TCTAP 2012
Seoul, Korea
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Best Preparation for Prevention of Stroke in Carotid Artery Stenting

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Conflicts of Interest

- **Consultant**
  - Abbott Vascular (non-compensated)
  - Becker Venture Services Group
  - Bluegrass Vascular Therapies
  - Cordis Corporation(non-compensated)
  - Covidien (non-compensated)
  - Hansen Medical
  - Medtronic (non-compensated)
  - Micell, Incorporated
  - Primacea
  - Trivascular, Inc.
  - Vortex
- **Equity**
  - Access Closure, Inc
  - Embolitech, Inc
  - Hotspur, Inc
  - Icon Interventional, Inc
  - I.C.Sciences, Inc
  - Janacare, Inc
  - Northwind Medical, Inc.
  - PQ Bypass, Inc
  - Primacea
  - Sadra Medical
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  - Vascular Therapies, Inc
- **Board Member**
  - VIVA Physicians (Not For Profit 501(c) 3 Organization)
    - www.vivapvd.com

April 2012

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Carotid Therapy

- Carotid endarterectomy performed for over 55 years
- Carotid artery stent performed for over 20 years
- Medical Therapy
  - Largely untested, specifically among patients being considered for revascularization

Procedure	No. of Procedures (Rate per 1000 Beneficiaries)			
	2003	2004	2005	2006
Carotid endarterectomy	88 698 (3.2)	85 349 (3.1)	76 387 (2.8)	69 920 (2.6)
Carotid stenting	NA	NA	8485 (0.3)	10 959 (0.4)
Total	**88 698 (3.2)**	**85 349 (3.1)**	**84 872 (3.1)**	**80 879 (3.0)**

Arch Intern Med 2010;170:1218-25

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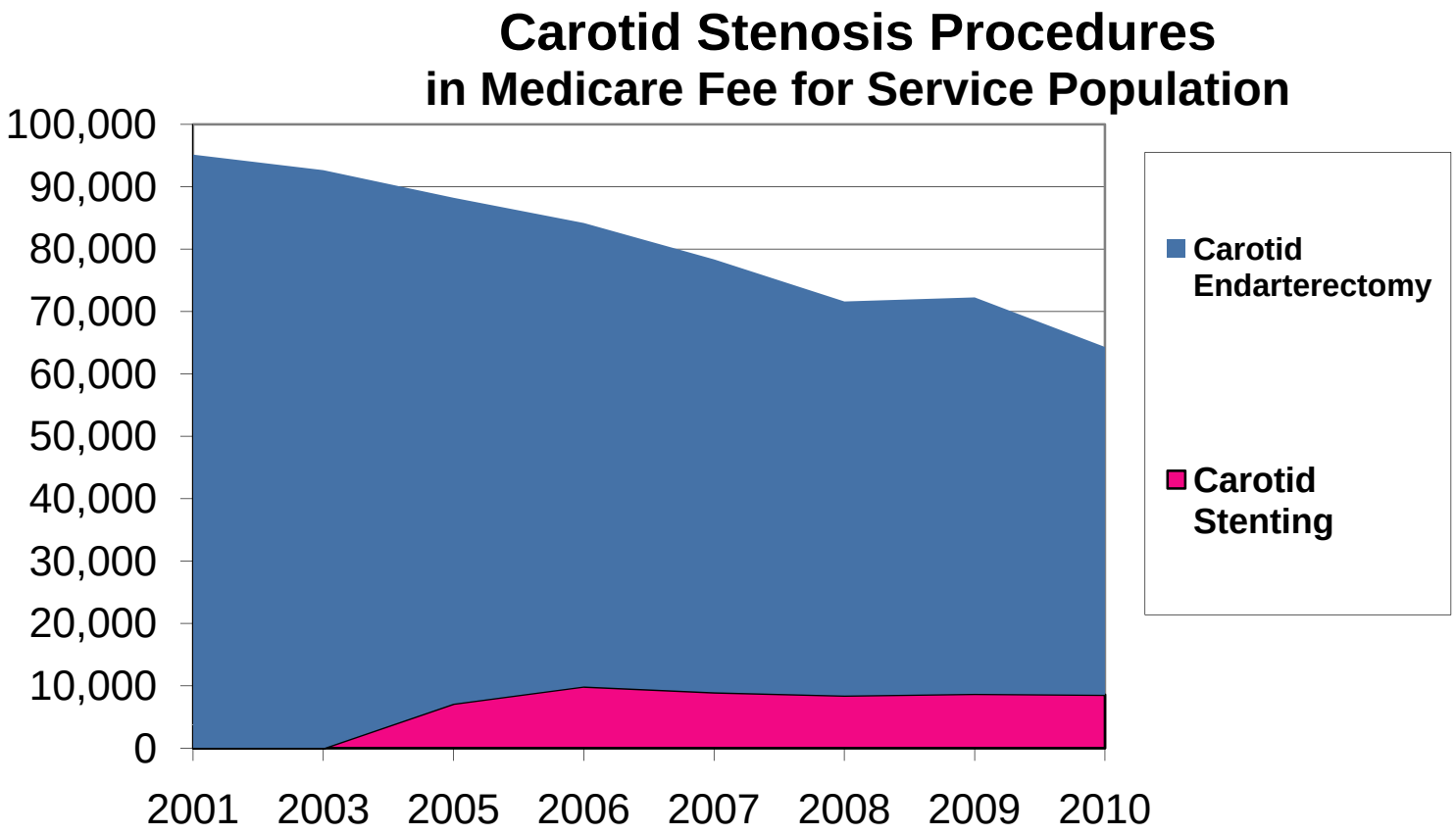
Carotid Revascularization in Medicare Population, 2010 Update



