

had a final infarct volume of 49.6 cm<sup>2</sup> (±46.3) versus a volume of 16.7 cm<sup>2</sup> (±13.8) for non-dominant occlusions ( $p = 0.009$ ). In patients with >1/3<sup>rd</sup> MCA involvement on TTP images the infarct volume was 51.5 cm<sup>2</sup> (±47.6) versus an infarct volume of 28.1 cm<sup>2</sup> (±31.5) in patients with ≤1/3<sup>rd</sup> MCA abnormality ( $p = 0.03$ ). There were 1,135,030 AIS discharges nationally for 2013 for the same ICD-9 codes. A 4% rate of M2 occlusions yields 45,401 potential patients with an M2 occlusion of which 38,137 can have a dominant branch involvement and hence the risk of significant ischemic injury.

**Conclusion** Patients with a dominant branch occlusion, whether superior or inferior, had larger TTP abnormalities (>1/3<sup>rd</sup> MCA) and final infarct volumes. An estimated 37,137 AIS patients can have a dominant M2 occlusion with significant risk of ischemic injury. A functional as opposed to pure anatomical classification may allow selecting these patients for endovascular therapy.

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#### 0-009 ASPECTS SCORES AND DWI VOLUME: HOW WELL DO THEY CORRELATE?

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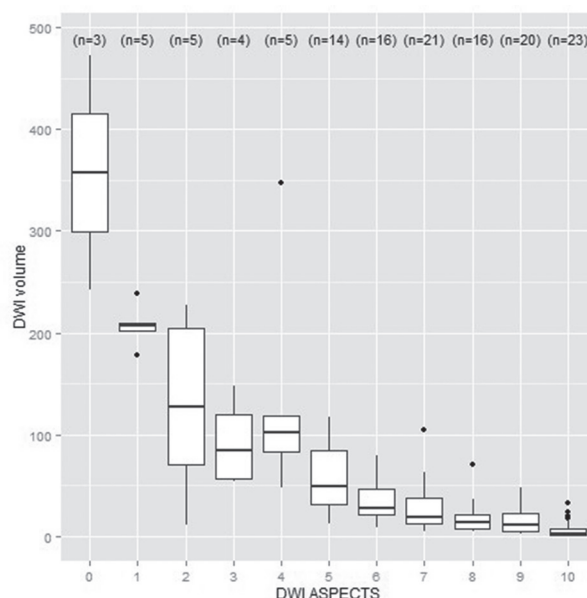
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Recent trials for the management of large vessel occlusion for acute ischemic stroke have demonstrated better outcomes for intervention over IV tPA alone. Ideal imaging triage remains uncertain, however CT only paradigms, volumetric paradigms, penumbral paradigms and collateral paradigms have been proposed and used. The volumetric exclusion criteria employed in EXTEND-IA and SWIFT-PRIME may have contributed to mRS 0–2 rates of 71% and 60% respectively. One of the appeals of MR estimation of irreversible “core” infarct is that it is the most accurate readily available modality. CT ASPECTS is more widely available, but may underestimate the volume of core.

**Statistical methods** The Pearson correlation coefficient was used to assess the amount of linear correlation between ASPECTS and DWI volume. The DWI volume values observed within each ASPECT score were then summarized. An empirical receiver operating characteristic (ROC) curve was used to summarize the accuracy of using ASPECTS to predict DWI volume less than 70 cc. The operating point furthest from the chance diagonal was selected as the optimal ASPECTS threshold and 95% Agresti-Coull confidence intervals were calculated for the sensitivity and specificity at this cut point.

**Results** DWI ASPECTS and DWI volume had a strong negative correlation ( $r = -0.76$ ; 95% CI:  $-0.67, -0.82$ ), though there was a fair amount of variability in DWI volume within a given DWI ASPECT score. CT ASPECTS and DWI volume had a moderate negative correlation ( $r = -0.50$ ; 95% CI:  $-0.36, -0.62$ ), though there was considerable variability in DWI volume for a given CT ASPECT score. In this sample, there were 105 patients with DWI volume < 70 cc and 27 with volume ≥ 70 cc. The area under the ROC curve for predicting DWI volume < 70 cc was 0.93 for DWI ASPECTS and 0.81 for CT ASPECTS. The ASPECTS thresholds which

maximized the overall rate of correct classification were 5 and 8 for DWI and CT, respectively. When DWI ASPECTS > 5 was considered positive for DWI volume < 70, the estimated sensitivity and specificity were 0.88 (92/105; 95% CI: 0.80, 0.93) and 0.85 (23/27; 95% CI: 0.67, 0.95), respectively. When CT ASPECTS > 8 was considered positive for DWI volume < 70, the estimated sensitivity and specificity were 0.64 (67/105; 95% CI: 0.54, 0.72) and 0.85 (23/27; 95% CI: 0.67, 0.95), respectively.



Abstract O-009 Figure 1

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#### 0-010 PLANNING FOR EFFICIENCY: SURVEY OF TECHNICAL AND WORKFLOW PRACTICES BEFORE MECHANICAL THROMBECTOMY

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**Background** Mechanical thrombectomy plays a critical role in the management of acute ischemic stroke due to emergent large vessel occlusion (ELVO). As healthcare systems adapt to more efficiently deliver patients with ELVO for timely thrombectomy, hospitals may benefit from increased awareness of successful workflows in place at other centers experienced with endovascular intervention.

**Methods** E-mail and phone interviews were conducted with endovascular team members at each of 30 high volume stroke centers. Each of these centers was certified as an Advanced Comprehensive or Advanced Primary Stroke Center. Questions were categorized into four major workflow steps of triage, team activation, transport, and case preparation.

**Results** During the triage workflow step, 53% of surveyed institutions designate specific non-physician staff to respond to