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## Hemodynamic concepts important to protected PCI

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W ith advancements in cardiac technology, it has now become possible to offer patients with complex and high-risk coronary artery disease, including those with cardiogenic shock (CGS) revascularization with percutaneous coronary intervention (PCI). Such patients often require hemodynamic support and are the procedure is thus termed "protected PCI". Protected PCI has led to breakthrough in the survival ceiling for patients presenting with CGS complicating acute myocardial infarction (MI) and to redefinition of protocols with which to best offer PCI in the setting of CGS. Ultimately, use of varying support models may lead to improved understanding of the components of shock states in ischemia and infarction. The presentation includes two patients who required high risk PCI in the setting of CGS. The first patient presented with Inferior MI complicated by RV infarction and was supported with RV Assist Device (RVAD). The second patient presented with cardiac arrest during Anterior MI and underwent emergent PCI with limited support in the off-site cardiac catheterization laboratory setting. Following these presentations, an introduction to analysis of hemodynamics of support using the Harvi model developed by Daniel Burkhoff, MD PhD and colleagues will be given and used to illustrate important hemodynamic concepts in ventricular supfort including changes in cardiac power, uncoupling of systemic and LV pressures, changes in contractility and coronary perfusion pressure, and comparison of devices used.



## **Biography**

Christine Gasperetti MD FACC FSCAI is an interventional cardiologist with interests in high risk and protected coronary intervention as well as acute myocardial infarction. She has been involved in many studies of coronary artery disease and determinants of platelet function during coronary intervention. She is affiliated with the University of Pennsylvania Health System and works at several of their hospitals and affiliates.

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