2023 MID-ATLANTIC CONFERENCE

11th ANNUAL CURRENT CONCEPTS IN

VASCULAR THERAPIES

2023

Hilton Virginia Beach Oceanfront
Virginia Beach, Virginia

APRIL 20-22

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Patient Perspective: Epidemiology and Risks

Jim Wyant, MD

Cervical Artery Disease

Congenital: Malformation, fibromuscular dysplasia

Acute Change: Trauma, Dissection, vasculitis, Vasospasm

Chronic Change: Atherosclerosis w/ or w/o flow limitation

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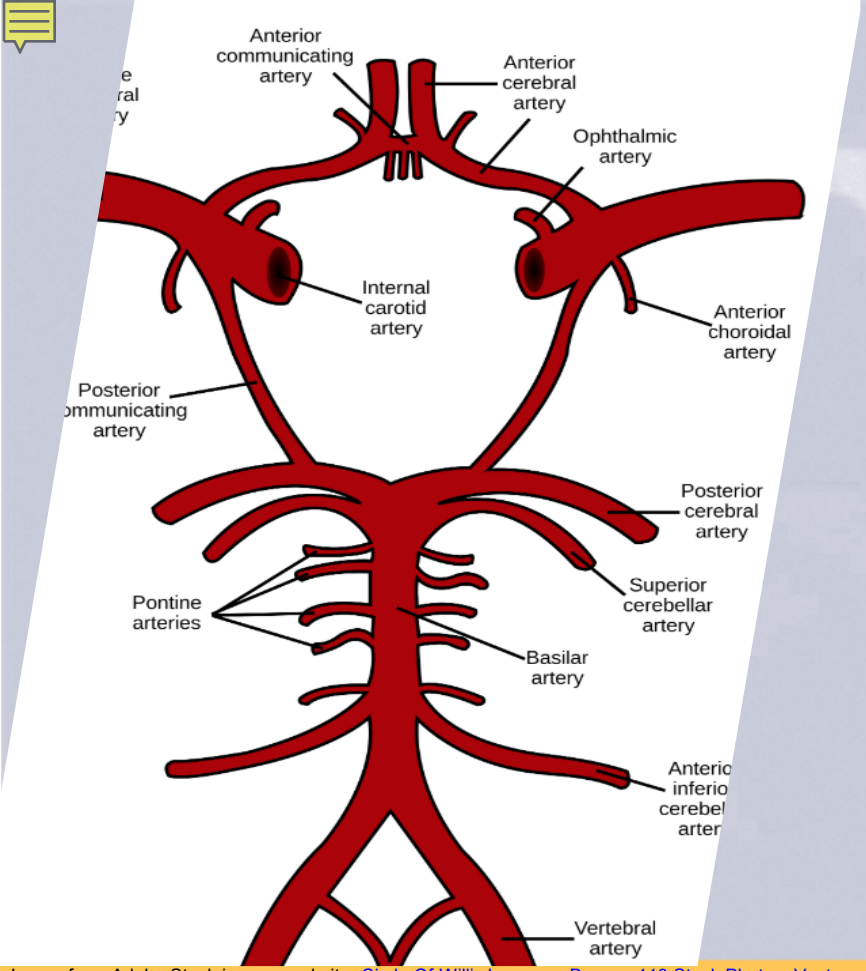

Risk Factors

- Increased Age
- Obesity
- Sleep Apnea
- Male Sex
- Cigarette Smoking
- Hypertension
- Poor Diet
- Sedentary Lifestyle
- Elevated Cholesterol

Image from Adobe Stock images website: Circle Of Willis Images – Browse 116 Stock Photos, Vectors, and Video | Adobe Stock

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Patient Experience

- Headaches
- Lightheadedness
- Dizziness
- Vision change
- Tinnitus
- Bruits
- Subclavian steal, Isolated Cranial Neuropathy, Carotid Sinus Syndrome
- Potentially asymptomatic until there is a stroke/TIA

