### METHODS

This is a retrospective, observational cohort study of all patients undergoing TCAR at our institution during a one year period.

Patients undergoing concurrent operations were excluded.

All patients met high-risk profile criteria as required for reimbursement.

Data was obtained from detailed chart review.

Descriptive statistics were used to assess primary endpoints of operative and flow-reversal time and morbidity including: death, stroke, myocardial infarction (MI), and cranial nerve injuries; as well as, length-of-stay (LOS) and readmissions.

### RESULTS

Ninety-one patients underwent TCAR, all under general anesthesia.

Mean age was 73 ± 9 years with 39% of patients over age 75.

There were 66 patients (72.5%) patients that met high-risk criteria based on their physiologic condition, and 37 (40.7%) on only anatomic considerations.

Internal Carotid Artery Stenosis of 80-99% was observed in 71 (78.0%) patients; and, overall 39 (43%) patients were symptomatic.

Mean operative and flow reversal times were 55.0 ± 14.3 and 8.8 ± 3.8 minutes, respectively.

There were two postoperative strokes (2.2%), both within 30 days.

At a mean follow up of 119 ± 111 days, there were no deaths, MI, or cranial nerve injuries.

Three patients (3.3%) required short-term vasopressor support and three (3.3%) required prolonged intravenous anti-hypertensive management.

Mean length of stay was 1.5 ± 1.3 days and unplanned readmission rate was 1.1%.

### CONCLUSIONS

Exclusive use of general anesthesia for TCAR provides expeditious carotid revascularization and minimal short-term morbidity and length of stay in this high-risk population.

On short-term follow-up, we observed excellent outcomes including no additional cardiopulmonary morbidity and only one readmission.

Additional study in larger, controlled populations is needed to define TCAR patients that may benefit from an anesthetic strategy other than general anesthesia.

TCAR flow reversal system reroutes blood from the common carotid artery and into the femoral vein.

TCAR reverse flow neuroprotection system captures any debris dislodged during the procedure.