# ELSA Extracorporeal Life Support Assurance

- Optimize ECMO Therapy
- Detect Oxygenator Clotting
- Verify Delivered Blood Flow





# **Optimize ECMO Therapy**

With Recirculation Percentage, Oxygenator Clot Detection, and Delivered Pump Flow Verification

## **OPTIMIZE ECMO THERAPY**

With a single bolus of saline, the Transonic<sup>®</sup> ELSA Monitor detects and quantifies recirculation in VV ECMO single- and dual-cannula configurations.

The ELSA Monitor:

- Guides optimal catheter placement and treatment delivery by helping to:
  - Establish a maximum pump setting before recirculation occurs;
  - Use known values for flow and recirculation to minimize the length of ECMO runs;
  - Identify cannula migration through high recirculation rates.
- Identifies possible cardiac output failure during VV ECMO.

# VERIFY DELIVERED BLOOD FLOW

Pump (delivered blood) flow errors and recirculation can compromise ECMO delivery of oxygenated blood. The Transonic<sup>®</sup> ELSA Monitor measures true delivered blood flow through ECMO tubing using "gold standard" transit-time ultrasound technology. By comparing actual delivered blood flow to the pump's reading, any flow limiting cause such as incorrect cannula placement can be identified and corrected.

# DETECT OXYGENATOR CLOTTING

Clots in the ECMO circuit pose one of the major complications of ECMO. The challenge is to keep the oxygenator from clotting while preventing bleeding in fragile patients.

With an injection of a small volume of saline, the ELSA Monitor measures oxygenator blood volume to identify early clot formation in the oxygenator of the ECMO circuit. Early detection of clot formation in ECMO circuits allows a wider window of opportunity to perform an oxygenator change-out.

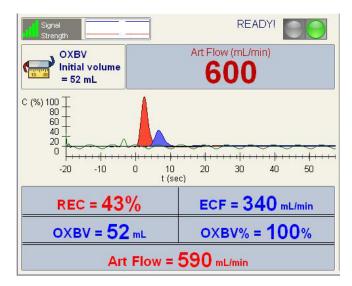


Fig. 1: Oxygenator Blood Volume (OXBV) plus Recirculation Results screen during VV ECMO.



Transonic Systems Inc., global manufacturer of biomedical flow measurement equipment, sells "gold standard" ultrasound transit-time flowmeters, hemodialysis, endovascular and laser Doppler perfusion monitors worldwide to surgeons, nephrologists, interventional radiologists, researchers and original equipment manufacturers (OEMs).

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