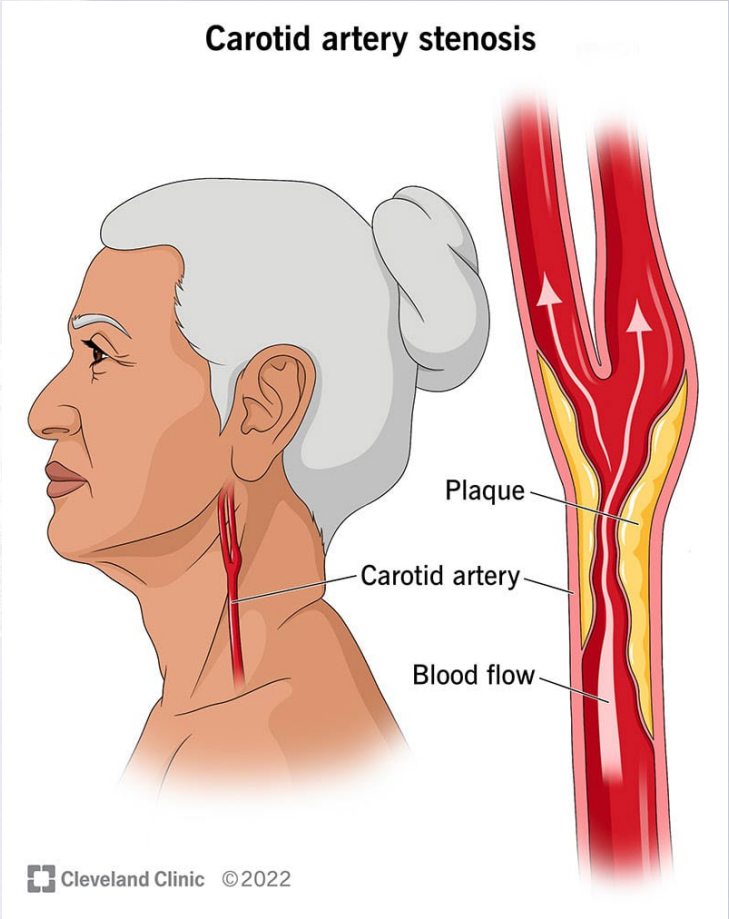
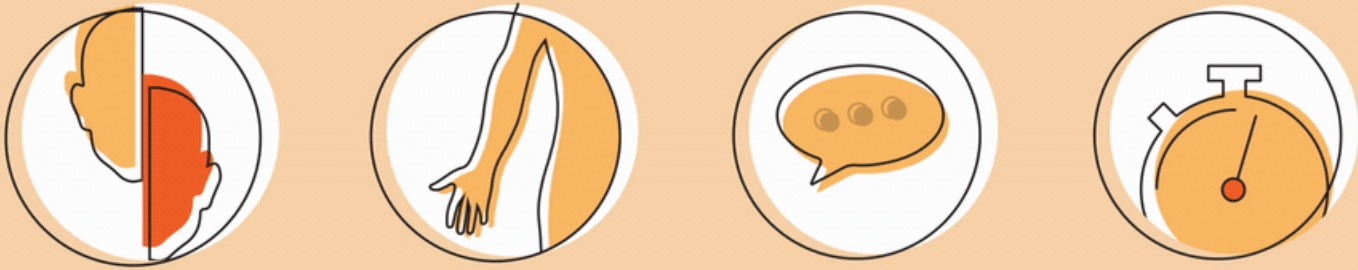


