

Contraindications to Extracorporeal Life Support therapy

As ECLS can cause life-threatening events, patient selection is an important factor in minimising these. Bleeding complications remain the commonest cause of morbidity in ECLS patients.

Absolute contraindications to all forms of ECLS

Inadequate vascular access
Progressive and non-recoverable heart disease (and not suitable for transplant)
Progressive and non-recoverable respiratory disease (irrespective of transplant status) unless accepted for transfer to a lung transplant centre prior to starting ECLS in Edinburgh
Advanced malignancy (irrespective of potential curative status)
Graft versus host disease
Frailty due to an underlying progressive chronic disease
History of variceal disease, liver cirrhosis or other bleeding diathesis
Previously documented poor functional status eg not independent of ADLs
Refusal of blood products

Specific absolute contraindications to veno-venous ECLS

Severe (medically unsupportable) heart failure
Severe chronic pulmonary hypertension and right ventricular failure (mPAP \geq 50mmHg)
Cardiac arrest (ongoing)
Severe immunosuppression (transplant recipients >30 days, advanced HIV, recent diagnosis of haematological malignancy, bone marrow transplant recipients). The outcomes for these patients have been uniformly poor
Pulmonary Fibrosis exacerbation.

Specific absolute contraindications to Veno-Arterial ECLS

Severe aortic regurgitation (e.g Pressure Half time <250ms)
Aortic dissection.

Relative contraindications to all forms of ECLS

Age >70
Inability to receive anticoagulation
Duration of conventional mechanical ventilation >7 days, with high inspiratory pressures (P_{plat}>30cmH₂O), high FiO₂ (FiO₂ >0.8) or evidence of significant ventilator induced lung injury
Trauma with multiple bleeding sites
CPR duration >60 min
Severe multiple organ failure
CNS injury
BMI <18 or >40

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