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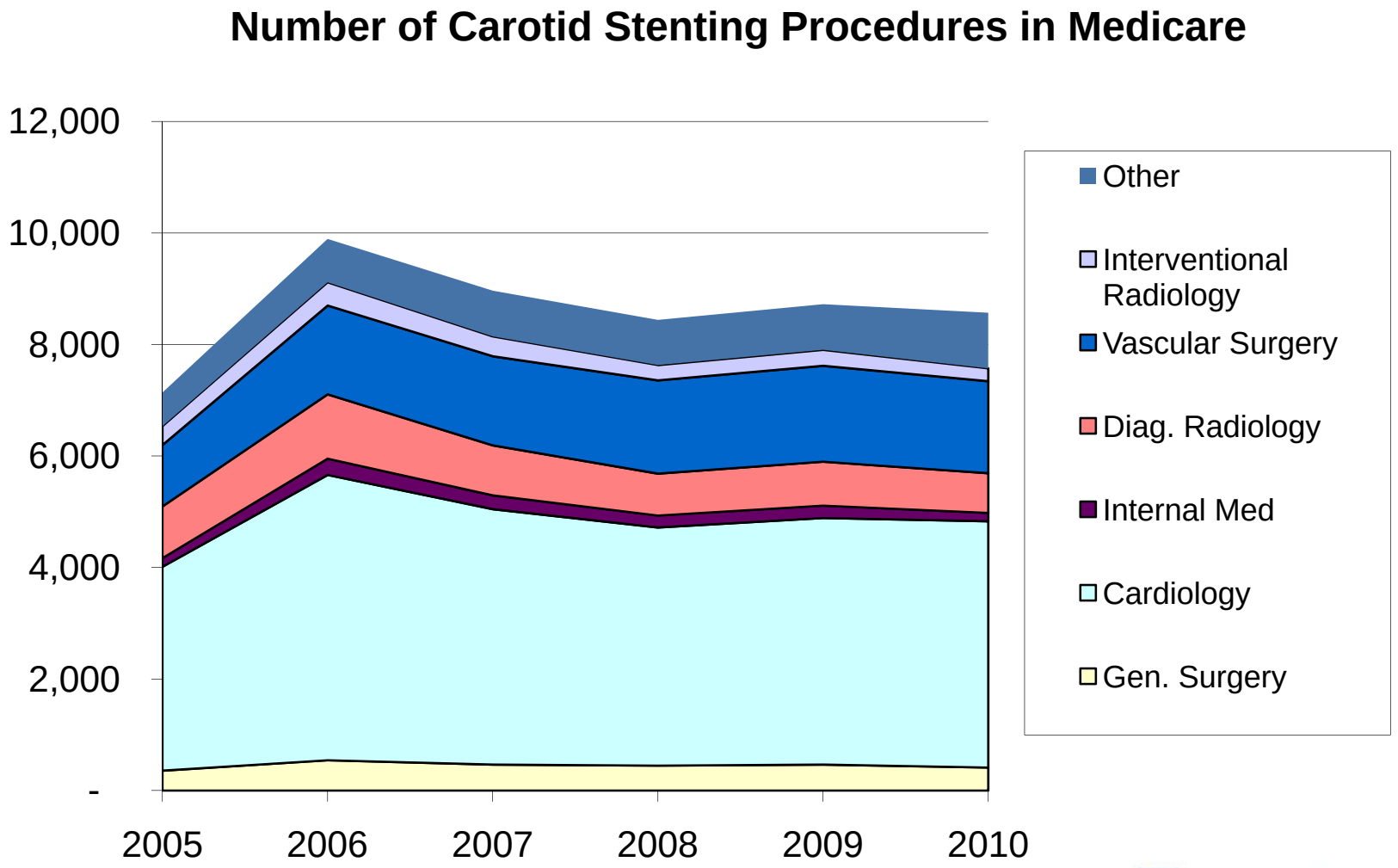
Carotid Revascularization By Specialty, 2010



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Because of all the controversy…

Procedural Performance of CAS Must Be Flawless

- Step One
  - Don’t choose patients who would be better treated either medically or with CEA

Get Experience On Who To Stent and How!