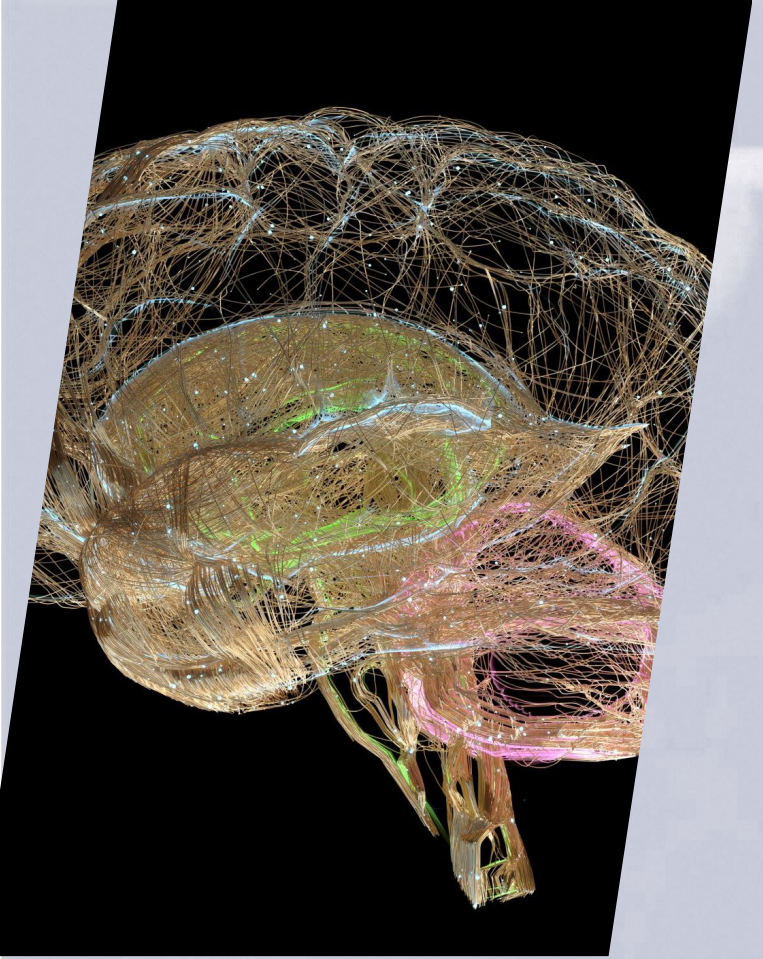
Image from Cleveland Clinic website Carotid Artery Stenosis: Causes, Symptoms and Treatment (clevelandclinic.org)

Learn the signs of stroke.



Face. **A**rms. **S**peech. **T**ime to **call 9-1-1.**

cdc.gov/stroke

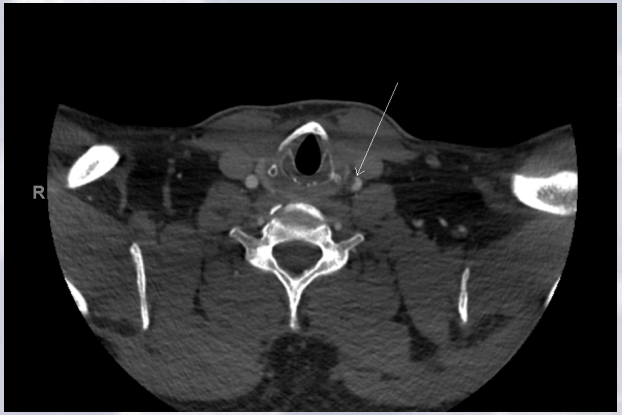


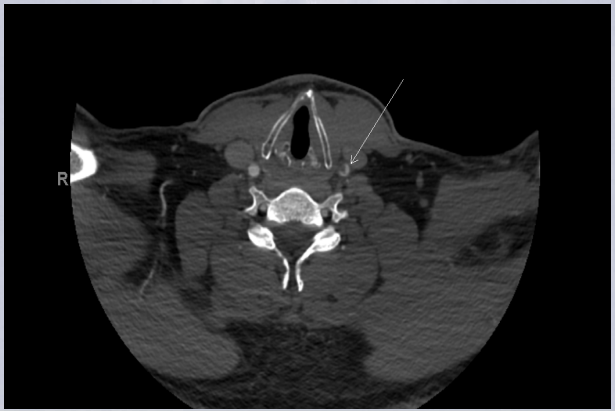
Epidemiology

- Prevalence of Carotid stenosis is low (3%) (6)
- ~20% of strokes are related to carotid disease (1)
- CEA is more stroke protective in men, particularly if life expectancy is >5 years following CEA. (7)
- Perioperative stroke/death as well as survival were equitable in black and white populations but patient reported outcomes were superior in black population. (9)
- Orthopantomography noted calcifications in 3-15% of patients. About 15% of this group had significant stenosis (8)
  - Statistical generalizability could not be made

