

SUMMARY OF CRYONICS COOL-DOWN PROCEDURES

BEFORE DEATH

The patient is carefully monitored by relatives and/or call-out members to ensure that we are alerted immediately the patient dies.

ON DEATH

STEP 1: ENSURE THE PATIENT IS DEAD –check the patient’s breathing, heart beat and blood oxygen levels.

STEP 2: BEGIN CARDIOPULMONARY SUPPORT (with prior agreement of the doctor) comprising chest compressions and lung ventilation. Where permitted, place ice bags around the patient’s neck and head to cool blood flowing to the brain. This is to minimise the risk of brain damage, and should be started within 5 minutes of clinical death.

STEP 3: VERIFICATION OF DEATH by the attending doctor or other suitably qualified person, with the prior agreement of the GP. If the GP agrees to our carrying out steps 4 and 5 before verification of death, then verification of death can be carried out later, at the GP’s convenience, but if the GP will not agree, then verification of death needs to be obtained as quickly as possible, hopefully within minutes of death.

STEP 4: TRANSFER THE PATIENT TO AN ICE BATH AND ADMINISTER MEDICATIONS (e.g. heparin, aspirin), whilst continuing cardiopulmonary support, to further minimise brain damage. Ideally, the patient would be transferred to the ice bath as the patient has died but if the GP does not agree to this then this step will have to wait until after verification of death. This would compromise the quality of the cryopreservation.

STEP 5: TRANSPORT THE PATIENT TO AN EMBALMER’S PREMISES. The patient remains in the ice bath, with cardiopulmonary support, in a specially equipped ambulance.

STEP 6: PERFUSION OF THE HEAD with cryoprotectant solution that is pre-cooled to about -18°C. This procedure is started once the body has been cooled in the ice bath to below 20°C, which typically takes about 2 hours, normally while the patient is being transported in the ambulance. The perfusion process normally takes between 3 and 12 hours.

STEP 7: COOL-DOWN ON DRY (CARBON DIOXIDE) ICE PRIOR TO TRANSPORTATION TO A CRYONICS STORAGE PROVIDER (normally Alcor or the Cryonics Institute) in the US. This stage normally lasts about 3 days for arrangements and formalities to be completed and for the body to reach our target shipping temperature of -65°C.