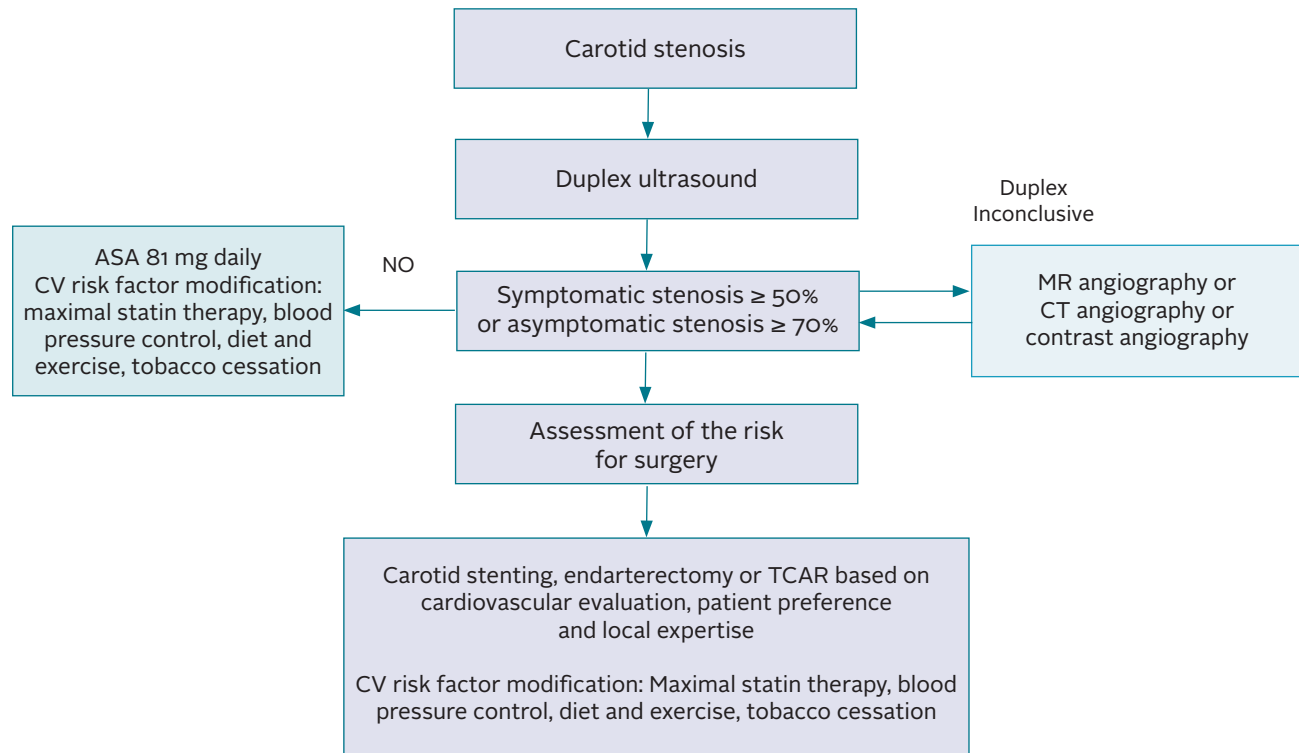


# Carotid Artery Disease Management

**Carotid artery disease is most commonly caused by atherosclerosis.** It is the source of up to 15 percent of strokes. When carotid artery disease is severe and/or the patient has had a TIA or stroke, surgical or percutaneous revascularization may be necessary. The choice of carotid stenting, endarterectomy or TCAR is based on patient comorbidities, anatomy, patient preference and local expertise. Ongoing cardiovascular risk factor modification is essential, and includes: evidence-based lipid lowering therapy, blood pressure control, diet, exercise and tobacco cessation.

## Management Strategy For Patients With Carotid Stenosis



## Who Should Be Considered For Carotid Revascularization?

### Symptomatic patients:

- ≥ 50 percent stenosis by angiography, MRA, CTA, Duplex
- Natural history, on medical therapy alone, is a 15-20 percent risk of TIA/stroke at one year

### Asymptomatic patients:

- ≥ 70 percent by angiography, MRA, CTA, Duplex
- Natural history, on medical therapy alone, is approximately 1-5 percent risk of TIA/stroke at one year

### Stents favored over CEA in:

- Comorbidity issues: CHF, EF < 30 percent, CASHD, COPD (patients with mod/high cardiac risk of CEA)
- Anatomical issues: post radical neck dissection or XRT, contralateral occlusion, high lesions, low lesions, prior CEA, spinal immobility, short or obese necks

### Features indicating higher than average risk for stenting:

- Age > 80, excessive vessel tortuosity, reduced cerebral reserve (recent stroke, dementia), heavy calcification



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# Carotid Artery Disease Management

## Our Team Members



### DAVID CASSADA, MD

**Medical School:** University of Virginia School of Medicine  
**Residency:** General surgery, University of Tennessee Medical Center  
**Fellowships:** Vascular surgery, University of Virginia  
**Board Certified:** General and vascular surgery  
**Specialties:** Catheter based and open surgery for peripheral vascular disease, aortic disease, aneurysmal disease, visceral arterial disease, brachiocephalic arterial disorders



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### EVAN OWNBY, MD

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### ALBERT PAVALONIS, DO

**Medical School:** Edward Via Virginia College of Osteopathic Medicine  
**Residency:** General surgery, St. Barnabas Hospital  
**Fellowship:** Vascular surgery, NYU Langone Hospital-Brooklyn  
**Specialties:** Emergency services, complex limb salvage

## TransCarotid Artery Revascularization (TCAR)

The new minimally invasive transcrotid artery revascularization (TCAR) procedure that uses a special transcrotid neuro-protection system (NPS) is designed to reduce the risk of stroke during the insertion of the stent.

## TCAR Surveillance Project Eligibility

CMS coverage for carotid stenting is guided by the National Coverage Decision (NCD 20.7). TSP is an approved clinical study under this NCD.

### Symptomatic

- Neurological symptoms
- HSR factors
- Stenosis > 50 percent

### Asymptomatic

- HSR factors
- Stenosis  $\geq$  80 percent

## TCAR Patient Selection & Medication

### Anatomical Requirements

Typically assessed by ultrasound in surgical position.

- CCA  $\geq$  5cm in length (clavicle to bifurcation)
- CCA  $\geq$  6mm in diameter
- Clear CCA (free of significant disease)
- ICA  $\geq$  4mm and  $\leq$  9mm in diameter (reference)



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