Background and purpose The best imaging selection technique for endovascular treatment (EVT) remains a topic of debate. Collateral scores (CS) on pre-treatment CT angiography (CTA) have been associated with favorable outcome. We hypothesized that low CS on pre-treatment CTA may predict a poor outcome after EVT in successfully recanalized patients with emergent large vessel occlusions (ELVO).

Methods A retrospective chart review was performed for the University of Tennessee Health Sciences Center Acute Ischemic Stroke Database evaluating AIS patients presenting with CTA confirmed anterior circulation ELVO in a tertiary stroke center during a 3 year period. Only patients with successful recanalization (TICI 2 b or 3) after EVT were included in the analysis. A blinded neuroradiologist calculated the CTA CS and final infarct volume (FIV). Poor outcome after EVT was defined as symptomatic intracranial hemorrhage (SICH), cerebral edema requiring hypertonic treatment for ≥48 hours, hemicraniectomy, higher FIV, and poor clinical outcome of modified ranking scale (mRS)-score 3–6 at 3 months.

Results 58 AIS patients with anterior circulation ELVO (mean age 63 ± 13 years, 48% male, median admission NIHSS-score: 17 points, IQR 14–21) had successful recanalization after EVT. Systemic thrombolysis was administered in 38 patients (65.5%). A total of 31 patients (53%) achieved favorable outcome (FO). There was no significant difference in rates of hemicraniectomy (p = 1.000) and SICH (p = 0.667) after EVT when compared to patients with low and good CS. Patients with low CS tended to have higher rates of cerebral edema requiring hypertonic treatment (30% vs 13%, p = 0.340) after EVT. Patients with low CS had greater FIV (111 ± 71 vs 41 ± 66 cm³, p = 0.007) and higher rates of poor clinical outcome (82% vs 39%, p = 0.017) in comparison to patients with high CS. A low CS was independently associated with poor clinical outcome (p = 0.048) in multiple logistic regression models adjusting for demographics, vascular risk factors, pretreatment SBP, admission NIHSS, intravenous thrombolysis, and onset to revascularization time.

Conclusion Low CS on pre-treatment CTA was correlated with significantly worse outcome despite successful recanalization as evident by higher FIV and higher rates of poor clinical outcome. Poor CS should be considered an important variable in futures trials comparing the medical versus interventional management of patients with ELVO.

Disclosures N. Goyal: None. S. Itikhar: None. G. Tsigoulis: None. Y. Khorchid: None. A. Choudhri: None. D. Hoit: None. A. Alexandrov: None. A. Arthur: None. L. Elijovich: None.
white, black, and others. Multiple variables for chronic/acute comorbidities identified associated with outcomes. After adjustment using logistic regression, race was not associated with three in-hospital outcome variables: mortality (p = 0.183), post-operative stroke (p = 0.610) and discharge disposition (p = 0.231).

**Conclusions** There were no differences in hospital outcome among races/ethnicities in endovascular thrombectomy outcomes for acute stroke patients in the Premier data. Racial/ethnic disparities play role for patients’ selection not for patients’ outcome in endovascular thrombectomy.

**Disclosures** S. Park: None. M. Pilot: None. M. Alexander: 1; C; Consultant for Stryker Neurovascular, Medtronic, and Penumbra, Inc. A. Rosengart: None.

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**Background** Favorable imaging profile according to the Alberta Stroke Program Early CT Score (ASPECTS) on noncontrast head CT is a key criterion for the selection of patients with ischemic stroke from large vessel occlusion (LVO) for intra-arterial (IA) revascularization therapies.

**Objective** The goal of our study was to analyze factors associated with changes in ASPECTS during inter-hospital transfer and to determine their impact on eligibility for endovascular procedures.

**Methods** We analyzed factors associated with changes in ASPECTS during inter-hospital transfer and their potential impact on eligibility for IA stroke therapies in patients with anterior circulation ischemic strokes. Clinical and demographic characteristics between patients with favorable and unfavorable imaging on repeat CT were compared. Favorable ASPECTS profile was defined as ASPECTS ≥6, and unfavorable ASPECTS <6, based on the imaging criteria proposed by the AHA in the 2015 updated acute stroke guidelines.

**Results** Of the 50 transferred patients with anterior circulation LVO, 42 had favorable ASPECTS ≥6 on CT imaging performed at outside hospital. 19 (45%) of those 42 patients presented to an outside facility within 6 hours of stroke onset (mean time from symptom onset to head CT, 295 ± 61 min), whereas in 23 patients CT showed favorable ASPECTS with stroke onset beyond the 6 hour window (mean time from symptom onset to outside CT, 603 ± 224 min). Stroke evolution towards unfavorable ASPECTS occurred in 13 (31%) out of 42 patients who initially had favorable imaging profile at outside hospitals. Higher NIHSS score was the only significant predictor of ASPECTS decay, whereas other clinical characteristics such as the use of intravenous thrombolysis and site of LVO (ICA versus MCA M1/M2) were similar between both groups.

**Conclusions** Our study showed that during inter-hospital transfer, one out of three patients with stroke from anterior circulation LVO becomes ineligible for IA thrombectomy based on CT ASPECTS imaging criteria alone. Except for NIHSS severity, no other baseline clinical factors could identify which patients were at risk of ASPECTS deterioration. Our study indicates the critical importance of rapid transfer of all stroke patients with suspected LVO to endovascular-capable hospitals.

**Disclosures** M. Mokin: None. R. Gupta: 1; C; Zoll, WellStar foundation. 2; C; Stryker Neurovascular, Covidien, Penumbra, Rapid medical. 6; C; Penumbra, Inc. W. Guerrero: None. D. Rose: 3; C; Boehringer Ingelheim Pharmaceuticals, Chiesi-USA. W. Burgin: None. S. Sivakanthan: None.