Choosing Wisely®

An initiative of the ABIM Foundation

American College of Cardiology

AMERICAN COLLEGE of CARDIOLOGY

Five Things Physicians and Patients Should Question

1 Avoid the routine use of invasive hemodynamic monitoring with pulmonary artery catheters in patients with uncomplicated acute decompensated heart failure who are hemodynamically stable and responding to treatment.

The randomized ESCAPE trial and a meta-analysis of randomized trials did not demonstrate benefit to routine pulmonary artery catheterization in heart failure and in critically ill patients. Since the publication of these analyses in 2005, there has been growing awareness that invasive hemodynamic monitoring may be valuable in some patients with decompensated heart failure. Thus, the 2021 update to the 2017 Expert Consensus Decision Pathway for Optimization of Heart Failure Treatment concluded that invasive hemodynamic and filling pressure assessment may occasionally be useful to support decision-making in patients who have refractory symptoms despite adequate use of diuretic agents, and in patients who develop worsening renal function with attempts to increase doses of diuretic agents. It may also be helpful in patients with repeated hospitalization for congestion in whom an understanding of filling pressures and hemodynamics might assist in meaningful changes in heart failure therapies. Pulmonary artery catheterization results may also help select candidates for advanced therapies, including transplantation or mechanical circulatory support. Similarly, the 2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure emphasized that invasive hemodynamic monitoring may be useful for patients with acute heart failure "whose fluid status, perfusion, or systemic or pulmonary vascular resistance is uncertain; whose systolic blood pressure remains low, or is associated with symptoms, despite initial treatment; whose renal function is worsening with therapy; or who require parenteral vasoactive agents."

However, the use of pulmonary artery catheters is not without increased risk of complications which may range from mild such as a superficial hematoma to major such as pulmonary artery rupture. Additionally, the use of pulmonary artery catheters is associated with increased healthcare costs – as much as $1,600 in a recent analysis – and is associated with a cost difference of approximately $1,400 when compared to patients not receiving pulmonary artery catheter-guided care. In the year 2000, over 1.2 million pulmonary artery catheters were placed in the United States with an associated annual cost of over 2 billion dollars.

Overall, weighing risks and benefits, the 2021 Expert Consensus update and the 2022 Guideline concluded that routine use of invasive hemodynamic monitoring with pulmonary artery catheters is not recommended.

2 Avoid performing atrial fibrillation ablation for the sole purpose of discontinuing chronic anticoagulation.

Catheter ablation is an important tool to reduce symptoms and improve quality of life for appropriately selected patients with atrial fibrillation (AF). However, there are no randomized trials demonstrating that anticoagulation can be safely discontinued after ablation in patients with elevated stroke risk. US cardiology society and international electrophysiology society guidelines and consensus statements recommend that continuation of oral anticoagulation after catheter ablation should be guided by a patient's stroke risk profile rather than the perceived success of the procedure. Therefore discontinuation of anticoagulation should not be the sole motivating factor for undertaking AF ablation. Informed consent and shared decision making should include a discussion of the indication to continue anticoagulation as indicated by standard stroke risk scores and clinical practice guidelines.

3 Avoid routine imaging stress tests or coronary CT angiography for the workup of palpitations or presyncope.

Palpitations, dizziness, lightheadedness, and presyncope are common symptoms. Not infrequently, these are worked-up with a variety of testing modalities including advanced cardiac imaging (PET or SPECT myocardial perfusion imaging, cardiac magnetic resonance imaging, or cardiac computed tomography). In the absence of other symptoms or signs of cardiovascular disease, cardiac imaging beyond a transthoracic echocardiogram is rarely warranted.

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Avoid obtaining a coronary artery calcium score in patients with known clinical atherosclerotic cardiovascular disease.

A coronary artery calcium (CAC) test is useful to assess risk and aid treatment decisions in many individuals without an established diagnosis of coronary artery disease. It does not contribute information for the risk assessment or treatment when the diagnosis of clinical atherosclerotic cardiovascular disease (ASCVD) has been established. According to the 2018 Guideline on the Management of Blood Cholesterol, clinical ASCVD includes acute coronary syndrome (ACS), history of myocardial infarction (MI), stable or unstable angina or coronary or other arterial revascularization, stroke, transient ischemic attack (TIA), or peripheral artery disease (PAD) including aortic aneurysm, all of atherosclerotic origin.

5

Avoid obtaining routine serial echocardiograms for chronic heart failure if there has been no change in signs, symptoms, or management.

Echocardiography is a readily available, accurate, noninvasive modality that is ideal for assessing pathology and monitoring treatment in patients with heart failure (HF). Once guideline-directed medical treatment has been optimized, echocardiography can be useful when making decisions regarding device therapy or referral to advanced therapies. For patients who are stable clinically and in whom no recent change in management has occurred or is contemplated, a routine schedule of serial echocardiograms is not useful.

How This List Was Created

The American College of Cardiology (ACC) formed a *Choosing Wisely* workgroup of member leaders from the Board of Governors, subspecialty experts, and health policy specialists. The workgroup was tasked with identifying five clinical scenarios where specific tests, treatments, or procedures should be avoided for lack of benefit. These five recommendations were pulled from ACC's existing appropriate use criteria (AUC) and clinical practice guidelines, selecting items that were either Rarely Appropriate AUC indications or Class III guideline recommendations. The ACC's Clinical Policy Approval Committee and Science & Quality Committee then reviewed and approved the final five items.

ACC's disclosure and conflict of interest policy can be found at www.acc.org/about-acc/industry-relations/principles-for-relationships-with-industry

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About the ABIM Foundation

The mission of the ABIM Foundation is to advance medical professionalism to improve the health care system. We achieve this by collaborating with physicians and physician leaders, medical trainees, health care delivery systems, payers, policymakers, consumer organizations and patients to foster a shared understanding of professionalism and how they can adopt the tenets of professionalism in practice.

To learn more about the ABIM Foundation, visit www.abimfoundation.org.

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The American College of Cardiology (ACC) is a 56,000-member nonprofit medical society with members from around the world. The ACC is comprised of physicians, surgeons, nurses, physician assistants, pharmacists and practice managers, and bestows credentials upon cardiovascular specialists who meet its stringent qualifications. The College is a leader in the formulation of health policy, standards and guidelines, and cardiovascular research. The ACC provides professional education and operates national registries for the measurement and improvement of quality care.

Learn more at www.acc.org.

For more information or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwisely.org.