



## SWSC 2020 On-Demand Meeting Abstracts

### 23. CAROTID ENDARTERECTOMY SURGEON VOLUMES IN CONTEMPORARY PRACTICE: A COMPARISON TO RANDOMIZED TRIAL INCLUSION CRITERIA

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**Background:** Clinical decisions regarding the utility of carotid revascularization are informed by randomized controlled trial (RCT) results. However, RCT's generally require participating surgeons to meet strict inclusion criteria with respect to procedure volume. The purpose of this study was to compare annual surgeon volume for carotid endarterectomy (CEA) in contemporary practice to RCT inclusion thresholds.

**Methods:** Surgeon volume thresholds were identified in 18 RCT's evaluating the efficacy of CEA (1986-present, n=18). Contemporary annual surgeon volumes (2012-2017) were identified by aggregating data from the Medicare Provider Utilization Database and Healthcare Cost and Utilization Project Network (HCUP), and compared to RCT inclusion thresholds. Further comparisons were performed over time, and across specialties (i.e., vascular surgeon vs. other).

**Results:** Minimal surgeon volume in 18 RCT's ranged from 10-25 CEA annually. From 2012 to 2017, CEA incidence in Medicare beneficiaries declined from 68,608 to 56,004 and become increasingly consolidated in fewer providers (7,331 vs. 6,626). However, only 26.2% of surgeons performing CEA in Medicare beneficiaries would have met the least stringent volume requirement (10 CEA/year). Only 5.6% of surgeons performing CEA met the most stringent RCT volume threshold (25 cases/year). In 2017, 819 vascular surgeons (25.5% of those certified in the specialty) performed >10 CEA in Medicare beneficiaries.

**Conclusion:** The majority of surgeons performing CEA do not meet the annual volume thresholds required for participation in the RCT's that have evaluated the efficacy of carotid revascularization. Given the established volume-outcome relationship in CEA, the disparity between surgeon experience in the context of RCT's versus contemporary practice is concerning. These findings have potential implications for informed decision-making, hospital privileging, and regionalization of care.