Work up

- Vessel imaging
  - CT angiography is effective and accurate (10)
  - MRA, DSA, Carotid Doppler





- Candidacy for intervention
- Risk factors mitigation

Evidence for Intervention

- NASCET
  - Large, well powered, multicenter, RCT published in 1998
  - Defined mild/moderate/severity
  - CEA reduced 5-year mortality
- ECST
  - Similar large-scale trial published in 1998
  - Patients with severe stenosis do better with surgery
- SAPPHIRE
  - 2004
  - Stenting with emboli-protection device is not inferior to CEA
- CREST
  - 2010
  - Stenting vs. CEA
- ACAS/ACST
  - 2010
  - Patient selection is key when intervening on asymptomatic patients
- ROADSTER 2
  - 2020
  - TCAR showed excellent outcomes with low rates of complications (e.g. stroke and death)

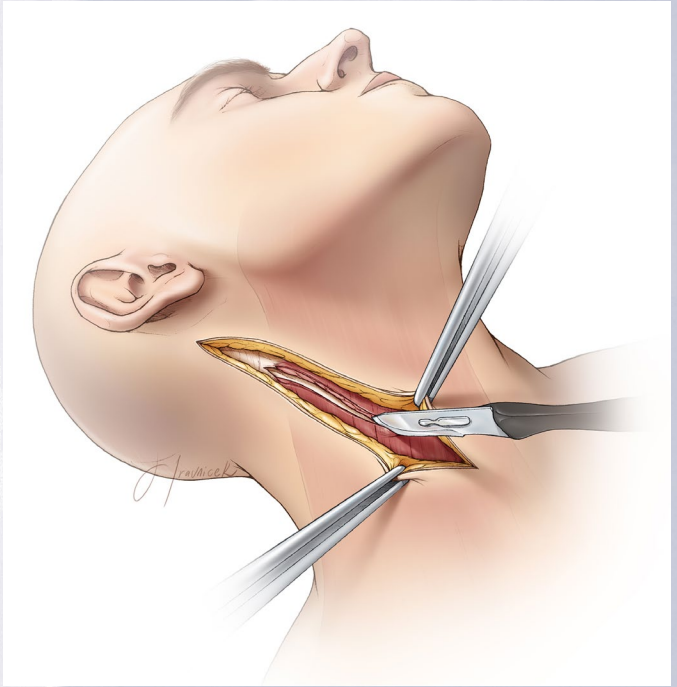


Image from The Neurosurgical Atlas website: www.neurosurgicalatlas.com/volumes/cerebrovascular-surgery/revascularization/carotid-endarterectomy