Influence of Site and Operator Characteristics on Carotid Artery Stent Outcomes: Analysis of the CAPTURE 2 (Carotid ACCULINK/ACCUNET Post Approval Trial to Uncover Rare Events) Clinical Study

William A. Gray, Kenneth A. Rosenfield, Michael R. Jaff, Seemant Chaturvedi, Lei Peng, Patrick Verta, and CAPTURE 2 Investigators and Executive Committee

J. Am. Coll. Cardiol. Intv. 2011;4;235-246

doi:10.1016/j.jcin.2010.10.009

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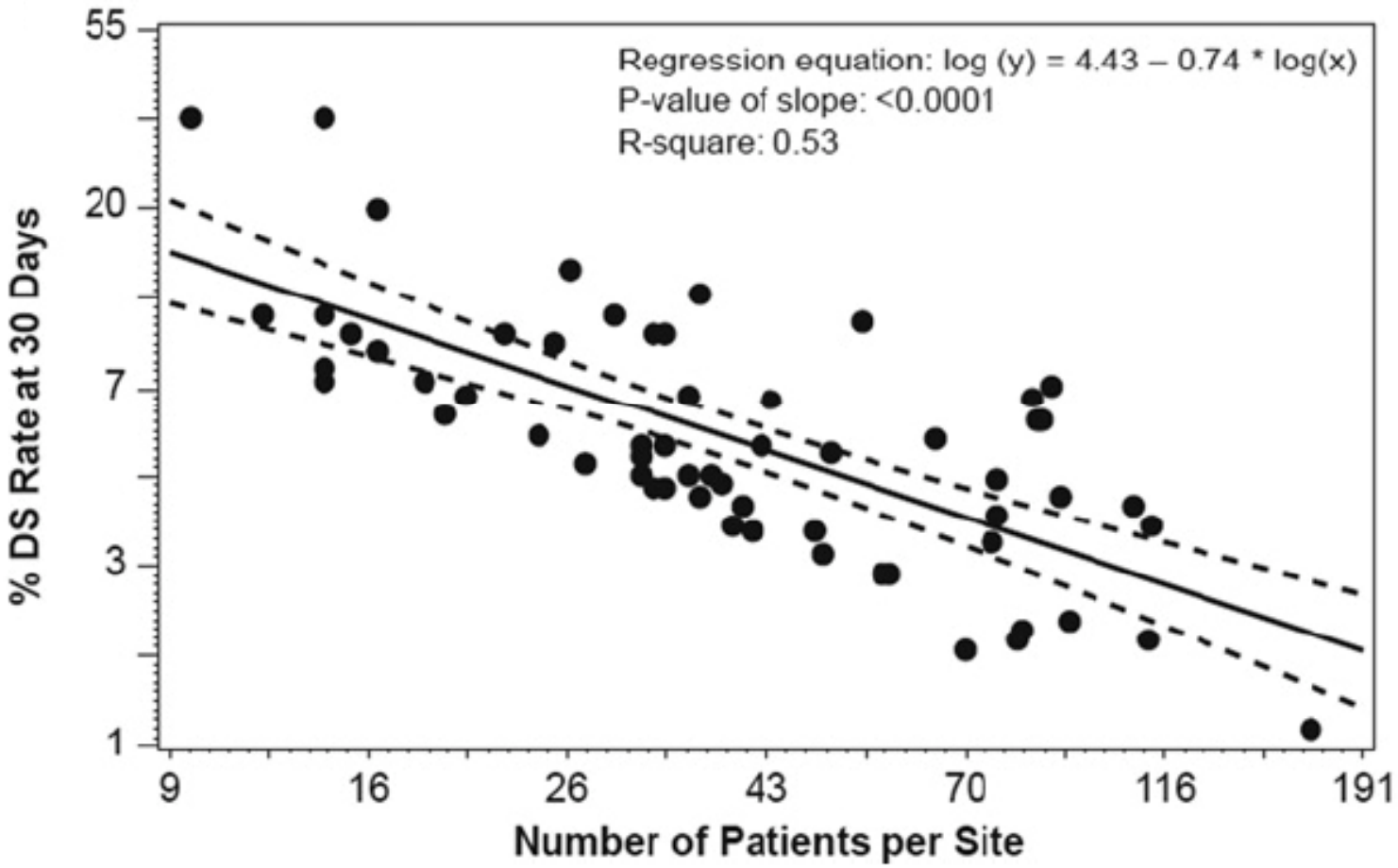
Stroke/Death Rates By Site Volume



J Am Coll Cardiol Intv 2011;4:235-46.

