

**OLIVE VIEW-UCLA MEDICAL CENTER
ENDOSCOPY LAB
POLICY & PROCEDURE**

**NUMBER: 3487
VERSION: 2**

SUBJECT/TITLE: BRONCHOSCOPY, PREPARATION, ASSIST AND OBSERVATION

POLICY:	Patients safety and security will be maintained while undergoing invasive procedures.
PURPOSE:	Bronchoscopy is an invasive procedure utilizing a fiberoptic bronchoscope connected to an appropriate light source allowing for illumination and examination of the upper and lower airways of the respiratory system.
DEPARTMENTS:	Endoscopy Lab (Unit), Operative Services (OR), Ambulatory Special Procedure Unit, Anesthesiology, Procedural Nursing
DEFINITIONS:	
INDICATIONS:	<p>Bronchoscopy may be used for both therapeutic and diagnostic purposes.</p> <ol style="list-style-type: none"> 1. Diagnostic indications for bronchoscopy include: <ol style="list-style-type: none"> a. Inspection of the anatomical structures of the upper airway, larynx, and/or the tracheobronchial tree. This may be indicated for the assessment of vocal cord function, localization of bleeding, or for evaluation of airway lesions. b. Performance of bronchoalveolar lavage (BAL) for the purposes of diagnostic specimen analysis. Collection of specimens may be indicated for the diagnosis of infectious processes of the lungs or upper airways. c. Performance of bronchoscopic brushings for the purposes of diagnostic specimen analysis. Collection of specimens may be indicated for the diagnosis of malignant or infectious processes of the lungs or upper airways. d. Performance of endobronchial and transbronchial biopsy for purposes of diagnostic tissue analysis. Biopsied tissue samples may be indicated for the diagnosis of neoplastic disease, infectious processes, or inflammatory conditions of the lungs or airways. e. Performance of transbronchial needle aspiration for purposes of diagnostic tissue analysis. Biopsied tissue samples may be indicated for the diagnosis of neoplastic disease, infectious processes, or inflammatory conditions of the lungs or airways.

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	<p>2. Therapeutic bronchoscopy may be indicated for:</p> <ul style="list-style-type: none">a. Removal of foreign matter in the lungsb. Suctioning of inspissated secretions, especially for patients with significant atelectasis or lobar collapsec. Tamponade of bleedingd. Aid in intubation of a difficult airwaye. Assistance with percutaneous dilational tracheostomy (PDT)f. Instillation of iced saline or epinephrine into the tracheobronchial tree
<p>COMPLICATIONS:</p>	<p>Complications associated with bronchoscopy include:</p> <ul style="list-style-type: none">a. Aspirationb. Laryngospasmc. Bronchospasmd. Seizurese. Cardiac dysrhythmiasf. Hypoxemiag. Hemorrhageh. Pneumothoraxi. Fever and infectionj. Respiratory depression and hypotension may result from administration of narcotics or benzodiazepines required for patient sedation
<p>PRECAUTIONS:</p>	<p>Efforts should be made to take the following precautions:</p> <ul style="list-style-type: none">a. Suspected/confirmed aerosol transmissible disease (ATD) will be done in a negative pressure room.b. Patients without suspected/confirmed ATDs can undergo bronchoscopy in rooms without negative pressure, if a negative pressure room is not available.c. If a patient requires an emergent bronchoscopy and a negative pressure room is not available, an Infection Control (IC) risk assessment will be performed and coordination with IC is required to minimize exposure.d. Standard precautions must be followed throughout all bronchoscopy procedures, including the wearing of hospital approved particulate respirators masks when appropriate.e. Emergency airway management equipment and manual resuscitation equipment must be set up and immediately available at the bedside.f. Lidocaine with epinephrine should be readily available when performing transbronchial biopsy for management of excessive bleeding, should it occur.g. Patients must be monitored throughout bronchoscopy procedures with a cardiopulmonary monitor and a pulse oximeter. The low saturation alarm should be set at 90 percent.h. All procedures for bronchoscope decontamination and processing must be strictly followed. Failure to follow proper procedures may result in damage to equipment or cross-contamination.

	<p>ADVERSE REACTIONS AND INTERVENTIONS:</p> <ul style="list-style-type: none"> i. Desaturations below 90% on the pulse oximeter should be treated with an increase in the FiO2 delivery. When desaturations are not readily responsive to increases in oxygen concentration, the bronchoscopy procedure should be discontinued and not resumed until a stable saturation can be achieved and maintained. j. Vomiting which ensues during a bronchoscopy procedure must be attended to with immediate oral suctioning, or if severe, a withdrawal of the bronchoscope to the hypopharyngeal area for quick suctioning. Every effort should be made to prevent aspiration. k. Cardiopulmonary instability as manifested by a change in heart rate, rhythm, or blood pressure should be reported to the bronchoscopist. Efforts to medicate the patient in cases of vagal irritation may be indicated. l. Significant discomfort exhibited by a patient may be indicative of the need for additional sedation. Patients should be monitored throughout bronchoscopy procedures as to the tolerance of the procedures.
KEYWORDS:	
PROCEDURE:	<p>I. EQUIPMENT:</p> <ul style="list-style-type: none"> 1. Video bronchoscope 2. Light source, video processor 3. Bronchoscope supplies: <ul style="list-style-type: none"> o Disposable biopsy port o Disposable suction port o Silicone Lubricant o 4x4 gauze o Swivel adapter o Alcohol wipe 4. Patient supplies: <ul style="list-style-type: none"> o Two towels o Bite block/oral airway o Manual resuscitator with mask o Monitor to include saturations, HR, and BP o Fentanyl, Midazolam and Benadryl for injection shall be available; I.V. solution & tubing, if physician requests 5. Bronchoalveolar lavage/washings supplies: <ul style="list-style-type: none"> o Suction wall source o 60ml slip tip syringes o Leukens trap

