

EDITORIAL

The Post–CREST-2 Landscape: A Tectonic Shift or an Incremental Slide?

Reflections on CREST-2 and the evolving opinions around modern carotid revascularization.

By William A. Gray, MD, MSCAI, FACC

Historically, when a trial has demonstrated definitive and favorable results of a therapy, the specialty groups involved have moved quickly to establish and adapt care pathways and infrastructure, train their colleagues and trainees, and educate referring physicians. For example, major shifts have occurred in acute interventional stroke therapy after a series of positive trials, including MR CLEAN and others, and in transcatheter aortic valve replacement after the PARTNER and CoreValve studies, setting their respective fields on entirely new trajectories. There has been discourse, and debate at times, regarding the nuances of patient candidacy and procedural oversight, but turf concerns largely turned to routine collaboration in the years that followed.

The field of carotid artery disease management exists in a more specialty-diverse landscape, especially regarding the asymptomatic patient. Key stakeholders include internists and general cardiologists who manage atherosclerotic disease, neurologists, vascular surgeons, interventional radiologists, neurointerventionalists and neurosurgeons, and interventional cardiologists—all bringing a unique perspective. Owing to this diversity, the responses to key milestones, including long-awaited level 1 evidence and expanded reimbursement and thus improved access to all therapies, have varied.

It has been roughly 10 months since the results of the CREST-2 trial were published and presented—to an enthusiastic crowd at the Society of Vascular and Interventional Neurology annual meeting in Orlando, and to a more muted response at the VEITHsymposium in New York City in November 2025. This contrast in reception has been emblematic of the perspectives of the larger carotid field over the past 2 decades and in the short time since the data were released, but there are opportunities for a more harmonious path forward without sacrificing the benefits of the diversity of perspectives and skills comprising the field of carotid practitioners.

It is not possible for one clinician to speak for each of these groups, but several broad observations can be made. First, although interpretation of the CREST-2 results has generally varied somewhat across specialties, the trial's findings have reinforced the role of revascularization in acceptable-risk patients with atherosclerotic bifurcation carotid stenosis. For patients undergoing transfemoral carotid artery stenting (TF-CAS), CREST-2 demonstrated improved 4-year outcomes compared with intensive medical therapy.¹ Second, the carotid endarterectomy (CEA) arm did not demonstrate a statistically significant benefit over medical therapy, but the results should be considered in the context of the aggressive medical therapy employed in CREST-2, which may be difficult to consistently replicate in routine clinical practice. From a practical standpoint, CEA remains an important revascularization option for appropriately selected patients. Finally, when counseling the asymptomatic patient who may benefit from revascularization but is subsequently not found to be a suitable candidate for TF-CAS, one may still consider transcarotid artery revascularization (TCAR) or CEA based on the patient's anatomy, procedural risk, and other factors.

Nonsurgical specialties have generally moved toward recognizing TF-CAS as an important revascularization option alongside CEA and TCAR. However, some vascular surgical leaders have raised questions about the generalizability of the CREST-2 TF-CAS results, including whether operator selection and trial eligibility criteria may have contributed to the observed outcomes. Based on my experience as a member of the CREST-2 Interventional Management Committee, I can provide some additional context. For example, at the time of the trial, national TF-CAS volumes were relatively limited, in part because of the restricted Centers of Medicare & Medicaid coverage, and truly high-volume operators were therefore scarce. In addition, the exclusion criteria in both the CEA and TF-CAS arms were appropriate for patients considered to be at high procedural risk.

As the CREST-2 findings are incorporated into practice, it appears that TF-CAS is gaining broader acceptance among clinicians. Individual operator preferences still factor into decision-making, which may depend more on the operator's training or specialty than their interpretation and application of CREST-2's findings alone. The operators of today and tomorrow must be well-trained in the therapies they offer and well-versed in every option (as well as associated optimal medical therapies), and team-based collaborative approaches are most likely to yield the best results and build the strongest programs.

WHAT COMES NEXT FOR CAROTID REVASCULARIZATION?

Looking to the future, it is reasonable to consider whether the management of carotid disease should follow other well-established disease management paradigms: Consider least invasive first, and move to more invasive as patient factors dictate.

Now that the initial debate surrounding CREST-2 has begun to settle, the next step is to translate the evidence into thoughtful, patient-centered treatment pathways. Rather than viewing TF-CAS, TCAR, and CEA as compet-

ing strategies, the carotid community should focus on defining which approach offers the greatest benefit for each patient based on anatomy, procedural risk, and comorbidities, while prioritizing shared decision-making and patient preference. The challenge now is to ensure that patients are evaluated with all appropriate options in mind and ultimately receive the revascularization strategy best suited to their individual circumstances. ■

1. Brott TG, Howard G, Lal BK, et al; CREST-2 Investigators. Medical management and revascularization for asymptomatic carotid stenosis. *N Engl J Med*. 2026;394:219-231. doi: 10.1056/NEJMoa2508800

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