scans; and 4. Motion compensation post-processing algorithm technology.

Methods Patients with AIS who received endovascular mechanical thrombectomy were prospectively included in this monocentric study (n=105).

Study 1: Image quality of non-contrast circular CB-CT scans were analyzed using 2 quantitative and 6 qualitative measures and were compared to CT. **Study 2:** 6 types of image artifacts were compared between circular and dual-axis CB-CT scans. **Study 3:** Clot detection, ischemic core and collateral blood supply was assessed on CB-CT Perfusion imaging and compared to baseline CT and DSA imaging. **Study 4:** Motion artifacts were assessed on all scans before and after post-processed using a motion artifact correction algorithm.

Results Study 1: Newer non-contrast CB-CT circular scans had higher mean contrast-to-noise ratio and lower mean image noise compared to older generation protocols. The largest image quality improvements included grey/white matter differentiation (59% improvement), and reduction of image noise and artefacts (63% & 50% improvement, respectively). Study 2: Dual-axis CB-CT scans had significantly improved beam hardening and cone-beam artifacts compared to circular scans. Study 3: CB-CT stroke perfusion imaging software accurately demonstrates vessel patency, ischemic core, and collateral blood supply. Study 4: 51% of all AIS CB-CT scans had motion artifacts, of which 91% improved after post-processing with our motion correction algorithm. Overall 76% of the scans were sufficient for clinical decision making prior to correction, which improved to 93% after post processing with our algorithm.

Conclusions The latest generation of CB-CT scans & technology allow for exclusion of haemorrhages, stroke core definition and demonstration of brain perfusion and collaterals. These improvements suggest that CB-CT is acceptable for emergency stroke imaging assessment before mechanical thrombectomy, which may reduce door-to-groin puncture times and improve patient outcomes.

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Disclosures N. Cancelliere: None. P. Nicholson: None. F. Nij-natten: 5; C; Philips. E. Hummel: 5; C; Philips. P. Withagen: 5; C; Philips. P. van de Haar: 5; C; Philips. R. Agid: None. B. Hallacoglu: 5; C; Philips. M. van Vlimmeren: 5; C; Philips. V. Mendes Pereira: 1; C; Philips.

0-021

MIDDLE MENINGEAL ARTERY EMBOLIZATION FOR CHRONIC SUBDURAL HEMATOMA: A NATIONAL DATABASE STUDY OF 292 PATIENTS IN THE UNITED STATES

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10.1136/neurintsurg-2021-SNIS.21

Background Middle meningeal artery embolization (MMAE) has been used as an effective minimally invasive treatment for chronic subdural hematomas (cSDH). The demographics and clinical outcomes after MMAE treatment for cSDH have not yet been studied using the large scale of a national database.

Abstract O-021 Figure 1

Methods We queried all MMAE cases up to March 19th, 2021 from the TriNetX Analytics Network. We identified patients >18 years old who underwent MMAE for the treatment of cSDH. Patient demographics, baseline characteristics, comorbidities, and clinical outcomes were evaluated within 1-year post-MMAE. 1-year mortality and recurrence analyses were performed after propensity score matching to control for baseline characteristics and comorbidities.

Results A total 292 patients were included (mean age: 70.6 ± 13.9, 27.7% female, 71.6% White, 13.0% Black/African American, and 15.4% other). Essential hypertension (71.9%), heart disease (61.6%), type 2 diabetes mellitus (27.4%), nicotine dependence (26.0%), chronic kidney disease (19.52%), and overweight/obesity (18.2%) were among the most prevalent comorbidities. At presentation, 21.6% and 42.7% were on antiplatelet and anticoagulation therapy, respectively. Outcomes within a one-year follow-up were 6.2% (or 2.74-5.82% when propensity-matched) for mortality (18 patients), 0.34-3.4% for repeat MMAE (1-10 patients), 6.5% for craniotomy/craniectomy after MMAE (19 patients), 5.1% for burr hole procedures (15 patients), and 0.35-3.5% for low vision/blindness (1-10 patients).

Conclusion MMAE is a safe and effective minimally invasive procedure for the treatment of cSDH. This represents the first analysis of patients undergoing MMAE for cSDH using a national database.

Disclosures A. Nia: None. R. Lall: None. V. Srinivasan: None. P. Kan: None.

0-022

WHITE MATTER SURVIVAL WITHIN AND AROUND THE HEMATOMA: QUANTIFICATION BY MRI IN PATIENTS WITH INTRACEREBRAL HEMORRHAGE

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10.1136/neurintsurg-2021-SNIS.22

Introduction White matter (WM) injury and survival after intracerebral hemorrhage (ICH) has received insufficient attention. WM disruption, surrounding the hematoma, has been