

Author Disclosures: K. Y. Bilimoria: Nothing to disclose; M. K. Eskandari: Nothing to disclose; B. L. Hall: Nothing to disclose; M. H. Ju: Nothing to disclose; C. Y. Ko: Nothing to disclose; L. L. Nguyen: Nothing to disclose; W. Pearce: Nothing to disclose.

PS116.

Are NASCET and ACAS Guidelines Applicable to Modern Imaging Measurements: Digital Subtraction Angiography vs TeraRecon CTA

Ashley Aaron, Adithya Suresh, Steven Santilli, Rumi Faizer, Steven Levin. University of Minnesota, St. Paul, Minn

Objectives: The North American Symptomatic Carotid Endarterectomy Trial (NASCET) and Asymptomatic Carotid Artery Surgery Trial, helped establish guidelines for carotid intervention based on conventional angiography measurements of stenosis. However, with improvement in noninvasive imaging techniques, the use of computed tomography angiography (CTA) has become widespread. The goal of this retrospective evaluation was to compare the degree of carotid stenosis based on TeraRecon compared with angiography and how these potential differences may impact decisions for intervention.

Methods: The percentage of carotid stenosis was obtained via digital subtraction angiography and TeraRecon. The study population included 58 patients who underwent carotid artery stenting for symptomatic and asymptomatic carotid stenosis between 2006 and 2013. The TeraRecon CTA and angiography stenosis measurements were analyzed by Student *t*-test to determine if traditional NASCET angiography determinations for intervention are applicable to CTA.

Results: TeraRecon CTA measurements of the percentage of carotid artery stenosis were, on average, 6.5% higher than those based on angiography. Analysis with the Student *t*-test showed a statistically significant difference between the two measurements ($P = .0033$).

Conclusions: Overall, we found that measurements of percent carotid artery stenosis in asymptomatic and symptomatic patients undergoing carotid stent placement were higher when using TeraRecon CTA compared with measures with angiography. This prompts the question have we been over-intervening on patients by using NASCET and ACAS guidelines on patients imaged with CTA?

Author Disclosures: A. Aaron: Nothing to disclose; R. Faizer: Nothing to disclose; S. Levin: Nothing to disclose; S. Santilli: Nothing to disclose; A. Suresh: Nothing to disclose.

PS118.

Regional Differences in Patient Selection and Treatment of Carotid Artery Disease in the Society for Vascular Surgery Vascular Quality Initiative (SVS VQI)

John C. McCallum¹, Thomas Curran¹, Dominique B. Buck¹, Jeremy D. Darling¹, Joe Schneider³, Brian W. Nolan², Philip P. Goodney², Marc L. Schermerhorn¹.
¹Vascular Surgery, Beth Israel Deaconess Medical Center, Boston, Mass; ²Dartmouth Hitchcock Medical Center, Hanover, NH; ³Northwestern University Feinberg School of Medicine, Chicago, Ill

Objectives: There are limited data on the regional variation of carotid endarterectomy (CEA) and carotid stenting (CAS). We use the Society for Vascular Surgery Vascular Quality Initiative (SVS-VQI) to evaluate regional differences in CEA and CAS across the United States.

Methods: We used the SVS-VQI to identify patients undergoing CEA and CAS between 2009 and 2012. Each of 14 regions was evaluated. Regions performing <50 CAS were excluded, leaving nine regions.

Results: A total of 14,871 cases were performed, and a minority of cases used CAS (vs CEA) to treat both symptomatic and asymptomatic disease. Substantial regional variation in patient characteristics (eg, symptom status, stenosis >70%), technical approach (eg, CEA vs stent, patch use, shunt use, neurologic monitoring, cerebral protection device use and type), and evidence-based process measures (eg, antiplatelet and statin use, patch use) are demonstrated in the Table.

Conclusions: This first investigation of a national clinical database demonstrates significant regional variation in carotid disease management. Future studies on the association of regional variation with risk-adjusted outcomes offer the opportunity for quality improvement through prospective identification of best practices.

Table. Ranges of variables across regions

Variable	Min	Max
Symptomatic patients who had CAS (vs CEA), %	7	32
Asymptomatic patients who had CAS (vs CEA), %	7	23
CEA with symptoms, %	20	42
CAS with symptoms, %	10	53
CEA with patch, %	73	95
CEA with shunt use, %	33	76
CEA where EEG used by surgeons who routinely shunt, %	0	68
CAS on both antiplatelet and statin, %	60	82
CAS discharged on both antiplatelet and statin, %	75	91
Asymptomatic CAS with stenosis >70%, %	67	97
CAS predialated, %	27	68
CAS postdialated, %	60	96

All $P < .01$.

Author Disclosures: D. B. Buck: Nothing to disclose; T. Curran: Nothing to disclose; J. D. Darling: Nothing to disclose; P. P. Goodney: Nothing to disclose; J. C. McCallum: Nothing to disclose; B. W. Nolan: Nothing to disclose; M. L. Schermerhorn: Endologix Inc and Medtronic Inc, consulting fees or other remuneration (payment); J. Schneider: Nothing to disclose.

PS120.

Outcomes After Early and Delayed Carotid Endarterectomy in Patients With Symptomatic Carotid Artery Stenosis

Ying Huang, Peter Gloviczki, Audra A. Duncan, Manju Kalra, Gustavo S. Oderich, Mark D. Fleming, Randall R. De Martino, Thomas C. Bower. Division of Vascular and Endovascular Surgery, Mayo Clinic, Rochester, Minn

Objectives: To define outcomes after carotid endarterectomy (CEA) in symptomatic patients when operated on ≤ 14 days after onset of symptoms or later (<14 days).

Methods: Clinical data of consecutive patients who underwent CEA (2003-2012) for symptomatic carotid