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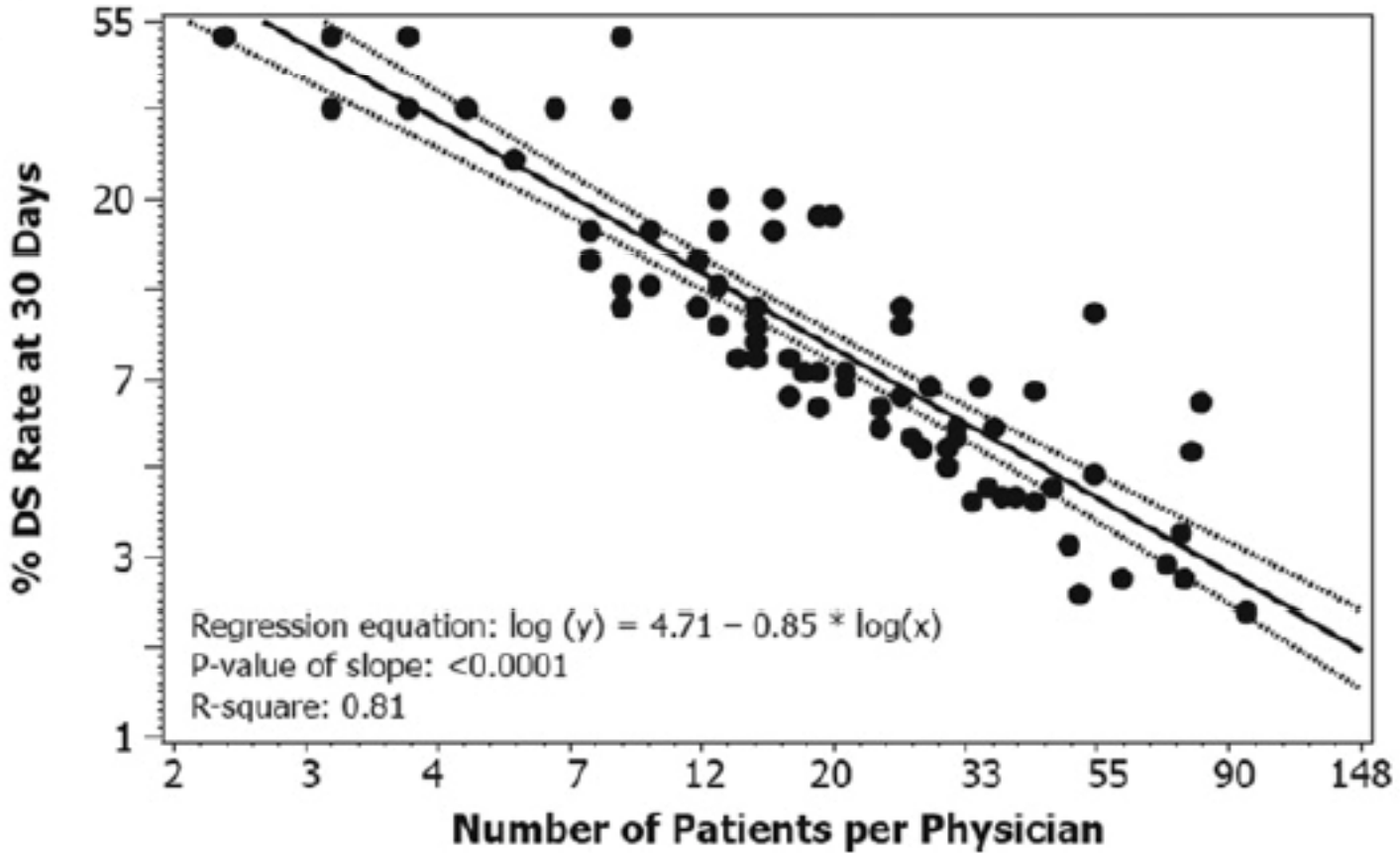
Stroke/Death Rates By Physician Volume



J Am Coll Cardiol Intv 2011;4:235-46.