- Sterile 6 foot suction tubing
 - 10 foot suction tubing
 - 250ml bottle of 0.9% NaCl solution
 - Basin
 - Patient identification labels
 - Specimen transport bags
 - Lab requisition sheets (micro and cytology)
6. Transbronchial biopsy supplies (per bronchoscopist request):
- Disposable biopsy forceps
 - Formalin specimen container
 - Lead apron, if fluoroscopy used
 - Patient identification label
 - Specimen transport bag
 - Pathology lab requisition sheet
 - 1 mg/ml epinephrine readily available (for excessive bleeding)
7. Brushings supplies (per bronchoscopist request):
- Disposable brush
 - Dry slides
 - Wet slides
 - Alcohol specimen jars
 - Patient identification labels
 - Specimen transport bag
 - Cytology lab requisition sheet
8. Transbronchial needle aspiration supplies (per bronchoscopist request):
- Disposable needle kit
 - 20cc syringe
 - Dry slides
 - Wet slides
 - Alcohol specimen jars
 - Patient identification labels
 - Specimen transport bag
 - Cytology lab requisition sheet
9. Safety supplies:
- Gloves, gowns, N95 masks, PAPR devices

II. PRE-PROCEDURE:

1. Must ensure there is a valid, accurate, complete informed consent form for the procedure to be done.
2. Prepare the patient (inpatients):
 - Patient is to be properly prepared by the floor nurse as ordered by the

patient's physician.

- Endoscopy staff is to call for the patient at least ½ hour prior to the procedure time.
- Transport patient to Endoscopy Lab with the chart and patient labels.
- Identify the patient by checking ID Band and asking patient their name and date of birth (if patient is alert).
- Mix one bottle viscous lidocaine with cherry syrup to flavor. After patient gargles a little at a time, the throat is sprayed with lidocaine until the gag reflex is gone and numbness is achieved.
- Connect the patient to cardiac and arterial oxygen saturation monitor and record baseline oxygen saturation, heart rate, blood pressure and respiratory rate Place bite block in the patient's mouth. Place mouth suction in the corner of the patient's mouth.
- Attach scope to video processor and white balance.

3. Prepare the patient (outpatients):

- Admit the patient to Ambulatory Surgery Procedure Unit (ASPU). Please see ASPU/Procedure Area Patient Flow Process Policy & Procedure (Number 5513; version 5).
- Endoscopy staff is to call for the patient at least ½ hour prior to the procedure time.
- Transport patient to Endoscopy Lab with the chart
- Identify the patient by checking ID Band and asking patient their name and date of birth.
- Mix one bottle viscous lidocaine with cherry syrup to flavor. After patient gargles a little at a time, the throat is sprayed with lidocaine until the gag reflex is gone and numbness is achieved.
- Connect the patient to cardiac and arterial oxygen saturation monitor and record baseline oxygen saturation, heart rate, blood pressure and respiratory rate.
- Place bite block in the patient's mouth. Place mouth suction in the corner of the patient's mouth.
- Attach scope to video processor and white balance.

III. DURING PROCEDURE:

1. Assist the physician as needed and continuously monitor patient condition.
2. Administer procedural sedation as ordered by the physician and document patient condition on Procedural Sedation Monitoring and Medication Order Form.

IV. POST-PROCEDURE:

1. Oral Care
 - Suction the patient's mouth of mucous, blood or foreign objects. This

	<p>intervention improves comfort.</p> <ol style="list-style-type: none"> 2. Position <ul style="list-style-type: none"> ○ Place patient’s head of bed at 45 degrees. This intervention reduces risk of aspiration. 3. Vital Signs <ul style="list-style-type: none"> ○ Check and record before the patient is discharged or returned to floor. 4. Discharge <ul style="list-style-type: none"> ○ After patient is fully awake and alert, make sure responsible an adult accompanies the patient home. <p>V. DOCUMENTATION:</p> <ul style="list-style-type: none"> ○ Record all nursing activities for the patient, including condition upon discharge. Record all patient data. ○ All medications are documented on nursing notes.

References:	
Approved by: Paula Siler (Clinical Nurse Director III)	Date: 04/30/2017
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