



## **LUNG ADVISORY COMMITTEE**

# ***GUIDELINES FOR LUNG DONOR BRONCHOSCOPY AND CT CHEST***

ATCA-TSANZ Guidelines G001/2015

Version 1.0, 27 March 2015

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## **I Purpose**

The purpose of this document is to provide guidance to donor coordinators in arranging additional diagnostic investigations of bronchoscopy and CT chest in potential lung donors.

## **II Introduction**

The guidance document is intended to be used by donor coordinators and trainee coordinators/nurses. The guidelines should be viewed only as recommendations. They do not establish legally enforceable responsibilities.

Mention of specific products or equipment in this document does not represent an endorsement of such products or equipment by the Lung Advisory Committee nor does it necessarily represent preference for those products or equipment over similar competitive products or equipment. It is incumbent on the reader who intends to use any information, forms or procedures contained in this document to evaluate such materials for use in the light of operational requirements associated with his or her facility.

## **III Lung Donor Bronchoscopy**

### **1. Rationale:**

- 50% expected to be abnormal in lung donors with findings including mucous/foreign aspirated material/blood clot plugging, bronchial infection and rarely, endobronchial mass
- Opportunity for acquisition of microbiological specimens to enhance antibiotic regimens early post-transplant

Most requests for bronchoscopy will be for when the donor is nursed in ICU, before the retrieval team arrives for donor organ evaluation

### **2. Method/technique:**

- Local anaesthesia is required in DCD donors
- Visualization of :
  - site of ETT
  - airway anatomy to assess for variations including right upper lobe tracheal bronchus
  - extent of airway inflammation and vascularity
  - site and extent of secretions, clot, aspirated material, foreign bodies and tumours
- Airway toilet to remove secretions. Small volume aliquots of 5-20ml N/Saline inserted and aspirated via suction: send for urgent microbiology: m/c/s, fungal culture, and AFB

### **3. Indications:**

- X ray evidence of segmental or lobar collapse
- Significant burden of secretions on ETT suctioning
- Assessment of pulmonary infiltrates especially if unilateral
- History of aspiration or foreign body inhalation
- Donors with unexpectedly low PO<sub>2</sub> (at the guidance of the requesting transplant physician)

## IV CT Chest

### 1. Rationale

The plain chest radiograph has a relatively low sensitivity compared with CT imaging in the detection of lung abnormalities in potential lung donors. Whilst CT scans are not considered routine in the work up of a lung donor, indications in either the standard or marginal donor may include:

- a. Clarification of anomalies suggested on a CXR especially in donors with >20 pack year history of smoking where exclusion of lung malignancy or emphysema is of particular concern
- b. Donors with history of penetrating or blunt trauma to assess for diaphragmatic tears, lung lacerations, extent of pneumothorax, pulmonary contusions and other infiltrates
- c. Donor history of aspiration or infection to assess for extent of consolidation as CXR may underestimate structural abnormalities (this may be of particular interest if only single lung donation is being considered)
- d. All lung donors  $\geq 70$  years of age due to increased incidence of lung pathology

A CT scan of the chest performed on admission for a lung donor will generally suffice. A formal report from a radiologist is ideal although not always practical. Representative images of lung windows from the upper, mid and lower sections of the thorax should accompany the Electronic Donor Record.

### 2. Method/technique

CT chest (without contrast) to define lung parenchyma and airway anatomy – contrast may be required to outline mediastinal and vascular structures although potential nephrotoxicity needs to be considered.

## V. Version Control

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