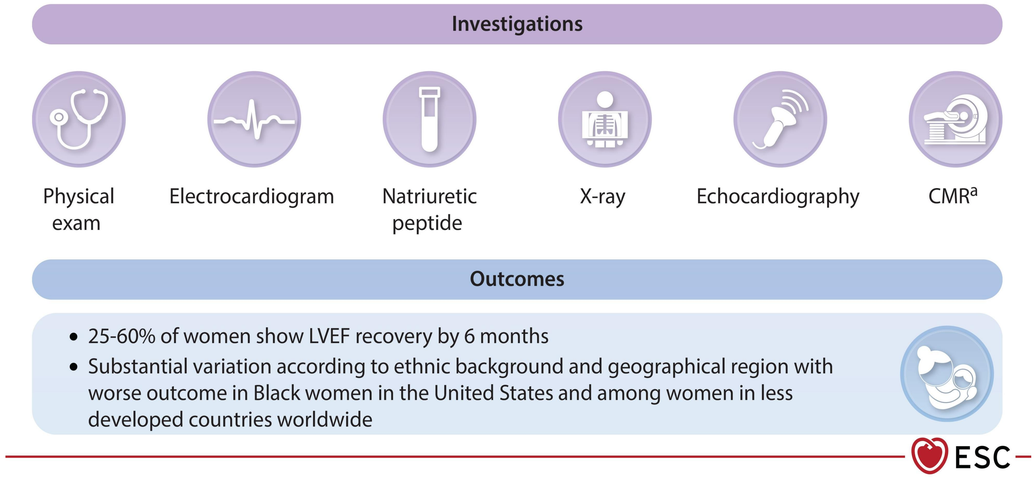
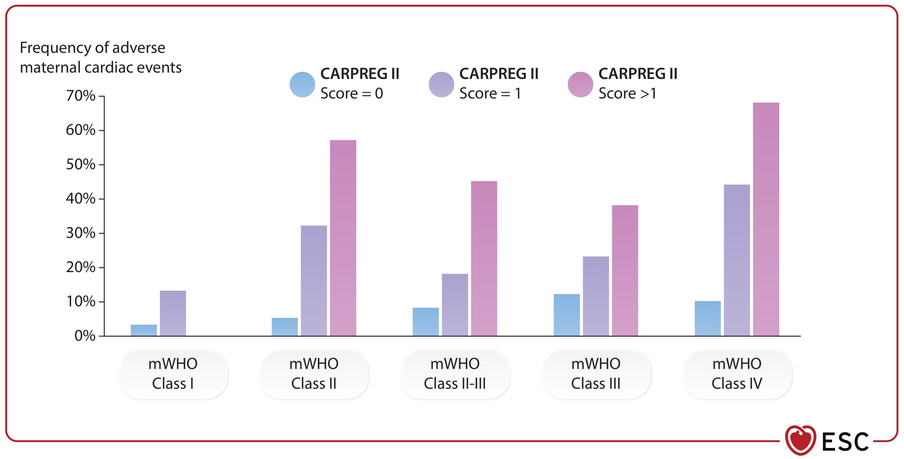
Background

- **Peripartum cardiomyopathy:** HF with reduced left ventricular ejection fraction (LVEF) <45%, without any other cause of HF, that occurs mainly during the peripartum period or in the months following delivery, termination, or miscarriage





High-Risk Cesarean Delivery in Severe Peripartum Cardiomyopathy: An Echocardiography-Guided, Multidisciplinary Anesthetic Strategy

Ashley Vincent Thomson, MD
Braydon Bak, MB, BCh, BAO
Rebecca S. Himmelwright, MD

Duke Anesthesiology
Duke University School of Medicine

Case Study: Severe PPCM (LVEF <15%) Management

28yo G1P0 at 35 weeks; severe heart failure with critical **LVEF <15% (mWHO 2.0 class IV condition)**

Anesthetic Plan:

- **Combined Spinal-Epidural** (CSE)
- Low dose spinal; slowly titrated to surgical levels to maintain hemodynamics

Hemodynamic Support:

- Prophylactic **Norepi & Epinephrine** gtts
- Continuous TTE & arterial line monitoring

High-Risk Contingency:

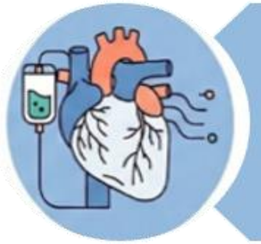
- Multidisciplinary team on standby
- **Primed ECMO circuit** and femoral sheaths in place

Outcome: Successful delivery; 500cc EBL; stable recovery & currently **undergoing transplant evaluation**

Teaching Points: Safe Neuraxial Anesthesia in Severe PPCM

Multidisciplinary Preparedness

- Requires seamless coordination between Anesthesiology, OB, Cardiology, and CT Surgery.
- **Crucial:** Immediate, primed access to Mechanical Circulatory Support (ECMO,VAD, or IABP) in case of sudden decompensation



Preload Optimization

- Prevent both volume overload (pulmonary edema) and hypovolemia (cardiovascular collapse).
- Requires dynamic, personalized fluid and vasopressor management.

Echocardiographic Assessment

- Real-time, continuous TTE provides instant feedback on ventricular function, filling pressures, and response to interventions.