Introduction Stent retrievers with ancillary devices such as balloon guide catheters (BGC) and/or aspiration catheters are used in combination to achieve high rates of successful revascularization and improved clinical outcomes. The use of BGC has been previously reported associated with improved clinical outcomes and reperfusion. We thus assessed the effectiveness and safety of Tigertripper when used with and without BGC use in the TIGER study.

Methods The TIGER study is a single arm, prospective, multicenter trial assessing the efficacy and safety of this novel radially-adjustable stent retriever technology for LVO related stroke. We evaluated the revascularization success (mTICI 2b-3) with Tigertripper, the rate of embolization to new territory (ENT), 90d mRS scores, symptomatic intracranial hemorrhage (sICH), and 90d mortality at in patients treated with BGC compared to those treated without BGC.

Results A total of 160 patients were enrolled with a mean age of 66±15 years and median NIHSS of 18 [IQR 13–22]. A total of 104 (65%) did not use a BGC, and 56 (35%) used a BGC during the procedure. Patient demographics including age, gender, baseline mRS and vessel occlusion location, were similar in both groups. There were no significant differences in the effectiveness and safety outcomes in the patients treated with Tigertripper without the use of BGC, compared to the patients where BGC was used (table 1).

Conclusions The effectiveness of Tigertripper in enabling successful reperfusion is independent of the use of BGC. These results suggest that the unique technology of braiding and radially device control may lead to better encapsulation of the clot thereby reducing embolization during thrombectomy. This may be especially beneficial in the posterior circulation where converging blood supplies and vessel size limits the utility of BGC use.

Disclosures K. Snyder: 2; C; Medtronic, EV3, Abbott Vascular, Micrus, Boston Scientific, Codman, Zimmer, Stryker, Vital, Cannon. 4; C; Boston Scientific, Access Closure Inc, Niagara Gorge Medical. 6; C; Endo Tex, Micrus, BSC EPI, Access Closure Inc, Cordis, Primus. A. Jadhav: None. E. Levy: 2; C; Clarret Medical, GLG consulting, Guidepoint Global, Imperative Care, Medtronic, SimMed, Misionix, Mosaic, Clarion, Stryker, NeXtGen, Biologics, MEDX, Cognition Medical, Endostream Medical, Rapid Medical, Rebound Therapeutics, Three Rivers Medical. 6; C; Medtronic, Penumbra. A. Siddiqui: 2; C; Adona medical, Inc, AmnisTherapeutics, ApellisPharmaceuticals, Inc, Bent IT Technologies, Ltd, Blink TBI, Inc, Boston Scientific, Buffalo Technology Partners, Inc, Canon Medical Systems USA, Inc, Cardinal Health 200, LLC, CerebrotechMedicalSystems, Inc, Cerenovus, Corindus, Inc, Cognition Medical, Endostream Medical, Ltd, Imperative Care, Inc, Intylla, Inc, Integra LifeSciencesCorp, International Medical Distribution Partners, IRRAS, LaunchNY Seed Fund Management, Medtronic, MicroVention, MinnetronixNeuro, Inc, NeuroRadial Technologies, Inc, Penumbra, PerflowMedical, Ltd, Q’ApelMedical, Inc, Rapid Medical, Rebound Therapeutics Corp, Rist Neurovascular, Inc, Sense Diagnostics, Inc, Serenity Medical, Inc, Silk Road Medical, Spinnaker medical, Inc, StimMed, Stryker, Three Rivers Medical, Inc, Truvec Medical, Inc, Vastrax, LLC, VICIS, inc, Videon, Inc, Viz.ai, VasSol, W. L. Gore & Associates. J. Davies: 1; C; NIH R01. 2; C; Medtronic, Microvention. 4; C; Cerebrotech, Rist neurovascular. O. Zaidat: 1; C; Penumbra, Stryker Neurovascular. 2; C; Stryker Neurovascular, Cerenovus, Penumbra, Rapid Medical, Medtronic. D. Yavagal: 2; C; Medtronic, Cerenovus, Rapid Medical, Vascular Dynamics, Poseydon, Neurosave, Neural Analytics, Galaxy Therapeutics. J. Saver: 2; C; Medtronic, Stryker, Cerenovus, Rapid Medical. 6; C; University of California. R. Gupta: 1; C; PI for TIGER Study (Rapid Medical), PI for the ASSIST Registry (Sticky Neurovascular), PI for the RECCLAIM II Study (Zoll), CLEAR Study (Vesalio), Clinical Events Committee for the MIND Trial (Penumbra). 2; C; Cerenovus.