**HFpEF AS A SYSTEMIC DISEASE - WHAT CAN WE LEARN FROM CARDIOPULMONARY EXERCISE TESTING?**

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Heart failure (HF) remains a major public health problem worldwide. Half of patients presenting with HF have preserved ejection fraction (HFpEF) as opposed to reduced ejection fraction (HFrEF). HFpEF is a highly heterogeneous and complex entity, affecting many organ systems from the heart to lungs to vasculature, all of which may result in specific disease subphenotypes. This talk will review approaches for provocative exercise testing with invasive hemodynamic monitoring, that can unmask HFpEF subphenotypes and uncover abnormal cardiac, pulmonary and vascular physiology that may not be apparent at rest. Beyond functional capacity, multiple domains of cardiac and extracardiac vascular function can be ascertained, including LV contractile and diastolic reserve, pulmonary and systemic vascular reserve, and peripheral oxygen extraction. Each of these impairments contribute to depressed exercise capacity and characterize distinct HFpEF subphenotypes.