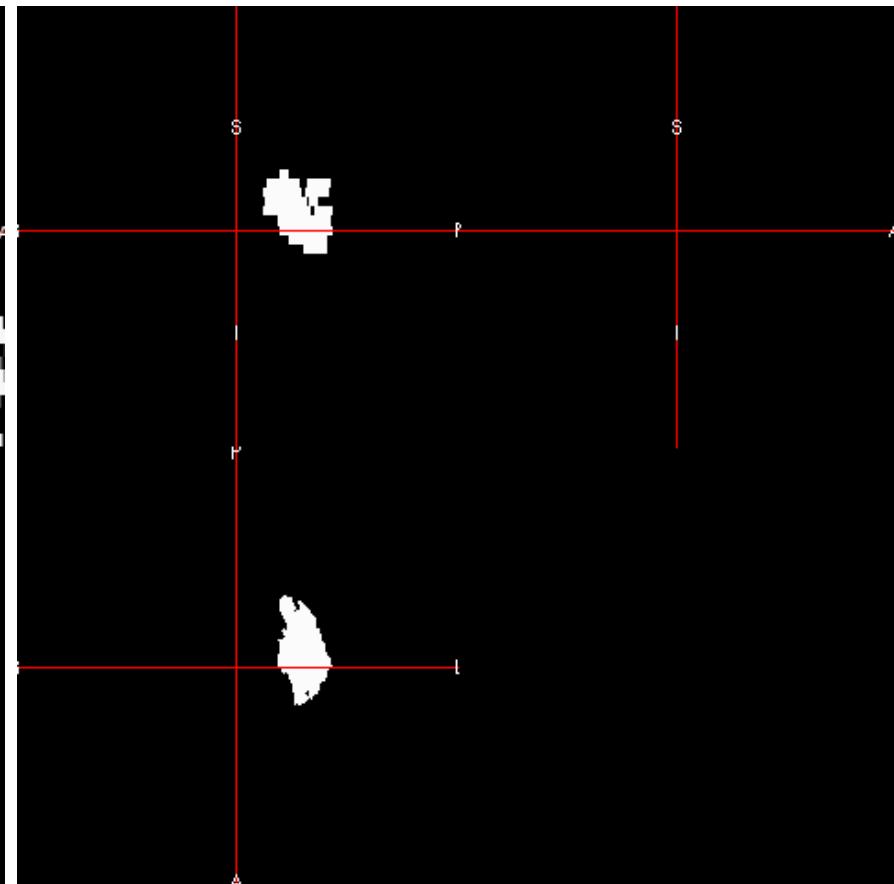
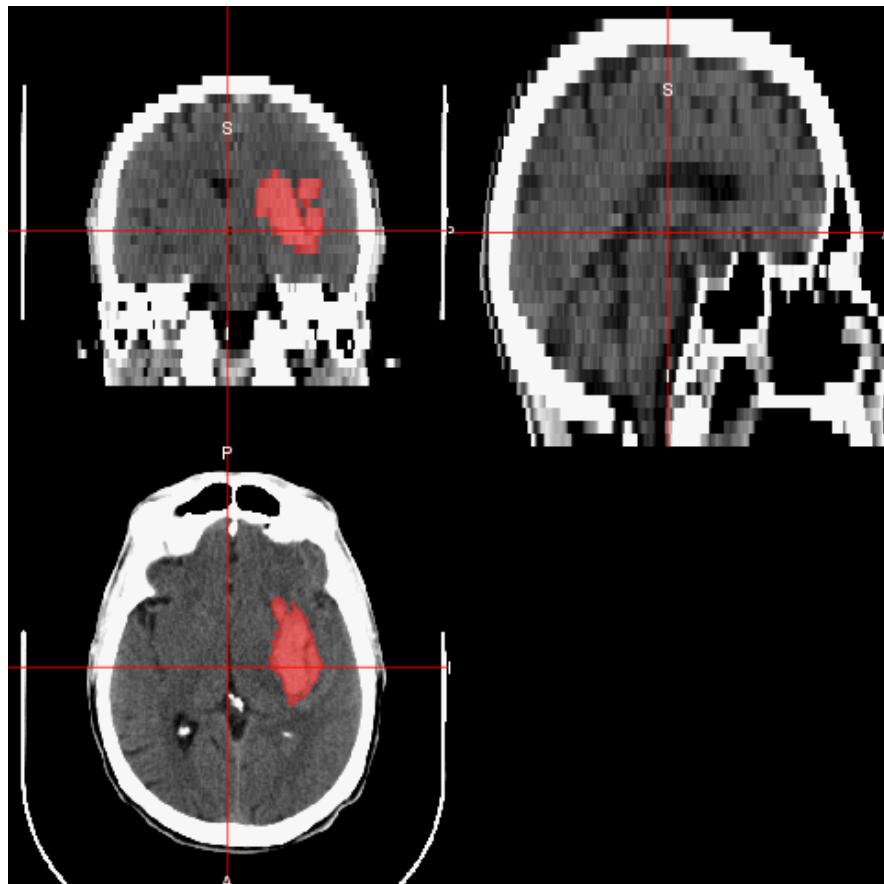
What is Intracranial hemorrhage?