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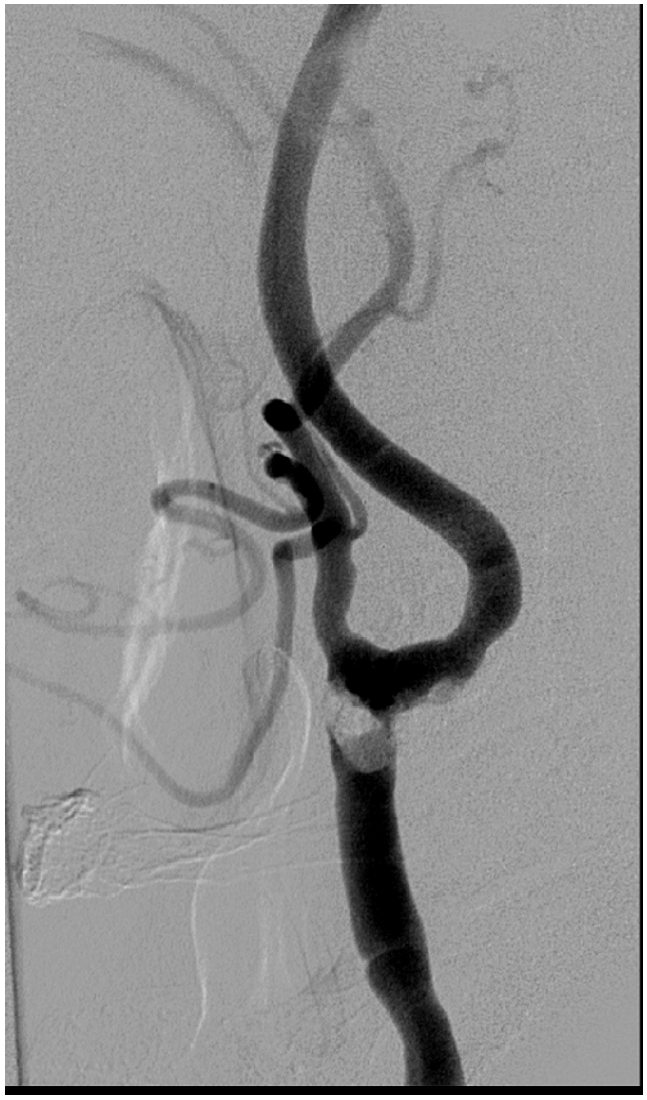
Avoid Dense Lesion Calcification



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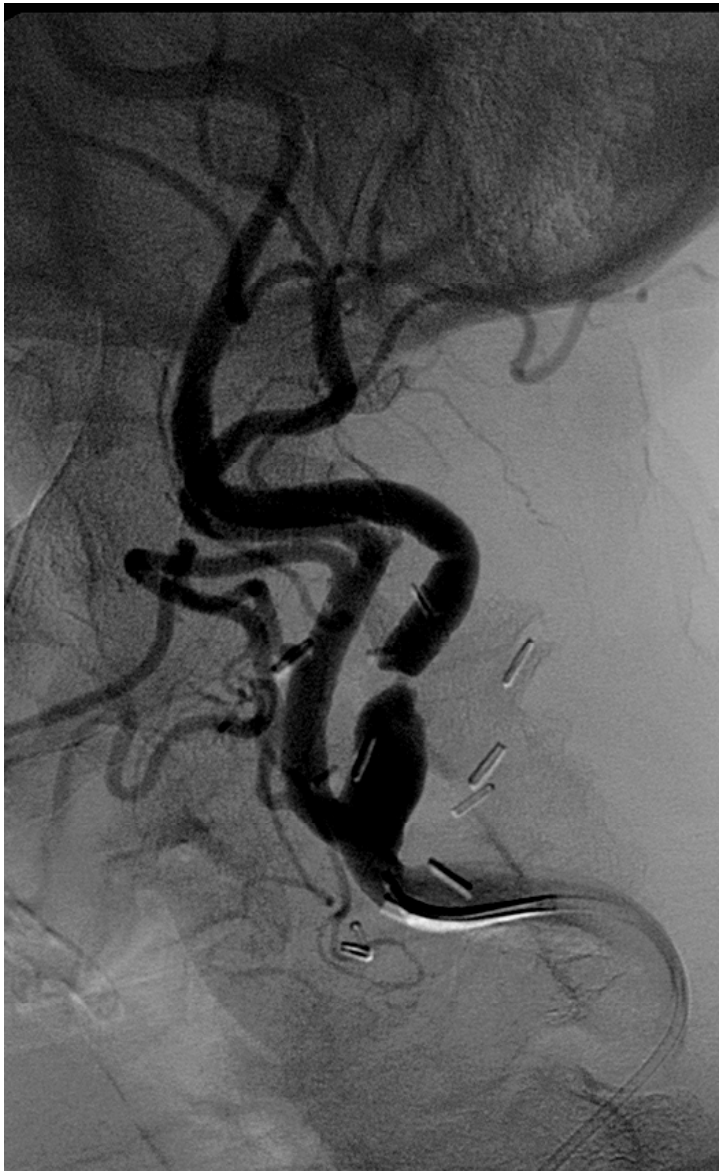
Avoid Marked ICA Tortuosity



