PANEL DISCUSSION

The 2024 PAD Guideline Update: How It Affects Practice

The most significant changes from the previous guidelines, achieving buy-in and consensus, key trends, obstacles to achieving appropriate care, ensuring compliance with medical therapy and exercise, and effective communication and the multidisciplinary care team.

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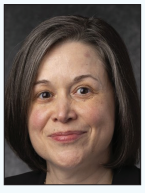

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What are the most significant changes in the 2024 peripheral artery disease (PAD) guideline update?[1]

Dr. Gornik: The document represents a comprehensive approach to PAD and is meant to completely replace the prior American Heart Association/American College of Cardiology PAD guidelines published in 2016. Of course, extensive new evidence was reviewed, including the COMPASS, VOYAGER PAD, BEST-CLI, and BASIL-2 trials, among other data, to inform the new

recommendations. In particular, the medical therapy and chronic limb-threatening ischemia (CLTI) sections were enriched by the addition of new randomized controlled trial (RCT) data. The Guideline Writing Committee (GWC) spent extensive time discussing, reviewing evidence, and summarizing the impact of disparities and social determinants of health (SDOH) on outcomes in PAD. We also present the concept of risk amplifiers in PAD—associated conditions that need to be identified and treated given their especially high risk of major adverse cardiovascular (MACE) and major adverse limb events (MALE). We had new collaborators in this version of the guidelines, with representation from the Association of Black Cardiologists and the American Podiatric Medical Association on the PAD GWC for the first time.

What are a few examples of major studies, events, or trends that informed or supported these changes?

Dr. Aronow: There have been multiple important studies that have informed significant changes to the PAD guidelines. For drug therapy, examples include the COMPASS and VOYAGER PAD trials, which demonstrated the safety and efficacy of dual pathway inhibition with low-dose aspirin and low-dose rivaroxaban for the prevention of MACE and MALE in patients with PAD. Likewise, the BEST-CLI and BASIL-2 studies have informed the appropriate selection of the first revascularization strategy in patients with CLTI.

Dr. Sabri: In addition to the major RCTs on CLTI such as BEST-CLI and BASIL-2, new studies and trends describing the role for emerging technologies in revascularization were highlighted. Examples include drug-coated technologies, common femoral endovascular techniques, and venous arterialization in CLTI. In addition, new trends and data supportive of high-intensity exercise therapy such as the MOSAIC and LITE trials helped shape the guidelines for the need of incorporating exercise therapy, especially in claudication. Guidelines for postrevascularization follow-up care were based on studies such as VOYAGER PAD and RCTs studying drug-coated devices. Lastly, trends of teams-based multispecialty care for CLTI and studies showing improved outcomes of implementing such teams were included in the guidelines.

How did the group go about achieving this degree of specialty buy-in?

Dr. Gornik: Our GWC had broad representation from many collaborating organizations across the spectrum of individuals who care for patients with PAD, including medical cardiovascular specialists and interventional cardiologists, vascular surgeons, interventional radiologists, nurses, wound care specialists, podiatrists, rehabilitation professionals, and others. We also had two patients on our GWC providing their perspectives. Our GWC process was a long one, and we spent hours upon hours of time reviewing and discussing data, as well as navigating consensus in writing and approving the guideline recommendation statements. There was an extensive peer review process, which had input from all the collaborating societies and further ensured these guidelines would have broad applicability. In the end, the GWC put the data and improving care for the patient first, beyond any subspecialty considerations, and we were able to develop a guideline that was broadly endorsed by the vascular community—and hopefully will be broadly implemented in the years to come.

Which areas remain the most challenging to achieve consensus?

Dr. Aronow: Although consensus was ultimately reached around all topics discussed, some issues were more challenging than others. One example included the question of what constitutes a failure of medical therapy warranting consideration of elective lower extremity revascularization for chronic symptomatic PAD. Another involved which first revascularization strategies were appropriate for patients with CLTI.