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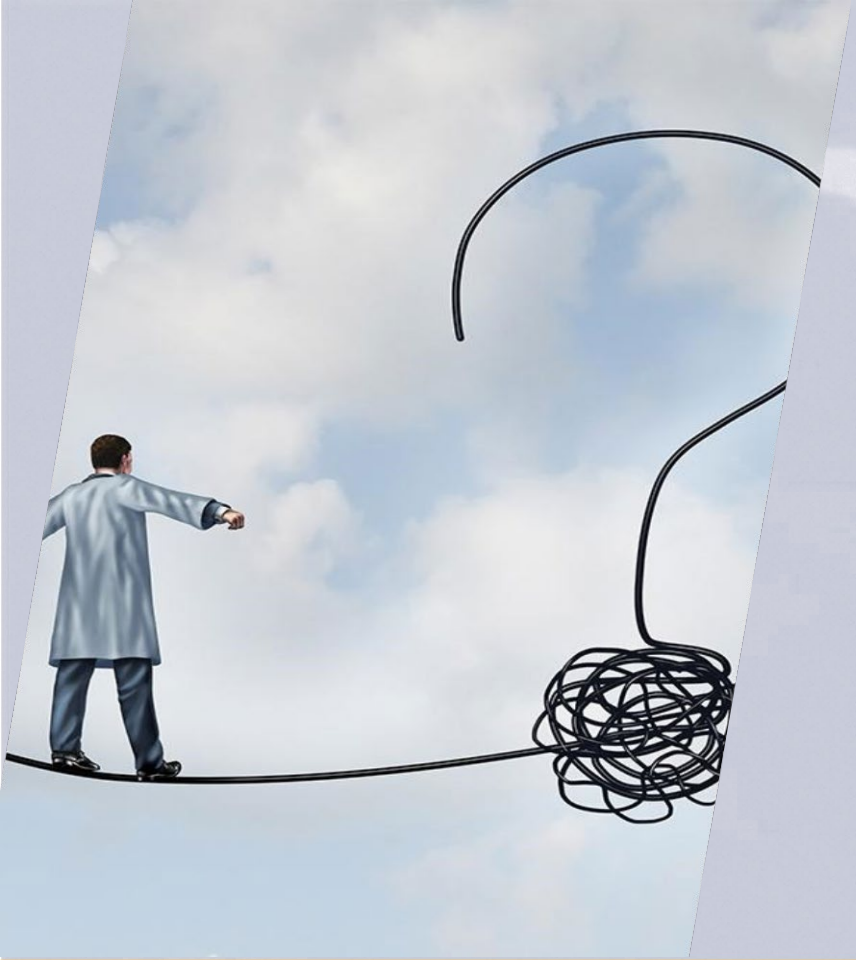

Questions?

References

1. Dossabhoy S, Arya S. Epidemiology of atherosclerotic carotid artery disease. Semin Vasc Surg. 2021 Mar;34(1):3-9. doi: 10.1053/j.semvascsurg.2021.02.013. Epub 2021 Feb 12. PMID: 33757633.
2. Prati P, Vanuzzo D, Casaroli M, Di Chiara A, De Biasi F, Feruglio GA, Touboul PJ. Prevalence and determinants of carotid atherosclerosis in a general population. Stroke. 1992 Dec;23(12):1705-11. doi: 10.1161/01.str.23.12.1705. PMID: 1448818.
3. Blum CA, Yaghi S. Cervical Artery Dissection: A Review of the Epidemiology, Pathophysiology, Treatment, and Outcome. Arch Neurosci. 2015 Oct;2(4):e26670. doi: 10.5812/archneurosci.26670. Epub 2015 Oct 17. PMID: 26478890; PMCID: PMC4604565.
4. Markus HS, et al. "Antiplatelet treatment compared with anticoagulation treatment for cervical artery dissection (CADISS): a randomized trial". Lancet Neurology. 2015. 14(4):361-367.
5. Mehta A, et al. Transcarotid artery revascularization versus carotid endarterectomy and transfemoral stenting in octogenarians; J Vasc Surg. 2021 Nov;74(5):1602-1608.
6. Dossabhoy S, Arya S. Epidemiology of atherosclerotic carotid artery disease; Semin Vas Surg. 2021 Mar;34(1):3-9.
7. Stoberock K, et al. Gender differences in patients with carotid stenosis; Vasa. 2016 Jan;45(1):11-6.
8. Basuga M, et al. Significance of Calcifications in Projection of Carotid Arteries on Orthopantomography for Detection of Carotid Artery Stenosis. Acta stomatologica Croatica 56(3):257-266
9. Pothof A, et al. The impact of race on outcomes after carotid endarterectomy in the United States. J Vasc Surg. 2018 Aug;68(2):426-435
10. Silvennoinen, et al. CT Angiographic Analysis of Carotid Artery Stenosis: Comparison of Manual Assessment, Semiautomatic Vessel Analysis, and Digital Subtraction Angiography. Am J Neuroradiology. 2007 Jan; 28(1): 97-103.

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