

OPERATIVE DETAILS

Section 1

<p>Donor Hospital <input style="width: 150px;" type="text"/></p> <p>Name <input style="width: 150px;" type="text"/></p> <p>DoB <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/></p> <p>NHS or CHI No <input style="width: 150px;" type="text"/></p> <p>ODT Donor No <input style="width: 150px;" type="text"/></p> <p>Blood Group <input style="width: 50px;" type="text"/></p> <p>Height (cm) / Weight (kg) / Girth (cm) <input style="width: 50px;" type="text"/> <input style="width: 50px;" type="text"/> <input style="width: 50px;" type="text"/></p> <p>Donor allergies <input style="width: 150px;" type="text"/></p> <p>SNOD <input style="width: 150px;" type="text"/></p> <p>SNOD contact no <input style="width: 150px;" type="text"/></p>	<p>NRP Centre <input style="width: 150px;" type="text"/></p> <p>NRP Centre Contact Number <input style="width: 150px;" type="text"/></p> <p>Cardiothoracic Retrieval (circle) NO / LUNG / HEART / TA NRP</p> <p>Cardiothoracic Team(s) <input style="width: 150px;" type="text"/></p> <p>CT Lead Surgeon (PRINT) <input style="width: 150px;" type="text"/></p> <p>CT Organ Preservation <input style="width: 150px;" type="text"/></p> <p>Stapler technique (lungs) YES / NO</p> <p>NRP Perfusion Specialist <input style="width: 150px;" type="text"/></p> <p>AB Organ Preservation <input style="width: 150px;" type="text"/></p> <p>NRP Surgeon (PRINT) <input style="width: 150px;" type="text"/></p> <p>NRP Surgeon contact no <input style="width: 150px;" type="text"/></p> <p>NRP Surgeon signature <input style="width: 150px;" type="text"/></p>
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By signing here, the NRP surgeon is prescribing all drugs, fluids, and blood products as initialled on chart

FLUIDS/EQUIPMENT

Section 2

PRIME

	Amount/Vol	Expiry	Batch/Ref (DIN)	Rx	Checked	Given
Sterile Circuit						
Hartmann's Solution	1000ml					
Hartmann's Solution	1000ml					
Sodium Bicarbonate 8.4% (1ml/kg)						
Heparin	50,000 units					
Fluconazole 2mg/mL	400mg					
Teicoplanin	200mg					
Gentamicin	120mg					
Metronidazole	500mg					
Methylprednisolone	1g					
Phentolamine	5mg					

ADDITIONAL FLUIDS

Blood						
Blood						
Blood						
Blood						

ODT Donor No

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	IVC clamp on (circle)	YES / NO
	Endoclamp (Scotland only)	SVC clamp on (circle)	YES / NO

PUMP PARAMETERS Section 4

Clock Time NRP Duration	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								

ODT Donor No

GASES Section 5

Clock time								
NRP duration	0		30		60	90	120	
Sample type (A/V)								
pH								
pCO ₂								
pO ₂								
HCO ₃								
BE								
Sats								
Lact								
Na ⁺								
K ⁺								
Gluc								
Ca ²⁺								
Hct								
Hb								

BIOCHEMISTRY Section 6

Clock time								
NRP duration	0		30		60	90	120	
Gluc								
Urea								
Crea								
Uric Acid								
Ca								
ALB								
Tot Prot								
ALT								
AST								
ALP								
Bili								
GGT								
AMY								

ODT Donor No

TIMINGS						Section 7
WLST location (circle) ITU / THEATRE SUITE			Knife to skin			<input type="text"/>
WLST	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Aortic arch vented	<input type="text"/>
Systolic BP < 50 mmHg	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	NRP Start (Time 0)	<input type="text"/>
Asystole	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	NRP stop time	<input type="text"/>
Verified Deceased	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	In situ cold Flush	<input type="text"/>

ORGAN QUALITY ASSESSMENT				Section 8				
Liver weight	<input type="text"/>	.	<input type="text"/>	kg	QUOD Box No	<input type="text"/>	NRP Box No	<input type="text"/>
Minimum dataset: 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 may be taken at 0 and 120 minutes . This is optional.								
	0	30	60	90	120	Validating Lab	Notes	
ALT (U/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
BILI (umol/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
AMYLASE (U/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
GLUCOSE (mmol/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
LACTATE (mmol/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
Hb (g/l)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			
BLOOD CULTURES (optional)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>			

INSTRUCTIONS FOR SNODS: Take a copy of pages 1-4 on iPad via genius scan app and email to anrp_passport_alert@nhsbt.nhs.uk to ensure receipt by all required.

Guidance Notes for the NRP Passport and NRP Management (FRM6725)

Section 2. Fluids/Equipment

Hartmann's solution is used in the Prime. Blood may also be used in the prime for paediatric donors, in TANRP or if starting haemoglobin is low. Hartmann's contains high levels of lactate (27mM) and if added after pump start, will lead to confusion regarding lactate metabolism by the liver.

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

Section 5. Gases

Arterial blood gases are essential to ensure appropriate acid-base status, tissue oxygenation and CO₂ levels and best describe oxygenator function and acid base status. Repeated arterial blood gases are **strongly recommended** for safe perfusion in NRP. Please ensure that gas samples are capped immediately to prevent loss of CO₂.

pH and Bicarbonate. pH<7 or H⁺>100nmol/l at time 0 can lead to mitochondrial dysfunction. Therefore add 25ml (or 50ml) 8.4% NaHCO₃ once, as early as possible in this situation. The resolution of acidosis during NRP is an index of organ quality so adding more bicarbonate later will be confusing.

Avoid further Bicarbonate administration once NRP is in progress.

PaCO₂. Optimise arterial CO₂ 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.

Venous blood gases give an accurate measurement of SvO₂. Mixed venous oxygen saturation (SvO₂) is an essential measure of tissue oxygen uptake, and hence adequacy of oxygen delivery to tissues. 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. This is why arterial blood gases are recommended for safe perfusion.

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).

When interpreting arterial gases, at least one set of venous gases should be performed for to confirm the SvO₂ monitor on the perfusion device is reading correctly. They tend not to read well if Hb is low, which may trigger transfusion to promote adequate oxygen delivery.

Section 8. Organ Quality Assessment Bloods.

The 'Validating Lab' is the NHS Laboratory which quality assures the point-of-care-testing ('POCT') device which is used in the donor theatre for rapid blood results. This will either be the donor hospital lab, for bloods tested with donor hospital equipment, or the NORS base hospital lab which has provided quality assurance for the 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.