- When a blood vessel ruptures into
- tissue: intracerebral hemorrhage (ICH)
- ventricles: intraventricular hemorrhage (IVH)
- ≈ 13% of strokes

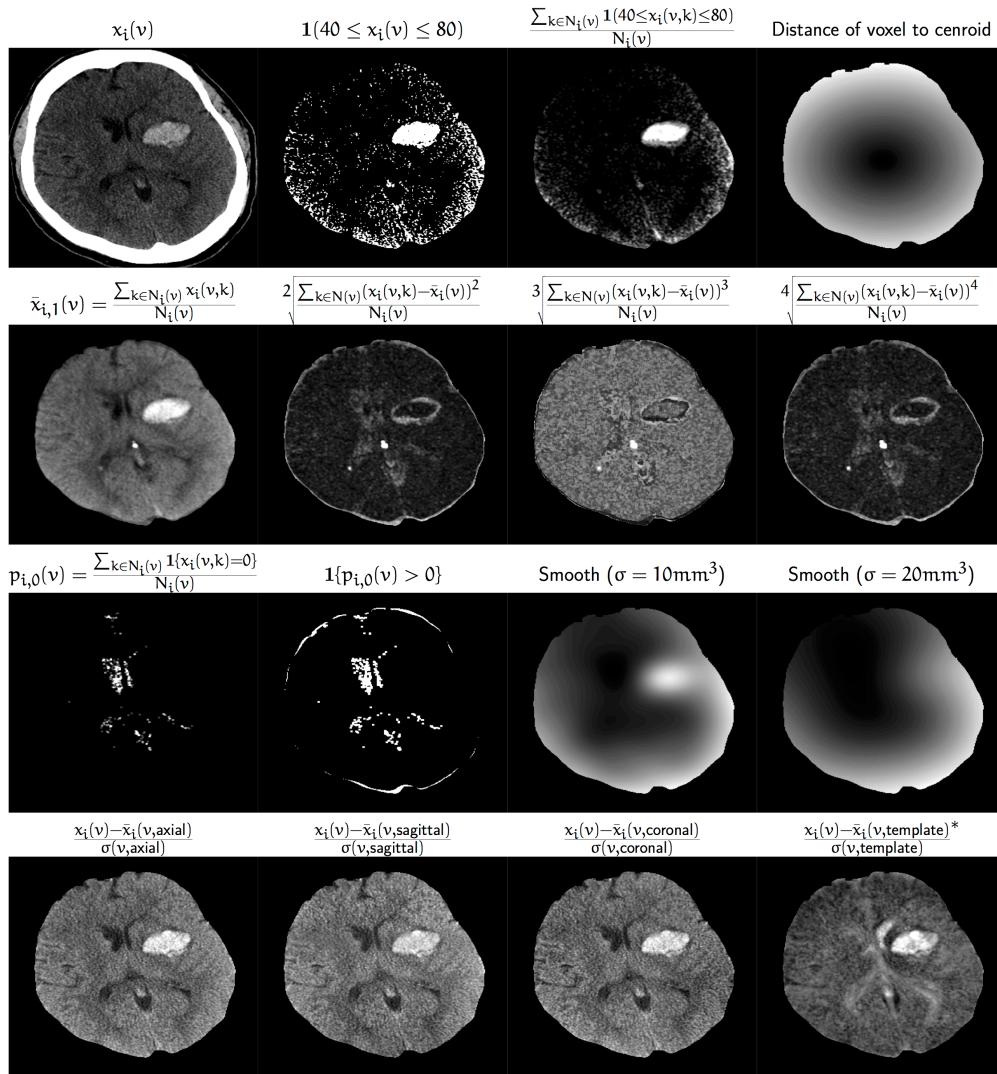


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Get ICH Mask from Manual Segmentation



