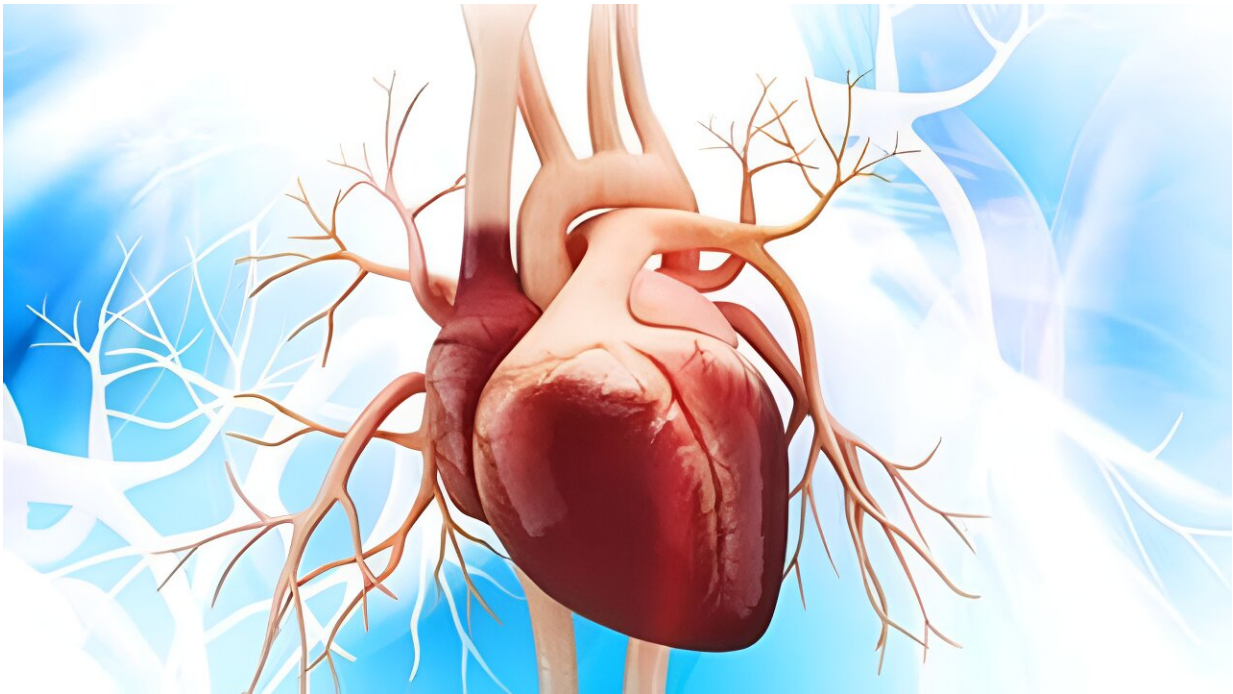


Updated guidelines issued for assessing prosthetic heart valves

January 17 2024, by Elana Gotkine



In guidelines issued by the American Society of Echocardiography and [published online](#) in the January issue of the *Journal of the American Society of Echocardiography*, updated recommendations are presented for evaluating prosthetic valve function in patients with prosthetic heart valves (PHVs).

William A. Zoghbi, M.D., from Houston Methodist Hospital, and colleagues noted that for initial evaluation and management of PHVs, [echocardiography](#) is the modality of choice. To assess [valve](#) structure and function, a comprehensive approach is needed. For evaluating prosthetic valve function and related complications, color and spectral Doppler play a central role.

Assessment of prosthetic valve function is more challenging than native valves due to suboptimal visualization of prosthetic valve structure and occluder devices with transthoracic echocardiography and the inherent variability of valve hemodynamics and orifice areas seen with the wide range of prosthetic valve types and sizes.

Advanced imaging is often needed in patients with suspected prosthetic valvular dysfunction to identify the mechanism of dysfunction or severity of regurgitation.

Computed [tomography](#) (CT) and [cardiovascular magnetic resonance](#) (CMR) have emerged as powerful imaging modalities that complement echocardiography in addition to the traditional role of two-dimensional and three-dimensional (3D) transesophageal echocardiography for assessing valve dysfunction. CT offers high-resolution imaging with a specific advantage in mechanical valves; the main strength of CMR is quantitation of the severity of regurgitation.

"This new guideline on prosthetic valves was very much needed, as the field has changed so much since 2009, with the introduction of percutaneous valves and improvements in 3D echocardiography and multimodality imaging," Zoghbi said in a statement.

More information: William A. Zoghbi et al, Guidelines for the Evaluation of Prosthetic Valve Function With Cardiovascular Imaging: A Report From the American Society of Echocardiography Developed

in Collaboration With the Society for Cardiovascular Magnetic Resonance and the Society of Cardiovascular Computed Tomography, *Journal of the American Society of Echocardiography* (2024). [DOI: 10.1016/j.echo.2023.10.004](https://doi.org/10.1016/j.echo.2023.10.004)

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