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Avoid Arch Challenges

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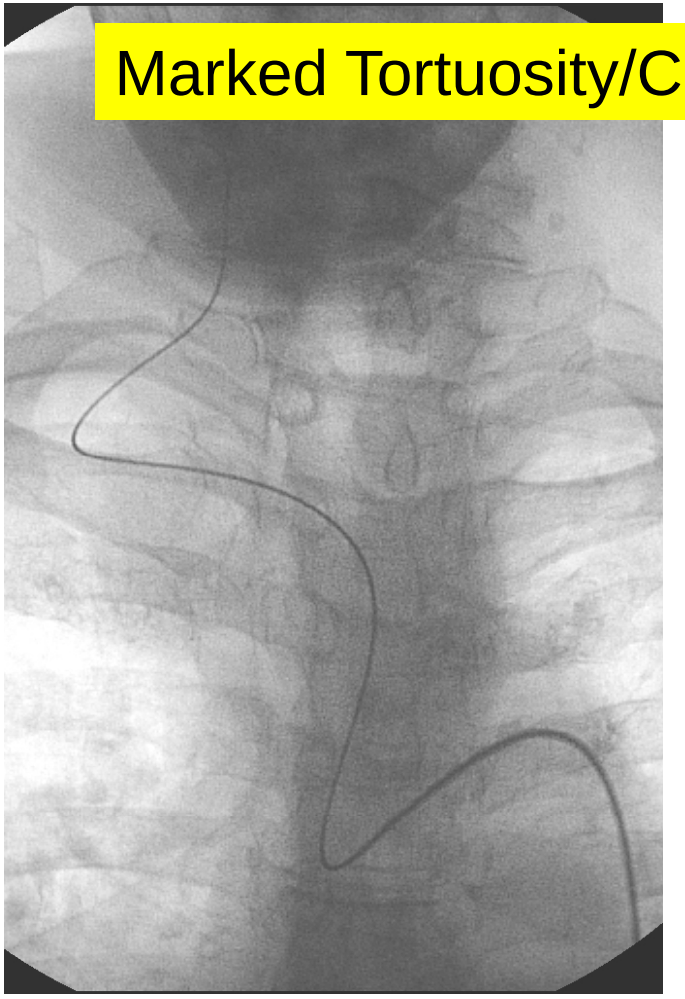
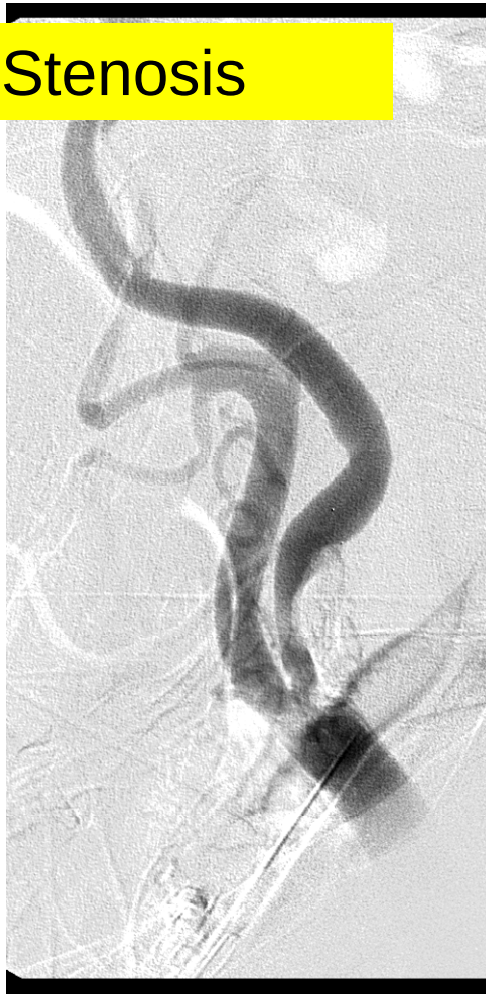
Reassess During the Procedure---Consider Case Termination if Things Aren't Going Well



Marked Tortuosity/Critical Stenosis



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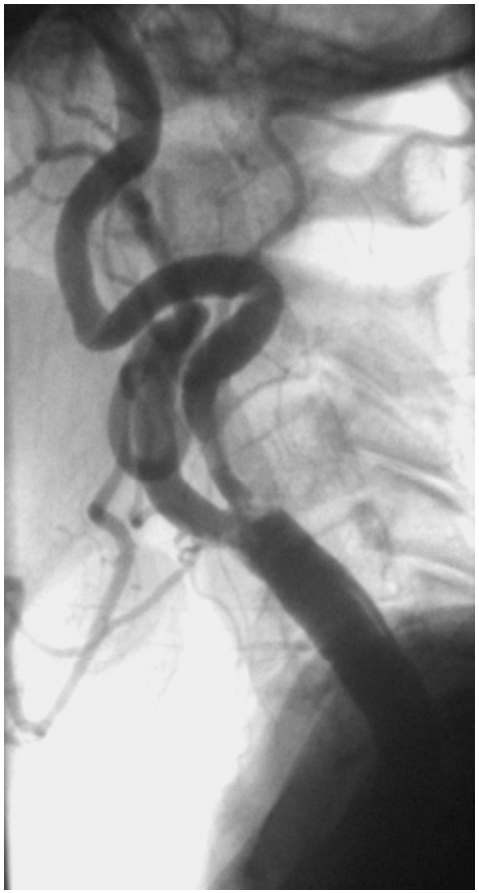
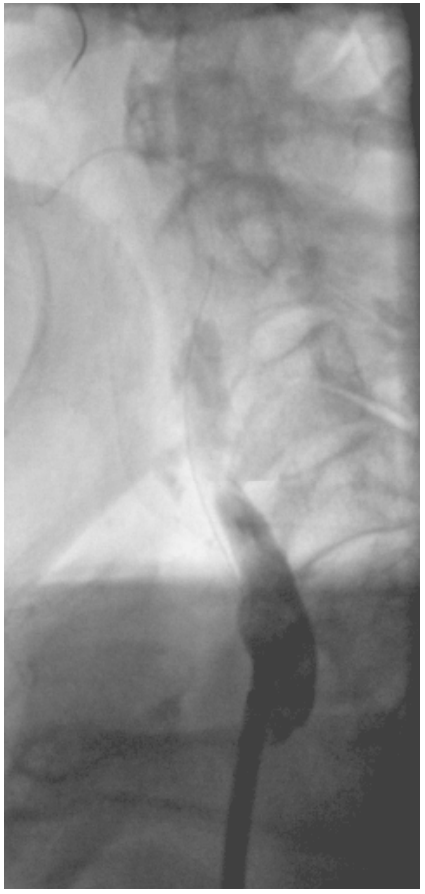
Reassess During the Procedure---Consider Case Termination if Things Aren't Going Well

