

Supplemental table 1: Commonly used strategies in weaning and discontinuation trials	
<i>Strategy</i>	<i>Practical approach</i>
Reduction of ECMO flow to a minimum*	Reduce ECMO flow to a minimum recommended flow, usually 100–200 ml/min, upregulate ECMO flow to idle flow every 10–20min to prevent circuit thrombosis. ¹
Discontinuation of ECMO flow**	Stop the ECMO flow and clamp the inflow and outflow cannulas, with intermittent de-clamping and reestablishment of the ECMO circulation at idle flow every 10 minutes to avoid circuit thrombosis. ²
Arterio-venous bridge**	Insert an arterio-venous (av) bridge and discontinue ECMO flow to the patient by clamping the inflow and outflow cannulas. ^{1,3-5}
Pump-controlled retrograde trial off (PCRTO)*	PCRTO as a valuable “stress test” for vaECMO weaning, ^{1,5,6} especially in patients with right heart failure: ⁶ Reduce centrifugal pump speed gradually to cessation of the antegrade ECMO flow until a retrograde flow caused by the patient’s native circulation creates a controlled external left-to-right shunt of 100 ml/min (pediatric oxygenator) to 500 ml/min (adult oxygenator) through the ECMO circuit. ⁷
Abbreviations: ECMO, extracorporeal membrane oxygenation; PCRTO, pump-controlled retrograde trial; * May be performed in the ICU prior to actual weaning, and may aid in the assessment of cardiac function through ECMO flow reduction below the idle flow, thus predicting weaning success. Upon cessation of the weaning and discontinuation trials in the ICU, the ECMO flow may be returned to full flow and the situation discussed by an interdisciplinary group. **The ECMO circuit should be periodically unclamped every 10 minutes to avoid blood stagnation.	

References

1. Pandya NR, Daley M, Mattke A, et al. A comparison of pump-controlled retrograde trial off to arterio-venous bridging for weaning from venoarterial extracorporeal membrane oxygenation. *Eur J Cardiothorac Surg* 2019; [Epub ahead of print]
2. ELSO Guidelines for Cardiopulmonary Extracorporeal Life Support. 2017; Retrieved from www.elseo.org.
3. Babar ZU, Sharma AS, Ganushchak YM, et al. An arterio-venous bridge for gradual weaning from adult veno-arterial extracorporeal life support. *Perfusion* 2015;30:683-8.
4. Holgren SE, Frede RT, Crumley JP, Patel SS, Moore EA, Turek JW. Novel Utilization of the Bridge During Weaning Off Venoarterial ECMO: The Hoffman Clamp Method. *Innovations* 2016;11:229-31.
5. Mattke CA, Haisz E, Pandya N, Black A, Venugopal P. Creating a Controlled Arterio-Venous Shunt by Reversing the Extracorporeal Membrane Oxygenation Blood Flow: A Strategy for Weaning Patients Off Veno-Arterial Extracorporeal Membrane Oxygenation. *Pediatr Crit Care Med* 2017;18:973-6.
6. Ling L, Chan KM. Weaning adult patients with cardiogenic shock on veno-arterial extracorporeal membrane oxygenation by pump-controlled retrograde trial off. *Perfusion* 2018;33:339-45.
7. Mattke AC, Black A, Venugopal P. Pump-controlled retrograde trial off: considerations. *Perfusion* 2018;34:173.