

Hemodynamic ultrasound patient selection protocol

Patients with significant pre-existing cardiopulmonary risk:

- Low EF
- RV dysfunction
- COPD
- Pulmonary hypertension

All VAD patients

All ECMO patients

Other high-risk patients with:

- Vasopressor usage
- Inhaled nitric oxide usage
- Lactic acidosis
- Postoperative bleeding (i.e., >150 cc/hr)
- Renal failure / AKI
- Suspected pericardial effusion/tamponade or pulmonary embolus
- Open chest

Hemodynamic ultrasound VAD algorithm

Place ClariTEE® probe upon CTICU arrival

1. Obtain baseline study.
2. Record the initial (postop) LVAD speed, power, PI, and estimated flow.
3. Record the CVP and MAP.
4. Assess the position of the inter-ventricular and inter-atrial septum in 4 CV.
5. Assess the position of the inflow cannula in 4 CV.
6. Assess the frequency of the aortic valve opening (transition from 4 CV to short axis or 5 CV).
7. Assess the RV function.
8. Assess the presence of pericardial effusion.