Contemporary Population-Based Outcomes For CAS and CEA From the SVS Registry: How Do We Know The Data Are Accurate

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SVS Vascular Registry® (VR)

- Developed in 2005 by the SVS Outcomes Committee as a response to CMS approval of CAS
- First societal registry to enroll CAS and CEA patients and was available to all clinical facilities and individual providers in the U.S.
- No inclusion or exclusion criteria as it was designed to capture real-world practices

- Data captured at Hospital discharge, 30d, 6m, 1 y, and annually thereafter
- Audit Program- ensure all cases reported, verify accuracy and completeness of data
- One of the largest available database on carotid revascularization in the US
- Vascular Surgeons performed 90% of CEA procedures
- Vascular Surgeons performed 60% of CAS procedures
- 15% Cardiology
- 15% Interventional Radiology

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<tr>
<th>Procedure</th>
<th>CEA</th>
<th>CAS</th>
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<td>S/D/MI-Asx</td>
<td>1.9%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Sx</td>
<td>3.7%</td>
<td>7.1%</td>
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<td>ASO Disease S/D/MI</td>
<td>CEA- 2.6%</td>
<td>CAS- 6.4%</td>
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| Risk Adjustment: CEA>>CAS

<65 years
CEA 1347 - 3.5%  
CAS 861 - 5.2%  NS
Asx: CEA 2.1%  
CAS 4.4%  p<.03
Sx: CEA 5.9%  
CAS 6.0%  NS

<65 years
CEA 4169 - 4.2%  
CAS 2536 - 7.1%  p<.01
Asx: CEA 3.3%  
CAS 5.3%  p<.01
Sx: CEA 5.3%  
CAS 9.5%  p<.01

PATIENTS > 65 years old: CEA>>CAS
The influence of contralateral occlusion on results of carotid interventions from the Society for Vascular Surgery Registry

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CEA (3,814) - 4.0%  CEA (2,678) – 4.0%
CAS (2,043) - 6.8%  p<.05 CAS (1,330) – 6.7%    p<.05

Men and women demonstrated similar results after CEA or CAS independent of symptom status
Both men and women did better with CEA than with CAS
Women may derive similar benefits as men from carotid revascularization

Contemporary results of carotid endarterectomy in “normal risk” patients from the Society for Vascular Surgery Registry

Normal Risk CEA 3,977
Sx: 1,456

Contemporary “real-world” results of CEA have improved
Ax: 1.3%  Sx: 3.7%

ACAS: 2.3%  NASCET: 5.8%
CREST:  Ax: 1.4%  Sx: 3.2%
AHA Guidelines: Ax: 3%  Sx: 6%

Should serve as benchmark for acceptable results for CEA in normal risk patients when compared to CAS or BMT

Gender-specific 30-day outcomes after carotid endarterectomy and carotid artery stenting in the Society for Vascular Surgery Registry

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SVS Vascular Registry® (VR)

- Limitations of any Registry
- Retrospective
- Selection bias
- Not all clinical factors can be readily identified: plaque characteristics, vessel morphology
- Not designed to mimic RCTs
- Represents “real-world” practice
- Independent verifiable registries can provide valuable information about clinical outcomes, particularly in the absence of randomized evidence