

Two organizations issue new joint coronary artery revascularization guideline

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People who have heart artery-opening procedures, called coronary artery revascularization, experience similar outcomes regardless of gender or race; thus the use of invasive heart procedures should not be limited

among women and adults from diverse racial or ethnic groups, according to a new joint guideline from the American College of Cardiology and the American Heart Association, in partnership with the Society for Cardiovascular Angiography and Interventions. The recommendations state revascularization treatment decisions for coronary artery disease should be based on clinical indications and involve a multidisciplinary heart team that includes the patient and patient preferences.

Coronary artery revascularization refers to procedures used to restore blood flow through a blocked [heart artery](#). It can be performed using percutaneous coronary intervention (PCI), where a stent is placed in the blocked artery via a catheter inserted in the wrist or thigh, or via [coronary artery bypass graft](#) (CABG), where an artery or vein from another part of the body is inserted via [open-heart surgery](#) to bypass the blockage.

"Coronary artery disease remains a leading cause of morbidity and mortality globally, and coronary revascularization is an important therapeutic option when managing patients with this disease," said Jennifer S. Lawton, MD, guideline writing committee chair and professor of surgery. "Treatment recommendations in the guideline outline an evidence-based approach to managing patients with [coronary artery disease](#) who are being considered for coronary revascularization, with the intent to improve quality of care and align with patients' interests."

The guideline specifies that to ensure equity and reduce disparities of care, all revascularization treatment decisions should be based on clinical indications, regardless of sex, race or ethnicity. There is no evidence that some patients with equivalent clinical indications benefit less than others; however, there is evidence that non-white patients are less likely to receive reperfusion therapy or an invasive strategy such as stenting or revascularization surgery.

Several factors are assessed to determine which procedure is best for a particular patient, including the location and severity of the blockage, the patient's clinical status and symptoms, the patient's age, having Type 2 diabetes or a weak [heart](#), the number of vessels that are affected and the risk involved for each procedure.

Determining the revascularization method and which treatment strategy is the best approach are not always clear for every patient, even when looking at the clinical indications, according to the guideline. In these cases, a multidisciplinary Heart Team approach is recommended, including a cardiologist, cardiac surgeon and other specialists. In addition to the Heart Team, the patient's preferences, goals, support system and understanding of their condition and potential outcomes should be considered.

"The Heart Team has become an important paradigm in clinical practice, emphasizing the importance of team consensus on the optimal approach to revascularization," said Jacqueline E. Tamis-Holland, MD, guideline writing committee vice-chair and professor of medicine at the Icahn School of Medicine at Mount Sinai.

The guideline updates recommendations for intervention, surgery and/or medical therapy in certain populations, including appropriate use of surgical revascularization or percutaneous revascularization for different disease states. Evidence has found that surgery is a reasonable recommendation to improve survival yet may not provide as strong a benefit over medication therapy as previously thought for patients with stable ischemic heart disease, normal left ventricular ejection fraction and triple-vessel coronary artery disease. Evidence also shows the ability of PCI to improve survival over medical therapy in this population is uncertain.

When PCI is the most appropriate treatment, recommendations are also

made for radial access (through an arm artery) vs. femoral (through a leg artery, which is the traditional access route) when a clinician experienced in radial access is available. Femoral access remains the default for people unable to receive radial artery catheterization because of anatomic limitations or because available clinicians are not experienced to perform radial access PCI.

The guideline also recommends a shorter one-to-three-month duration of dual antiplatelet therapy (DAPT) after PCI as reasonable in select patients to reduce the risk of bleeding, based on the latest evidence. Previous recommendations were for six or 12 months of DAPT.

The revascularization guideline complements the recently released 2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the Evaluation and Diagnosis of Chest Pain, as [revascularization](#) is often a treatment option for diagnosed chest pain. This is part of a strategic effort by the ACC and AHA to approach guidelines from a real-practice perspective, rather than solely topic-based guidelines. This guideline updates and consolidates the ACC/AHA 2011 CABG surgery guideline and ACC/AHA/SCAI 2011 and 2015 PCI guidelines based on new evidence to provide a patient-centric, disease treatment approach. Several recommendations in the guidelines for stable ischemic heart disease (2012), ST-elevation myocardial infarction (2013) and non-ST-elevation acute coronary syndromes (2014) are also updated.

The "2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization" will publish simultaneously in the *Journal of the American College of Cardiology* and *Circulation*.

More information: Jennifer S. Lawton et al, 2021 ACC/AHA/SCAI Guideline for Coronary Artery Revascularization: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines, *Circulation* (2021). [DOI:](#)

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