

# Non-Perfused Organ Donation - Lung Only

**START**

## NPOD ASSESSMENT

HCP identifies potential NPOD candidate after unsuccessful resuscitation time of death pronounced by MRP directing resuscitation per usual practice

Designated RN to complete NPOD screening form, call TGLN to obtain TGLN number and do preliminary NPOD lung assessment

Designated RN ensures RRT places patient, if intubated, on positive pressure circuit with room air (no tidal volume)

Designated RN notifies MRP with heads-up

RTC/CSC makes interest call to NPOD lung physician to assess lung interest & resource availability

Call TGLN Manager On-Call to notify of potential NPOD case if there are resource concerns (SRC/OTDC/CR/Lung fellows) and discuss dispatch plan and other options as needed

**Legend:**

- MRP
- DESIGNATED RN
- RTC/CSC
- SRC
- OTDC/CR
- INSTRUCTION



**Donor Exclusions**  
If any of the following apply, the patient is ruled out for NPOD

- Patients ≥ 65 years old
- Active COVID-19 positive
- If arrest was unwitnessed - time last seen alive was > 1 hour prior to being found VSA
- Known smoking history >20 pack-years
- Known history of COPD
- Active cancer or history of cancer in the last 5 years (except basal cell carcinoma skin cancer)
- Death related to asthma or COVID-19
- Major chest trauma leading to massive hemothorax

**Document the following in iTransplant**

- Time resuscitation started
- Time of death
- Intubated or supraglottic airway?
- If yes, has patient been placed on continuous positive pressure circuit with room air (no tidal volume)?
- Is it a Coroner's Case?
- Was death a homicide or criminal investigation?
- Previous bypass surgery
- Current or recent chest infections
- Brief medical history
- Has a rapid PCR for COVID-19 been done?
- OHIP number (if known)
- ABO (if known)
- Height & weight (if known)

**Non Perfused Lung potential?**

**Lung Interest?**

**Appropriate to proceed?**

MRP to contact Coroner as soon as possible, inform of potential NPOD and multi recovery

RTC/CSC will call the designated RN to inform of lung interest, and sufficient resources to proceed with approach for consent.

RTC/CSC will look up Registered Consent Decision

RTC/CSC notifies the OTDC/CR about NPOD approach

RTC/CSC notifies and dispatches the second OTDC/CR to go to hospital

RTC/CSC gives heads-up to SRC about potential NPOD case and dispatch if appropriate (E.g. Donation Preference – Transplant, Family mention of donation)

## NPOD CONSENT

Prior to approach, the OTDC/CR speaks with the designated RN or MRP to establish approach plan. NOK considerations: Must be informed of the death. If en route to hospital, the approach for NPOD to occur once they are on-site. Telephone approaches may be done if NOK is not travelling onsite immediately. Pre-Approach Plan/Pause (OTDC/CR, RN/MD) – Is it appropriate to approach the family?

The OTDC/CR approaches family for NPOD consent and completes high level suitability questions (Ask family to confirm information obtained from NPOD referral)

Note: Also request consent for Multi-tissue if time permits. At minimum, request verbal consent for testing, to permit drawing bloods for multi-tissue.

The OTDC/CR notifies RTC/CSC of NOK decision regarding multi-tissue donation

The OTDC/CR discusses option of multi-tissue donation with NOK and completes consent & MedSoc if NOK consents

**Donor ruled out by exclusion criteria as per NOK**

**Consent for NPOD lung donation?**

OTDC/CR notifies RTC/CSC consent obtained

## CORONER PROCEDURE

**Permission given after escalation process?**

The OTDC/CR follows Coroner escalation process

**Coroner gives permission to proceed?\***

The OTDC/CR speaks to Coroner to confirm if permission for lung donation is given

**Is it a Coroner's case?**

\*The Coroner must give verbal permission for NPOD lung donation over the phone before proceeding. This may mean inserting chest tubes, removal of the lungs from the body cavity and drawing bloods in the OR.

## NPOD RECOVERY

ALL STEPS UP TO HERE SHOULD IDEALLY BE DONE WITHIN 90 MINUTES FROM TIME OF DEATH

MRP to complete Death Certificate and TGLN Pronouncement of Death form

Designated RN to bring the NPOD Cart to bedside  
Inform MRP of consented case  
Arrange for RRT or Anesthetist to initiate lung recruitment maneuver, and then place patient on positive pressure circuit with 20cm H2O CPAP with room air or FiO2 < 50%  
Place patient in the prone position with OTDC involvement