Covariates



PltcHPERFECT uses Logistic Regression

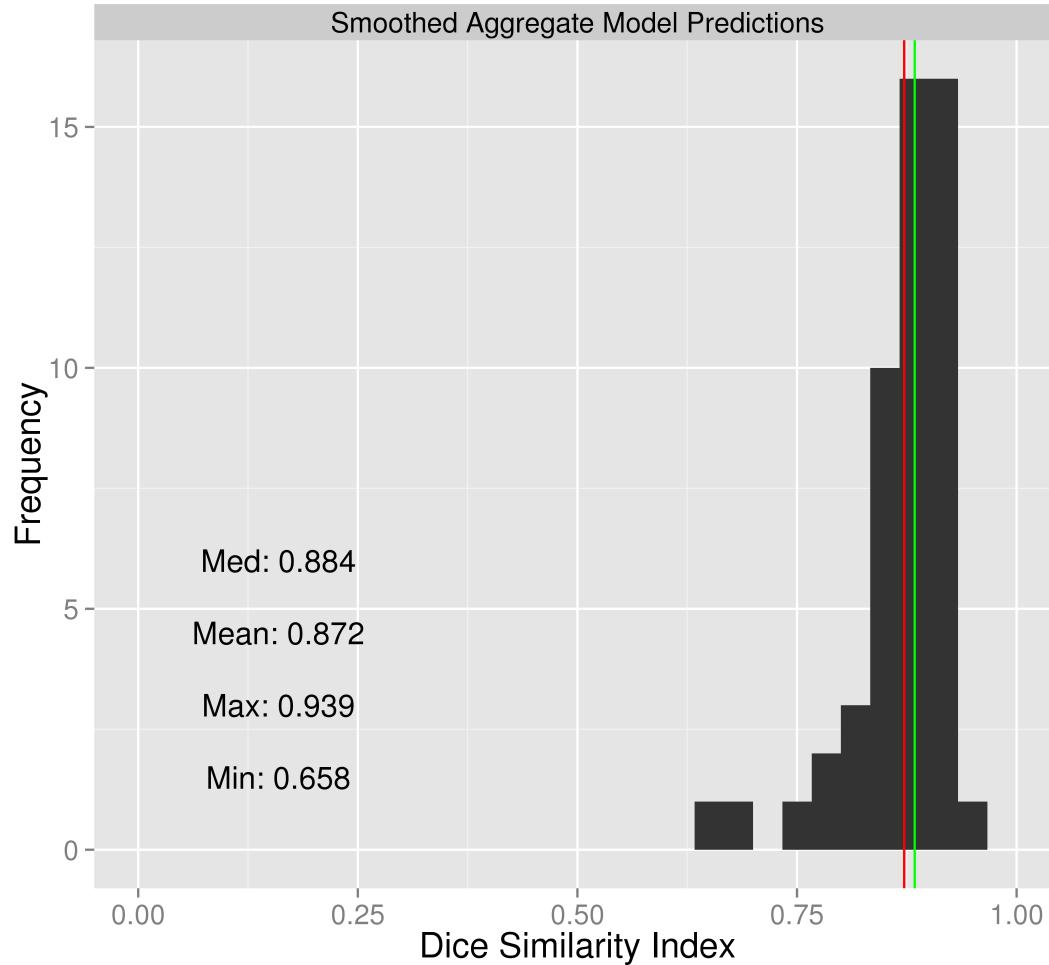
Let $y_{i,j}$ be the presence / absence of ICH for voxel j from person i .

$$\text{logit}(y_{i,j}) = \beta_0 + \sum_{k=1}^p x_{i,j,k} \beta_k$$

- Case-control sample voxels for a fixed percentage (25%) of outcome



Dice Similarity Index Distribution in Validation Scans



Prediction Comparison: DSI: 0.90

