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ECHO PROVIDES A COST-EFFECTIVE, MINIMALLY INVASIVE METHOD TO QUANTITATIVELY MONITOR CRITICALLY ILL AND SURGICAL PATIENTS

Morrisville, NC – Patient monitoring has traditionally been performed in most critical care and intraoperative settings with serial measurements of vital signs, oxygen saturation, carbon dioxide monitoring, and occasionally pulmonary artery catheters. Increasingly, however, echocardiography is being used to monitor hemodynamics and direct therapy in critically ill and surgical patients, in several different fields including cardiology, emergency medicine, anesthesiology, and critical care. To help clinicians understand when and how to use echo in this novel manner, the American Society of Echocardiography (ASE) has released a new document, ***Guidelines for the Use of Echocardiography as a Monitor for Therapeutic Intervention in Adults: A Report from the American Society of Echocardiography***, which will appear in the January issue of the *Journal of the American Society of Echocardiography (JASE)*.

The writing group for this guideline was chaired by Thomas R. Porter, MD, FASE, the Theodore F. Hubbard Distinguished Chair of Cardiology at the University of Nebraska Medical Center, in Omaha, Nebraska. Dr. Porter noted, “Although echo is currently used to qualitatively monitor left ventricle function and hemodynamics in the operating room and critical care settings, until now there have not been any quantitative parameters out there to guide us as to when a meaningful change in any parameter has occurred.” Both transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE) are increasingly being used by intensivists, trauma physicians, cardiologists, and anesthesiologists to provide hemodynamic assessments in patients with life-threatening illnesses such as sepsis, respiratory failure, congestive heart failure (CHF), shock, and traumatic injuries, as well as patients with significant respiratory and cardiac diseases undergoing non-cardiac surgery and high-risk non-cardiac procedures.

Although expert opinion and a significant body of literature support the use of echocardiography as a tool to guide therapy in patients who are critically ill, standard guidelines that define when and how echocardiography can be used to guide medical and surgical therapy have not been published. This document outlines the specific clinical scenarios in which echo can be used, as well as the specific parameters that are used to do so. The document includes several tables for easy reference, and also explores the strengths and limitations of echo and other methods for hemodynamic monitoring.



Dr. Porter also noted that much more work needs to be done to provide data on the incremental value of quantitative echo monitoring over current monitoring tools. “Carefully controlled studies are needed to determine when echo can or should be used for hemodynamic monitoring, since it is relatively inexpensive and non-invasive, and in some ways could be more accurate and predictive of outcomes than some other traditional methods, such as pulmonary artery and central venous catheters.”

The full guideline document is available on the *Journal of American Society of Echocardiography* (JASE) website (www.onlinejase.com). This document and all ASE Guideline documents are also available to the medical community at www.asecho.org/guidelines.

As the largest global organization for cardiovascular ultrasound imaging, the American Society of Echocardiography (ASE) is the leader and advocate, setting practice standards and guidelines. Comprised of over 16,000 physicians, sonographers, nurses, and scientists, ASE is a strong voice providing guidance, expertise, and education to its members with a commitment to improving the practice of ultrasound and imaging of the heart and cardiovascular system for better patient outcomes. For more information about ASE, visit www.asecho.org or ASE’s public information site, www.SeeMyHeart.org.

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