OTDC/CR obtains written consent for lungs (and multi-tissue) and lung hx Qs (inform family tissue med soc will be done later)  
OTDC/CR notifies the OR of pending recovery and book as "A-Case" - Ask for bronch in OR  
Ensure bloods drawn for HLA, serology, blood cultures, ABO, the Coroner (if a Coroner's case) and multi-tissue donation. Complete hemodilution. (If not possible, blood can be drawn in the OR)  
Ensure patient intubated and recruitment maneuver initiated, then place patient on positive pressure circuit with 20cm H2O CPAP and set to room air or FiO2 less than 50%  
Ensure patient is placed in the prone position  
Ensure rapid PCR for COVID-19 test, if available, has been done.  
Obtain actual height & estimated weight and send to PRC  
Ensures patient is moved to the OR in the prone position for prepping and draping by OR RN  
Ensure that the ER team is available to assist in unproning the patient in the OR  
Transfer patient to the OR

RTC transfers case to CSC  
CSC to notify Tx Program (NPOD lung physician & MOTC) consent obtained  
Arrange transportation for lung recovery fellows  
Confirm SRC dispatched to hospital (if not already) and confirm ETA to donor hospital  
CSC notifies OTDC of recovery teams (SRC & lung fellows) ETA to donor hospital  
Notify MOC consent obtained  
Rapid huddle with MOC, OTDC/CR, CSC  
CSC verifies ABO (if available) and communicates result to NPOD lung physician

Confirm a rapid PCR COVID-19 test has been done. Arrange and draw blood for HLA, serology, ABO, blood cultures, the Coroner (if a Coroner's case) and tissue (In priority sequence)

**Bag 1: Bloods to be drawn for lungs:** See NPOD Box  
 ABO (1 x 6 ml EDTA)  
 HLA (2 x 8 ml ACD)  
 Serology (2 x 6 ml EDTA, 2 x 6 ml red)  
 Blood cultures (2 x 8 ml)  
 TOTAL = Approximately 62 ml

**Bag 2: Bloods for Coroner, if a Coroner's case**  
 Coroner (2 x 6 ml red)  
 TOTAL = Approximately 12 ml

**Bag 3: Bloods to be drawn for multi-tissue:**  
 Eyes: 1 red (1 x 6 ml), 2 EDTA (2 x 6 ml) = 18 ml  
 Heart Valves: 1 red (1 x 6 ml), 2 EDTA (2 x 6 ml) = 18 ml  
 Bones: 2 SST gold (2 x 5 ml), 2 EDTA (2 x 6 ml), 1 Aerobic blood culture (1 x 8 ml), 1 Anaerobic blood culture (1 x 8 ml) = 38 ml  
 Skin: 3 SST gold (3 x 5 ml), 2 EDTA (2 x 6 ml) = 27 ml  
 TOTAL = Approximately 101 ml

**TOTAL BLOOD NEEDED FOR LUNGS & TISSUE ~ 175 ml**  
 In case of difficulty drawing blood, all bloods for lungs (Bag 1) and if a Coroner's case, Coroner blood (bag 2), should be drawn first before blood for multi-tissue (Bag 3).

## DONOR IN OR

OTDC/CR completes physical assessment in OR (if not already done). Note: if COVID-19 test result unknown, proper PPE, including N-95 mask, are required

RRT or Anesthetist attaches patient to ventilator with correct settings in OR (Rate 10, FiO2 0.21, PEEP 10cm H2O)

OTDC/CR hands off bloods to SRC, ensure coroner bloods are on body if applicable

SRC & recovery fellows arrive and set-up in OR

Rapid OR huddle

SRC arranges transportation of organ to Tx Hospital

SRC drops off samples to HLA, Microbiology/Serology labs

Lungs undergo EVLP

CSC updates Tx Program with ETA of organ arrival

BAL ensures COVID-19 BAL is collected in the OR

OTDC/CR informs TC of tissue consent and place Hold Body chart in form

\*\*SKIN CUT\*\* Lung Recovery in OR  
\*\*Within 180mins from TOD\*\*

CSC runs lung allocation once all necessary information obtained and makes formal offer including:  
 • ABO  
 • Actual height & estimated weight  
 • Hardcopy of consent  
 • HLA typing/VXM results  
 • Exceptional Distribution for missing mandatory tests and any other identified reasons  
 • Physical Exam  
 • Hemodilution  
 • MedSoc  
 • Serology (if available)  
 • Negative COVID-19 BAL result

## TRANSPLANT OCCURS

Recipient transplant proceeds

## CASE FOLLOW-UP

1. CSC updates organ outcome in iTx  
2. CSC obtains outstanding information from EVLP lab (CXR, Bronch, ABGs, BAL)

SRC notifies SRC group to make plan for re-stocking supplies

OTDC/CR follows up with family

**END**