Sheath/Buddy Wires: What's Happening Here?





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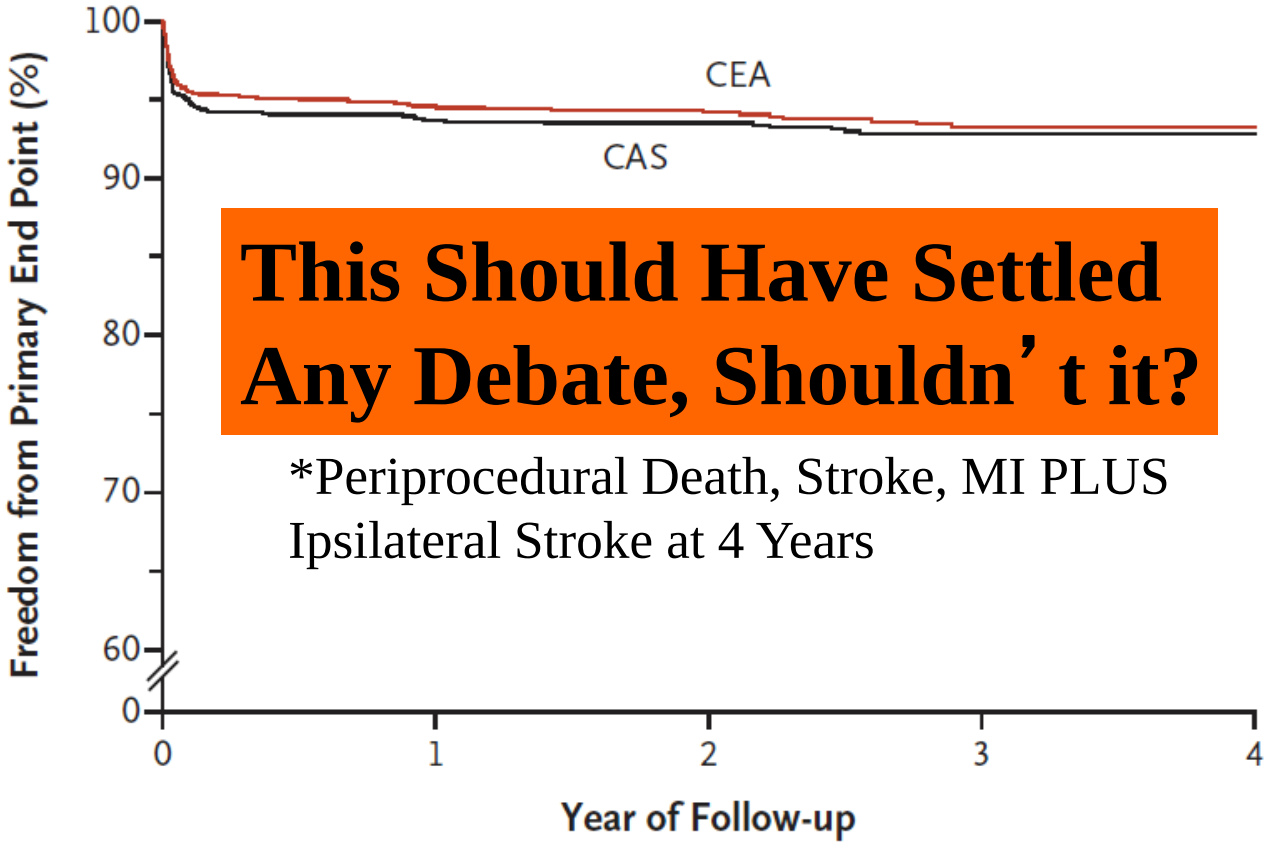
CREST Primary Endpoint*



This Should Have Settled Any Debate, Shouldn't it?

