Results Study Endpoints The primary study effectiveness endpoint is the incidence of residual or re-accumulation of the cSDH (>10 mm) at 6 months as assessed by an independent core laboratory OR re-operation or surgical procedure on the hematoma within 6 months post randomization.

Secondary effectiveness endpoints include mean reduction of hematoma volume at 3, 6 and 12 months compared to baseline, reduction > 50% in hematoma volume at 3, 6 and 12 months as well as others. Secondary safety endpoints include death, stroke, myocardial infarction or thromboembolic complications within 3, 6 and 12 months as well as others. Secondary health economics endpoints include hospital days, intensive care unit days, and change in the EQ-5D-5L score at discharge and 6 months compared to baseline.

Conclusion Middle meningeal artery embolization with n-BCA is an emerging treatment strategy for cSDH. An appropriately powered trial like the MEMBRANE Study will provide high level evidence on the potential safety and efficacy of this treatment paradigm.

Disclosures C. Kellner: 1; C; Penumbra, Siemens, Cerebrotech, Viz.AI, Minnetronix. 4; C; Metis Innovative. F. Al-Mufti: None. R. Gupta: None. B. Jankowitz: None. R. Starke: None. A. Rai: None.

E-076 MASKLESS DSA PROVIDES SIMILAR DETAIL WITH DECREASED RADIATION EXPOSURE

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Purpose Three-dimensional digital subtracted angiography (3D DSA) is vital to neuro-interventional evaluation and planning. The 3D dataset is used for better visualization of pathology and to obtain working angles. The 2D dataset can be evaluated in multiple planes, providing accurate measurements for device sizing. Current practices for acquisition of 3D DSA data for intracranial pathology involves performing two separate acquisitions. The first scan is acquired to image bone and tissue structure. During the second scan, contrast is injected after a short x-ray delay, allowing the vasculature to fill. Both scans are subtracted from each other allowing for a 3D volume of vasculature filling only. Using two scans to obtain the 3D volume doubles the amount of radiation dose. Artificial intelligence (AI) algorithms can be developed to allow for similar data with only one scan thus decreasing radiation dose. For this study, we sought to evaluate a prototype AI based 3D angiography by comparing this technique to conventional 3D DSA when measuring aneurysms.

Materials and Methods Imaging was acquired on the Artis Q-System (Siemens Healthineers, Forchheim, Germany). 20 patients received a standard 5 sec DSA imaging protocol. The standard 3D DSA technique was compared to the prototypical AI-based 3D angiography (3DA). Two separate investigators made measurements of aneurysms in both 2D and 3D datasets for 20 different aneurysms using both imaging techniques. The measurements were processed by a separate investigator using Minitab to run analysis of variance (ANOVA) statistics between the measurements of each investigator. Aneurysm dimensions, including height, width, depth, and neck, were collected. Each investigator independently determined the windowing thresholds and angles for measurement in 3D and 2D formats (figure 1).

Abstract E-076 Figure 1 (A) 2D DSA (B) 3D DSA Angle 1 (C) 3D DSA Angle 2 (D) 2D DSA (E) 3D DSA Angle 1 (F) 3D DSA Angle 2, highlighting the comparisons of the two techniques. Notice the nearly similar detail and measurements of both techniques