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授課主題

Beyond EF: A Structural and Functional Approach to LV Dysfunction Using
Intraoperative Strain and PV Loops

摘要

Left ventricular (LV) dysfunction cannot be fully characterized by ejection fraction (EF) alone. Subclinical abnormalities in contractility and diastolic relaxation often precede changes in EF and are frequently overlooked in the intraoperative setting. This presentation outlines a comprehensive approach to LV functional assessment by integrating intraoperative transesophageal echocardiography (TEE)-derived strain imaging and pressure-volume (PV) loop analysis. Key parameters—including global longitudinal strain (GLS), end-systolic elastance (Ees), ventricular compliance, and ventricular-arterial coupling (Ea/Ees)—are discussed as load-independent markers of myocardial performance. By combining structural and functional insights, this approach enhances physiologic interpretation, supports real-time decision-making, and improves perioperative risk stratification beyond traditional EF-based assessment.