*Periprocedural Death, Stroke, MI PLUS Ipsilateral Stroke at 4 Years

N Engl J Med 2010;363:11-23

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2011 ASA/ACCF/AHA/AANN/AANS/ACR/ASNR/CNS/SAIP/SCAI/SIR/SNIS/SVM/SVS Guideline on the Management of Patients With Extracranial Carotid and Vertebral Artery Disease: Executive Summary

A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, and the American Stroke Association, American Association of Neuroscience Nurses, American Association of Neurological Surgeons, American College of Radiology, American Society of Neuroradiology, Congress of Neurological Surgeons, Society of Atherosclerosis Imaging and Prevention, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, Society for Vascular Medicine, and Society for Vascular Surgery

	Symptomatic Patients		Asymptomatic Patients
	50% to 69% Stenosis	70% to 99% Stenosis*	70% to 99% Stenosis*
Endarterectomy	Class I LOE: B	Class I LOE: A	Class IIa LOE: A
Stenting	Class I LOE: B	Class I LOE: B	Class IIb LOE: B

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Updated Society for Vascular Surgery guidelines for management of extracranial carotid disease: Executive summary

In 2008, the Society for Vascular Surgery published guidelines for the treatment of carotid bifurcation stenosis. Since that time, a number of prospective randomized trials have been completed and have shed additional light on the best treastment of extracranial carotid disease. This has prompted the Society for Vascular Surgery to form a committee to update and expand guidelines in this area. The review was done using the GRADE methodology.

In contrast to the multispecialty guidelines recently published, the committee recommends carotid endarterectomy (CEA) as first line treatment for most symptomatic patients with stenosis 50% to 99% and asymptomatic patients with stenosis 60% to 99%. The perioperative risk of stroke and death in asymptomatic patients must be below 3% to ensure benefit for the patient. Carotid artery stenting (CAS) should be reserved for symptomatic patients with stenosis 50% to 99% at high risk for CEA for anatomic or medical reasons. CAS is not recommended for asymptomatic patients at this time. Asymptomatic patients at high risk for intervention or with <3 years life expectancy should be considered for medical management as first line therapy.

In this Executive Summary, we only outline the specifics of the recommendations made in the six areas evaluated. The full text of these guidelines can be found on the on-line version of the Journal of Vascular Surgery at http://journals.elsevierhealth.com/periodicals/ymva. (J Vasc Surg 2011;54:832-6.)

Wait….I Don't Get It---Wasn't The SVS Sponsors of the AHA Document?

2011 ASA/ACCF/AHA/AANN/AANS/ACR/ASNR/CNS/ SAIP/SCAI/SIR/SNIS/SVM/SVS Guideline on the Management of Patients With Extracranial Carotid and Vertebral Artery Disease: Executive Summary

A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, and the American Stroke Association, American Association of Neuroscience Nurses, American Association of Neurological Surgeons, American College of Radiology, American Society of Neuroradiology, Congress of Neurological Surgeons, Society of Atherosclerosis Imaging and Prevention, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, Society for Vascular Medicine, and Society for Vascular Surgery

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Is carotid artery stenting a fair alternative to carotid endarterectomy for symptomatic carotid artery stenosis? A commentary on the AHA/ASA guidelines

Kosmas I. Paraskevas, MD,[a] Frank J. Veith, MD, FACS,[b,c] Thomas S. Riles, MD, FACS,[d] and Wesley S. Moore, MD, FACS,[e] *Athens, Greece; New York, NY; Cleveland, Ohio; and Los Angeles, Calif*

The recent guidelines by the American Heart Association/American Stroke Association (AHA/ASA) and several other associations recommended carotid artery stenting (CAS) as an alternative to carotid endarterectomy (CEA) for symptomatic patients (Class I; Level of Evidence: B). The term "alternative" may easily be misinterpreted as "equivalent" to justify the widespread use of CAS. However, current evidence indicates that for symptomatic patients, CAS produces inferior outcomes compared with CEA. It is likely that with technical improvements, better patient selection, and better physician experience, CAS outcomes will improve in the future. CAS may then become a fair alternative to CEA, at least in certain patient subgroups. Based on current evidence, however, we are not there yet and it seems unfair to spin the AHA/ASA guidelines to conclude that we are. (J Vasc Surg 2011;54:541-3.)

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Wait….Weren't Drs. Moore and Riles Members of the Writing Group for the AHA Guidelines?

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Ahhhhh….now I see….we don't understand the difference between "alternative" and "equivalent"

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So, When Controversy Rages over CAS….

- Choose patients wisely
- Gain experience
  - Physician
  - Site
- Meticulous Procedural Performance
- Don’t be too proud to ask for help

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