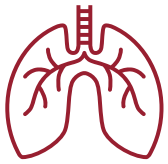


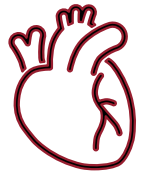
Hemodynamic Monitoring for the VV ECMO Patient

Key Issues:

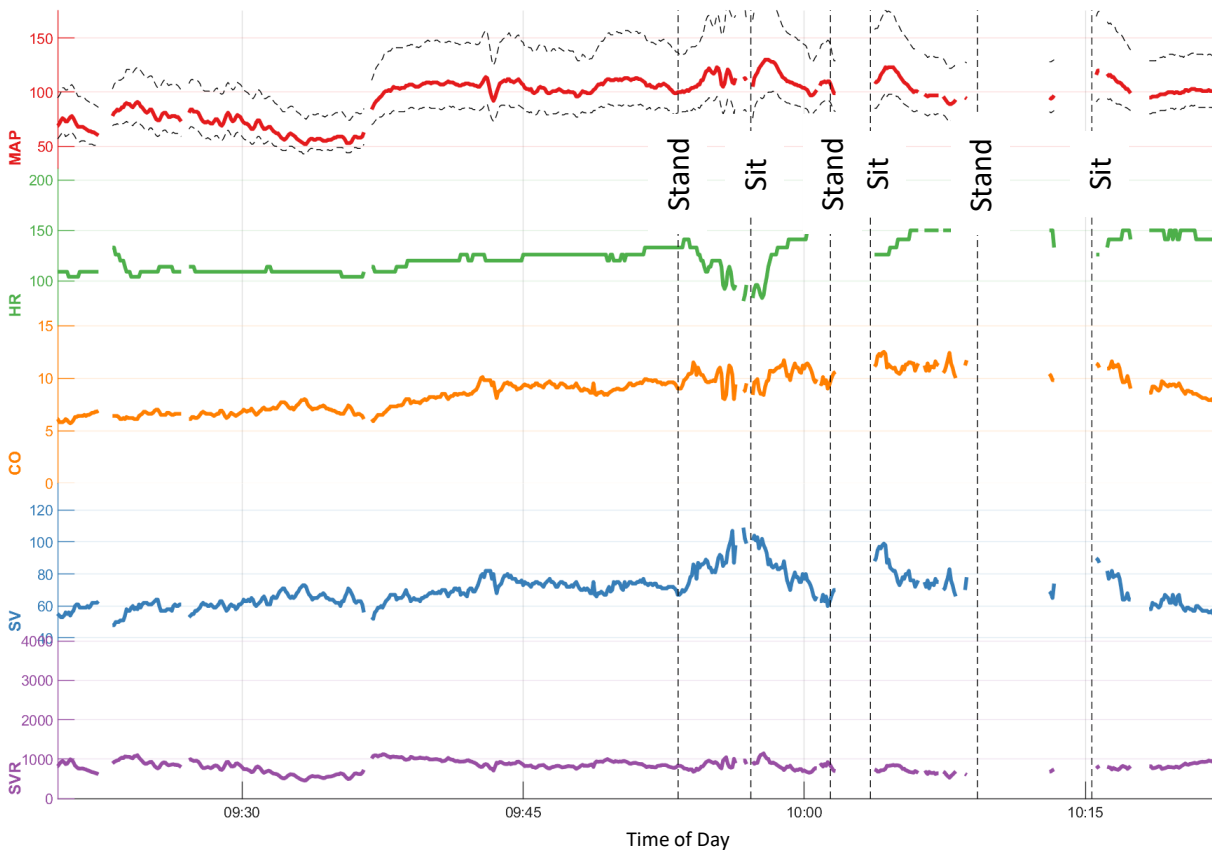


Is DO_2 sufficient to meet tissue oxygen demand?

Is the native lung and heart ready to maintain oxygenation *without* extracorporeal support?



Case: 39-year-old male, 84 kg, 183 cm on VV ECMO x 109 days



In this case study, the patient experienced repeated dizziness and bradycardia when standing. The care team noticed that there was a substantial increase in cardiac output (CO) shown by the Argos when the patient changed from a sitting to a standing position. They also noted that the ECMO flow rate (3.8L/min) was inadequate given the patient had a CO greater than 5.0L/min. From this information, they increased the ECMO flow rate and FiO_2 thereby increasing DO_2 , allowing the patient to stand without feeling dizziness.



Argos Cardiac Output Monitor

Hemodynamic monitoring can help assess the adequacy of perfusion, fluid responsiveness, and monitor the process of weaning from ECMO¹

¹Krishnan S, Schmidt GA. Hemodynamic monitoring in the extracorporeal membrane oxygenation patient. *Curr Opin Crit Care*. 2019 Jun;25(3):285-291.

The Argos Cardiac Output Monitor

Use the existing arterial line *with no additional disposables*



Single cable connection to the bedside monitor

Compatible with different patient monitors



Argos Monitor input



Consistently accurate^{1,2}
hemodynamic profile in seconds

- 1 Saugel B *et al.* Cardiac output estimation using multi-beat analysis of the radial arterial blood pressure waveform: a method comparison study in patients having off-pump coronary artery bypass surgery using intermittent pulmonary artery thermodilution as the reference method. *Journal of Clinical Monitoring and Computing*. August 5, 2019.
- 2 Greiwe G *et al.* Cardiac output estimation using multi-beat analysis of the radial arterial blood pressure waveform versus intermittent pulmonary artery thermodilution: a method comparison in patients treated in the intensive care unit after off-pump coronary artery bypass surgery. *Journal of Clinical Monitoring and Computing*. August 5, 2019.