Dr. Sabri: The threshold for revascularization in patients with claudication remains the most difficult question upon which to reach consensus. The guidelines call for optimizing medical therapy and initiating exercise therapy as a first step before considering revascularization, but determining when a patient has failed these measures remains subjective and can influence the decision to proceed to revascularization. The choice between endovascular and surgical revascularization strategies, especially in CLTI, remains an area of debate given the varying results of BEST-CLI and BASIL-2. Local expertise, access to available technologies, and patient preference remain key determinants of best revascularization strategy.

What are some of the key trends in risk amplifiers and health disparities? What role can the guidelines play in remedying these trends?

Dr. Kirksey: The writing of this document, led by Drs. Gornik, Aronow, and Goodney, is landmark in its inclusion of the section on risk amplifiers and health disparities, topics that were not discussed in the prior

guidelines. Health and health care disparities in PAD diagnosis, treatment, and outcomes occur along patient dimensions including race/ethnicity, socioeconomics, geography, and gender. This document provides the supportive evidence to help providers recognize the complex interplay between risk amplifiers like diabetes, smoking, and chronic kidney disease and the SDOH, and it acknowledges the need for a more holistic and patient-centered approach by the multidisciplinary team collaborating in the care of the patient with PAD. It also calls for simultaneously addressing resource deprivation, structural inequity, and public policy at the foundation of the SDOH, as described in The PAD National Action Plan.[2] The solution that each institution or practice care team undertakes will be based on the locally available resources and population needs, and our guidelines provide a template not heretofore described.

Dr. Sabri: The guidelines highlight key risk amplifiers such as age, diabetes, renal disease, and smoking, amongst others. In addition, it dedicates specific recommendations for care of geriatric PAD patients, including assessment of frailty, sarcopenia, mobility, and polypharmacy. Addressing these risk amplifiers while addressing PAD management is essential. In addition, the guidelines address the disparities in access to health care, including race, ethnicity, sex, geography, and socioeconomic status. Every attempt should be made by the care team to identify these disparities at the time of diagnosis and work to address them to limit their impact on the patient outcome.

What are the most common challenges at the referral level and the obstacles to ensuring PAD patients are identified and guided to appropriate care?

Dr. Kirksey: The challenges are multiple and complex and begin with a stark underappreciation of PAD as a pathology across various areas of health care training. As medical students, we learn about heart attack and stroke but not so much about PAD. The section on amplifiers in these current guidelines nicely ties the atherosclerotic syndromes together for clinicians to understand the relationship. Hopefully, these well-written and practical guidelines will promote a dialogue between vascular specialists and first-line providers that allows us to continue our efforts to educate around PAD. Secondly, expeditious patient navigation to evaluation and treatment must be efficient, especially in patients with CLTI. This may require collaboration across facilities or health systems in a regional area. Finally, there are just not enough vascular providers broadly speaking (across cardiology, vascular surgery, interventional radiology, and podiatry), especially when we think about rural America where disease burden may be high and intersects with distance to providers, low income, and lack of fully resourced facilities. There has been an ongoing closing small rural hospitals over the last 2 decades, which exacerbates this fact. To this extent, it is very important that we establish local and regional care networks.

Dr. Gornik: Compared to other serious cardiovascular diseases, PAD remains woefully underdiagnosed and subsequently undertreated. To be honest, I think health care providers may simply not have PAD on their radar nor even think to ask questions or do simple exam maneuvers (taking off the socks and examining the pulses and the feet) to diagnose PAD in their many patients at risk. Further, study after study has demonstrated patients diagnosed with PAD, even by cardiovascular specialists, are simply not prescribed potentially life- and limb-saving medical therapies compared to patients with coronary artery disease (CAD), for example. Supervised exercise therapy is a highly effective treatment for leg pain, function, and quality of life, but it is underprescribed, and there has been disappointing uptake even though a Medicare national coverage determination was implemented years ago. Patients with PAD and CLTI who could potentially have their limb saved with revascularization may not be offered any such therapies and go on directly to amputation. The reality is, groups spend a lot of time debating "endo or open" for CLTI, but many patients receive nothing. The guidelines are meant to provide a blueprint for frontline clinicians on the therapies that should be offered to patients with PAD, but we need extensive collaborative input to help educate and implement these guidelines in the medical community broadly. They are of no value if they are not downloaded, read, and used.

