

DIASPORA Study RESEARCH PROFILE

Background
Brief description of research study: The DIASPORA (Diaphragm Structure and Pathobiology in Patients Being Bridged to Lung Transplant) study aims to characterize the changes in diaphragm structure, function, and biology during bridging to lung transplant by mechanical ventilation or extracorporeal life support. Understanding these changes will inform the development of new methods to improve and maintain diaphragm muscle bulk and strength in order to improve lung transplant outcomes. The purpose of the NDD control group specimens (~10 donors) is to provide evidence of ventilator-induced diaphragm dysfunction for comparison to patients in whom diaphragm biopsies are obtained after extracorporeal life support.
Program: Toronto General Hospital – University Health Network
Contact Person(s) & Contact Information: Primary Contact: Jenna Wong, 416-340-4800 ext.7613 Secondary contact: Dr. Ewan Goligher, 416-340-4800 ext. 6810
Consent Considerations: Requires consent for Scientific Research from the donor NOK, “diaphragm specimen” should be specifically indicated on the TGLN consent form. Suggested script: <i>“We are looking into the changes in the diaphragm prior to lung transplant due to mechanical ventilation or extracorporeal life support. The lung team would like a small piece of the diaphragm from your loved one to help us determine this.”</i>
Offering Information: When a lung(s) has been accepted for transplantation into a recipient at UHN, TGLN-CSC will notify the UHN-MOTC who will in turn notify Dr Goligher.
Donor inclusions: <ol style="list-style-type: none"> 1. Adult NDD donors aged 18-80 years 2. Donor’s single or double lung(s) are accepted for transplant into a UHN recipient 3. Consent for research use of the diaphragm tissue is required
Donor exclusions: <ol style="list-style-type: none"> 1. Previously diagnosed neuromuscular disorder (<i>potentially interfering with diaphragm morphology and function</i>) including: ALS, multiple sclerosis, myopathy, spinal muscular atrophy, myositis and peripheral neuropathy 2. Thoracic cage deformity (e.g. scoliosis)
Recovery
Method: <ol style="list-style-type: none"> 1. Research team will provide a collection kit to the UHN Lung Recovery team. 2. UHN Lung Recovery team will collect 2 X 50 mg samples of diaphragm tissue (5 mm x 5 mm x 5 mm, partial thickness). Specimens will be placed in tubes with formalin and sent to the BioBank team. 3. Biobank team will notify Research team that the samples have arrived at TGH.
Requirements for Perfusion: None
Time Requirements: 5 minutes
Impact on Transplant/ Recovery Procedure: Minimal. It will take approximately 3-5 minutes to recover both samples, cut them and place them in the tubes. The samples can be taken at any time. No impact on the collection of other organs.
Effect on Body / Post-Mortem Care:
Recovery Personnel: UHN Lung Recovery team
Credentialing: As per PRC database.
Required Documentation: As per usual documentation