of patients as thrombectomy eligible. This is seen by the significantly high mean penumbra to infarct ratio for RAPID which may suggest a caution overestimation of penumbra to label as many patients as possible as thrombectomy eligible for the purpose of regaining lost neurological function.

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E-079 PRE-HOSPITAL STROKE TRIAGE DIRECTLY TO THROMBECTOMY CAPABLE CENTERS USING NYC S-LAMS – PRELIMINARY DATA

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Introduction/Purpose Management of acute ischemic stroke (AIS) in patients with an emergent large vessel occlusion (ELVO) has changed dramatically with endovascular therapy (EVT). Stroke systems of care have evolved to ensure timely EVT in addition to IV thrombolysis (IVT). In collaboration with the Greater New York Hospital Association and American Heart Association, the Fire Department of New York (FDNY) created the first triage protocol in our region to directly route suspected ELVO patients to the nearest thrombectomy capable stroke center (TSC). We sought to describe the results of this triage protocol from initiation in April 2019 to February 2020.

Materials and Methods The FDNY and regional emergency medical advisory committee adapted the Los Angeles Motor Scale (LAMS), with the addition of 'Speech,' to develop a clinical stroke scale for EMS personnel to use in the field: S-LAMS. With a S-LAMS score ≥4, EMS contact the main operating center for permission to reroute to the nearest TSC. We conducted a retrospective review of patients triaged to our urban health system using this protocol. The main outcome was the percentage of patients successfully triaged with confirmed ELVO. Time metrics, final diagnosis, National Institute of Health Stroke Scale (NIHSS), and other AIS measures were also analyzed.

Results There were 125 patients (58% female; median age 71 ±15) triaged directly to a TSC. ELVO was confirmed in 32% (n=40) of patients and 26% (n=32) underwent EVT. Eight ELVO patients were ineligible for EVT due to either high Modified Rankin Score (mRS) (n=3), infarct evolution (n=3), recanalization after IVT (n=1), or lesion chronicity (n=1). A stroke diagnosis was verified in 75% (n=94) of triaged patients (71 ischemic and 23 hemorrhagic) regardless of ELVO status. The median S-LAMS score amongst ELVO patients was 6±1 (initial provider NIHSS 16±7); score for non-ELVO stroke patients was 5±1 (initial provider NIHSS 9 ±7). The median hospital arrival to IVT was 41±36 minutes (58% [n=72] eligible, 30% [n=37] received) and hospital arrival to groin puncture was 1 hour 42±35 minutes. The median time from EMS triage to hospital notification was 6 ±3 minutes and notification to arrival was 10±6 minutes. Occluded vessels included Left M1 (n=12), Left M2 (n=6), Right M1 (n=7), Right M2 (n=3), Left ICA (n=3), R ICA (n=4), and Basilar (n=1) arteries. Top non-stroke diagnoses were seizures (n=12), brain neoplasm (n=4), and transient ischemic attack (n=2).

Conclusion S-LAMS ≥4 correctly identified 32% ELVO and 75% stroke patients in this cohort. One quarter of triaged patients received EVT; those excluded mainly had high mRS or established infarct. Relatively short times from triage to notification and arrival, in addition to high yield of correctly triaged ELVO and AIS patients suggest benefit from this triage protocol. Non-stroke patients were diagnosed with conditions that could mimic strokes on presentation. Further analysis is indicated to compare this alternative triage protocol to traditional stroke service delivery models.

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E-080 RISK FACTORS OF POST THROMBECTOMY MORTALITY IN ACUTE ANTERIOR CIRCULATION ISCHEMIC STROKE: SINGLE COMPREHENSIVE STROKE CENTER EXPERIENCE

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Background and Purpose Mechanical thrombectomy has significantly improved post-ischemic stroke clinical outcomes. However, the post-ischemic stroke mortality rate appears to be unchanged. We reviewed potential risk factors that can be related to mortality in patients who underwent mechanical thrombectomy.

Materials and Methods A retrospective review was conducted in acute anterior circulation ischemic stroke patients who underwent mechanical thrombectomy but expired within 90

days in a high volume comprehensive stroke center between January 2017 and January 2020. Pre thrombectomy risk factors evaluated include age, NIHSS, ASPECT score, baseline mRS, occlusion site, and IV tPA administration. Post-thrombectomy risk factors include ASPECT score at 24 hours, TICI score, post-procedural subarachnoid hemorrhage (SAH), hemorrhagic transformation, and decompressive craniectomy. Procedural risk factors included the mode of anesthesia, intraprocedural systolic (SBP), diastolic (DBP), and mean arterial pressure (MAP) were reviewed as well as procedural blood pressure variability. The difference between the highest and lowest recorded blood pressure was defined as procedural variability.

