

OPERATIVE DETAILS

Section 1

Donor Hospital <input type="text"/>	NRP NORS Retrieval Centre <input type="text"/>
Name <input type="text"/>	NORS Centre Contact Number <input type="text"/>
DoB <input type="text" value="DDMMYYYY"/>	Cardiothoracic Retrieval (circle) NO / LUNG / HEART / TA NRP
NHS or CHI No <input type="text"/>	Cardiothoracic Team(s) <input type="text"/>
ODT Donor No <input type="text"/>	QUOD Box No <input type="text"/>
Blood Group <input type="text"/>	NRP box No <input type="text"/>
Height (cm) / Weight (kg) / Girth (cm) <input type="text"/> / <input type="text"/> / <input type="text"/>	WLST location (circle) ITU / THEATRE SUITE
Donor allergies <input type="text"/>	WLST <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
SNOD <input type="text"/>	Systolic BP < 50 mmHg <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
SNOD contact no <input type="text"/>	Asystole <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
Advanced perfusion specialist <input type="text"/>	Verified Deceased <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
Organ preservation practitioner <input type="text"/>	Knife to skin <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
Surgeon (PRINT) <input type="text"/>	Aortic arch vented <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
Surgeon contact no <input type="text"/>	NRP Start (Time 0) <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
Surgeon signature <input type="text"/>	NRP stop time <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>
	In situ cold Flush <input type="text" value="DDMMYYYY"/> @ <input type="text" value="HH"/> : <input type="text" value="MM"/>

By signing here, the surgeon is prescribing all drugs, fluids, and blood products as initialled on chart

FLUIDS/EQUIPMENT

Section 2

Additive	Amount/Vol	Expiry	Batch/Ref (DIN)	Rx	Checked	Given
Sterile Circuit	X1					
PRIME						
Hartmann's Solution	1000ml					
Hartmann's Solution	1000ml					
Sodium Bicarbonate 8.4% (1ml/kg)						
Heparin	50,000 units					
Fluconazole 2mg/mL	200mg					
Teicoplanin	200mg					
Gentamicin	120mg					
Metronidazole	500mg					
Methylprednisolone	1g					
Pancuronium	12mg					
Phentolamine	5mg					
ADDITIONAL FLUIDS						
Blood						
Blood						
Blood						
Blood						

Avoid further Hartmann's solution once NRP has commenced as it contains lactate.

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CANNULATION AND CIRCULATION Section 3

Arterial cannulation site (circle)	Femoral / EIA / CIA / Aorta	Arterial cannula size	<input type="text"/>
Venous cannulation site (circle)	Femoral / EIV / CIV / IVC	Venous cannula size	<input type="text"/>
Ascending aortic vent cannula	Mandatory prior to NRP start	Vent cannula size	<input type="text"/>
Descending thoracic aortic occlusion method (circle)	External CLAMP Endoclamp (Scotland only)	IVC clamp on (circle)	YES / NO
		SVC clamp on (circle)	YES / NO

PUMP PARAMETERS Section 4

Clock Time NRP Time	Blood Flow	FiO ₂	Gas Flow (l/min)	SvO ₂ %	HCT %	Reservoir Volume	Temp °C	Notes
0								
10								
20								
30								
40								
50								
60								
70								
80								
90								
100								
110								
120								

Additional notes

GASES - ARTERIAL

Section 5

Arterial blood gases are essential to ensure appropriate acid-base status, oxygenation and CO₂ levels. Arterial blood gases are strongly recommended for safe perfusion.

Clock time								
NRP time	0		30		60		90	120
pH								
paCO ₂								
paO ₂								
HCO ₃								
SBE								
Na ⁺								
K ⁺								
Ca ²⁺								
Glucose								
Lac								
Hb								
SaO ₂								

Arterial blood gases provide data which best describe oxygenator function and acid base status.
 If pH<7 or H⁺>100nmol/l at time 0, add 25ml 8.4% NaHCO₃ once, as early as possible.
 Optimise paCO₂ by adjusting gas flow rate. If paCO₂ is <4.5kPa, decrease gas flow rate; if paCO₂>6.0 kPa, increase gas flow rate. Optimise paO₂ by changing FiO₂ alone.

GASES - VENOUS

Section 6

Venous blood gases give an accurate measurement of SvO₂. However, other analytes in venous gases (pH, pCO₂ etc) cannot be used to gauge acid-base status or gas exchange accurately, as normal venous ranges are not defined.

Clock time								
NRP time	0		30		60		90	120
pH								
paCO ₂								
paO ₂								
HCO ₃								
SBE								
Na ⁺								
K ⁺								
Ca ²⁺								
Glucose								
Lac								
Hb								
SvO ₂								

Venous blood gases are the best indicator of mixed venous oxygen saturation (SvO₂). An SvO₂ between 60% and 80% indicates satisfactory oxygen delivery (good flow, good arterial O₂, adequate Hb) to tissues.
 Optimise SvO₂ by adjusting pump flow rate. If SvO₂ <60%, increase pump flow; if SvO₂ >80% decrease pump flow (NB; Hb needs to be >60g/l for SvO₂ to be reliable).

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ORGAN QUALITY ASSESSMENT

Section 7

The 'Validating Lab' is the NHS Laboratory which quality assures the results below. This will either be the donor hospital lab, for bloods tested there, the NORS base hospital lab (which has provided quality assurance for the point-of-care-testing ('POCT') devices used by the NORS team), or both.

LFTs and gases are processed with POCT devices ('Piccolo', 'i-Stat') or via the Donor Hospital Lab. Haemoglobin and lactate are measured on the gas sample. Whichever device/laboratory is used, please ensure that the **same device/laboratory/sample type** is used on each occasion.

Red cells in a gas sample may settle to the bottom of a sample tube, and cause inaccurate Hb readings. **Please ensure gas samples are well mixed prior to analysis.**

Minimum dataset for LFT/amylase is **0, 60 and 120 minutes.**

Glucose, lactate and haemoglobin data are required at **0, 30, 60, 90 and 120 minutes.**

Blood cultures are taken at **0 and 120 minutes.**

	0	30	60	90	120	Validating Lab	Notes
ALT (U/l)							
BILI (umol/l)							
AMYLASE (U/l)							
GLUCOSE (mmol/l)							
LACTATE (mmol/l)							
Hb (g/l)							
BLOOD CULTURES		X	X	X			