

## 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 (Pplat>30cmH<sub>2</sub>O), high FiO<sub>2</sub> (FiO<sub>2</sub> >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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