Results Mechanical thrombectomy was performed in 290 patients, and 54 patients (54/290, 18.6%) were expired at 90 days, which include 42 anterior (77.8%) and 22 posterior circulation patients (22.2%). In 42 anterior circulation acute ischemic stroke patients who expired (M:F=25:17), the mean age was 77.5 ± 13, and 42.86% was at or more than 80 years old. Baseline estimated mRS three or above were seen in 92.7%. The number of days from admission to decease was 7 (median). Pre-procedural ASPECT score >6 was noted in 32 patients (32/42, 76.19%) but in 11 patients (11/42, 26.19%) on post-procedure ASPECT at 24 hours. MCA, ICA and CCA occlusion was found in 69.05%, 19.5%, and 9.52%, respectively. Pre thrombectomy IV tPA was administered in 17 patients (17/42, 40.48%). TICI 2b or three were achieved in 54.7%, with the median number of passes were 2. Ten patients (23.81%) developed post thrombectomy symptomatic intracranial hemorrhages (sICH), and the hemorrhagic transformation was seen in 14.29% (n=6). Three patients (7.14%) received decompressive craniectomy. Mean 'arrival to groin puncture time' and 'groin to reperfusion time' were 1.13 ± 0.19 hours and 1 hour ± 0.042, respectively. Monitored Anesthesia Care (n=29, 69.04%) was used for most of the procedure. Mean procedural variability of MAP, DBP and SBP were 24.32 + 23.79 mmHg, 16.38 ± 24.83 mmHg, and 40.19 ± 26.83 mmHg, respectively.

Conclusion Older age, low baseline estimated mRS, the relatively lower rate of successful reperfusion, the higher rate of sICH, delayed groin to reperfusion time, and higher intraprocedural variability in MAP and DBP were observed in patients with mortality in our study.

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E-081 ENDOVASCULAR THROMBECTOMY FOR STROKE IN ELDERLY PATIENTS: A COMPREHENSIVE MULTICENTER ANALYSIS – INSIGHTS FROM THE STAR COLLABORATION

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Introduction Acute ischemic strokes (AIS) due to large vessel occlusion (LVO) occur more frequently in elderly patients, resulting in more severe symptoms and worse outcomes after treatment. The purpose of this study is to evaluate the age-dependent outcomes of Endovascular Thrombectomy (ET) in the real world, using a large dataset from the Stroke Thrombectomy and Aneurysm Registry (STAR).

Methods All patients undergoing endovascular thrombectomy for AIS at 12 comprehensive stroke centers between January 2013 and December 2018 were included. Data were retrospectively collected by reviewing patient charts and procedure notes. The primary endpoint was the modified Rankin Score (mRS) at 90-days after the procedure, which was dichotomized into good outcome (mRS 0–2) or poor outcome (mRS 3–6).

Results Out of the 3850 patients that underwent mechanical thrombectomy, 2,827 patients (mean age 69±14, 49% female) had 90-day follow-up and were included in this study. When adjusting for confounding variables using multivariate logistic regressions, increased age was found to be an independent predictor of poor outcome (OR=1.4, p<0.001) and mortality (OR=1.5, p<0.001). An age increment of 10 years was associated with 23% higher odds of symptomatic hemorrhage, and 50% higher odds of mRS 5–6. Predictors of good outcome in elderly population (≥80 years) included higher ASPECT score (aOR=1.417, p=0.02), lower admission NIHSS (aOR=0.892, p<0.001), and lower number of attempts (aOR=0.664, p=0.003). The final Thrombolysis in Cerebral Infarction (TICI) score was associated with increased odds of better outcome in younger population (aOR=1.55, p<0.001), but not in the elderly (p=0.329).

Conclusion Higher age is an independent predictor of worse outcome and increased mortality in patients undergoing ET for AIS. Baseline deficits, ASPECT score, and number of attempts, but not complete revascularization rates, were associated with better outcomes in elderly patients. Our findings underline the need for further refinement of selection criteria for elderly patients being considered for ET.

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E-082 ANALYSIS OF COLLATERALS PROFILE AND SUCCESSFUL FIRST PASS THROMBECTOMY IN THE ELDERLY POPULATION: A SINGLE-CENTER EXPERIENCE

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Introduction Patients over 80 years old account for one third ischemic strokes in the developed world, with an overall poor outcome. Although current guidelines do not recommend an upper age limit for endovascular approach, the benefit in the elderly population is still uncertain. In spite of