What is the role of the interventionalist in ensuring optimal medical therapy and exercise are administered (and followed) before and after a procedure? How has this evolved?

Dr. Sabri: The guidelines emphasize the importance of best medical therapy for all patients with PAD and exercise for patients able to participate. The interventionalist should be familiar with these measures and strive to implement them regardless of the plan of revascularization. Several studies, including BEST-CLI, showed that adherence to best medical therapy remains suboptimal. The interventionalist should use

their relationship with the patient to educate them and their families that the revascularization procedure, when indicated, is not a single curative intervention but rather a tool in a longitudinal care pathway that still requires optimizing best medical therapy.

Dr. Aronow: Interventionalists are expected to initiate or optimize medical therapy and exercise in all patients, irrespective of revascularization status or timing. Revascularization, even when performed as a same-day procedure, provides a "teachable moment" in which patients are more likely to adhere to recommended therapies.

Dr. Kirksey: I agree with Dr. Aronow that we have a critical opportunity to "connect the dots" between behavior and disease and emphasize the importance of medical therapy adherence as well as behavior modification, including dietary habits. I would go as far as to say that in an ideal world, we should also be calling to bear social support resources as part of this patient optimization. This speaks to the issue of team-based care. Ultimately, we need to work with health insurers to create quality metrics for management of claudication that incentivizes high-quality, evidence-based medical management as much as vascular intervention.

Similarly, how might the guidelines facilitate communication among providers with respect to wound care?

Dr. Aronow: By emphasizing that optimal wound care should include revascularization, debridement of nonviable tissue, control of edema, facilitation of tissue growth, pressure offloading and other local wound care interventions, management of infection, pain control, and medical optimization of host factors, the PAD guidelines necessitate that clear communication occurs between providers from multiple specialties and disciplines, all of whom are integral to the care of patients with CLTI.

Did the committee weigh whether to include information or recommendations regarding the prevalence of CAD and whether to screen for it in patients diagnosed with PAD?

Dr. Gornik: This was discussed in developing the initial blueprint for the document, but the GWC leadership thought that this topic would be better and more comprehensively addressed in other multisocietal documents related to CAD, risk stratification, and prevention. That being said, the concept of CAD as a "risk amplifier" and the high cardiovascular risk associated with "polyvascular disease" is emphasized in this document.

What do you see as the core components of an effective multidisciplinary PAD team, as discussed in the guideline?

Dr. Kirksey: A core component across the broad team, which may include many players (ie, vascular medicine, cardiology, vascular surgery, interventional radiology, infectious disease, endocrinology, podiatry), is accurate and timely communication. Establishing group expectations around how that communication looks locally will facilitate efficient care, improve patient experience, and increase the value-based care proposition. Patients with CLTI can be one of the more resource-intensive patient groups in the cardiovascular service line, and we must also keep this goal in mind: "No margin, no mission."

Dr. Aronow: The guidelines suggest use of a multidisciplinary PAD care team for patients with either CLTI or acute limb ischemia. Core components of an effective team include members from various specialties and disciplines with expertise in revascularization, wound care, amputation, and medical therapies. ■

1. Gornik HL, Aronow HD, Goodney PP, et al. 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS guideline for the management of lower extremity peripheral artery disease: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. Circulation. 2024;149:e1313-e1410. doi: 10.1161/CIR.0000000000001251
2. American Heart Association. PAD national action plan. Published May 2022. Accessed August 20, 2024. https://professional.heart.org/-/media/PHD-Files-2/Science-News/p/PAD-National-Action-Plan.pdf

Disclosures
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