One-lung ventilation (OLV) is a critical component of over 600,000 cardiothoracic and pulmonary surgeries annually in the US alone. However, the current workflow has considerable drawbacks and complications.

98% of pulmonary surgeries involve OLV\(^2\)

40% rate of failure for current OLV devices\(^1\)

220,000+ patients globally are effected by the complications of OLV annually\(^3\)

These complications can lead to problems during surgery, longer hospital stay and recovery times, increased costs for the patient and insurance companies, and reduced mobility levels post-surgery.

Design Features

Anesthesiologists need a way to ventilate the entire lung during one-lung ventilation in order to prevent patient airway damage, hypoxemia, and tension pneumothorax. We establish six design requirements to fill this need:

- Complete lung separation
- Bronchoscope compatible
- Easily insertable
- Reduces dislodgment
- Repositionable
- Provides suction

The Bronchosleeve integrates with the current OLV technology pictured (SLT)

The features of the Bronchosleeve will benefit patients, anesthesiologists, surgeons, hospitals, and insurers alike. Using the Bronchosleeve for OLV will:

- Reduce patient postoperative complications
- Decrease surgical time by up to 40%
- Save hospitals up to $45K per patient

Improved OLV

The optimized lumen dimensions of the Bronchosleeve provide various benefits over existing OLV devices:

- Easy Insertion
- Consistent Target Lung Visualization
- Lung Isolation
- Effective Ventilation
- Minimized Dislodgment

The Bronchosleeve has all these features and more

Helping All

The Bronchosleeve is applicable to all OLV procedures including:

- Thoracic trauma
- Procedure involving compromised airways
- Standard OLV procedures

Applications

The Bronchosleeve is applicable to all OLV procedures including:

- Thoracic trauma
- Procedure involving compromised airways
- Standard OLV procedures

References


Superior Results

Preliminary verification and validation testing of our device have confirmed that it:

- Provides adequate space for ventilation of the non target lung
- Allows for suction and deflation of the target lung
- Is compatible with current bronchoscope technology

Helping you and your clinicians breathe easy.