Bronchoscopy: Radial Endobronchial Ultrasound (EBUS) Set Up (Respiratory Therapy)

Site Applicability

St. Paul's Hospital

Policy Statements

All endobronchial ultrasound (EBUS) procedures will be scheduled in Cerner via Pacific Lung Health Centre clerk on the order of an attending Respirologist or Respirology Fellow.

General Information

The EBUS set-up and procedure is restricted to a Respiratory Therapist who is EBUS-trained and has been deemed competent in these skills and has completed the Bronchoscopy Suite Orientation Checklist.

The *Bronchoscopy Safety Checklist* will be completed by the Respirologist or Respirology Fellow in the presence of the RN and RT prior to the commencement of the procedure. The Respirologist is required to be present in the suite prior to the first dose of sedation being administered and remain there for the duration of the bronchoscopy procedure.

Refer to B-00-16-12029 for more information regarding table setup and scope preparation.

Indications

Radial EBUS is most commonly used for evaluation of peripheral lung lesions. The clinical indication for performing radial EBUS is based on the assessment of the Interventional Respirologist

Contraindications

- Absence of patient consent
- Patient has not been NPO for a sufficient length of time
- Absence of skilled care providers proficient in performing and assisting with the procedure
- Allergy to any medications or substances that may be used during the procedure

Infection Control Precautions

Bronchoscopy is considered an aerosol generating medical procedure (AGMP) and as such all health care providers involved in the procedure should be wearing complete Personal Protective Equipment (PPE) attire including an N95 mask and eye protection.

See the following link for more information: Aerosol Generating Medical Procedures (AGMP) in the context of COVID – Infection Prevention and Control

Special Considerations

- The tip of the radial ultrasound probe is very delicate and fragile. Be sure to handle with care.
- The tip of the radial probe contains propagation fluid and should be stored tip down to ensure fluid remains at the tip.

Required Supplies & Equipment

- Olympus Guide Sheath Kit:
  - 3 x ET stopper
  - 1 x US stopper
  - 1 x Cytology Brush
  - 1 x Biopsy Forceps
  - 1 x Guide Sheath
- Ultrasonic probe (radial probe) (Model UM-S20-17S)
- Alcohol swabs

Procedure

1. Remove all contents of guide sheath kit and lay out on work table (Figure 1).

Figure 1.

Marking the Cytology Brush (Figure 2):

1. Open the cytology brush package and ensure that the brush has been retracted just inside its own sheath.

2. Apply one white rubber ET stopper onto the cytology brush. Glide the stopper along the length of the brush towards the handle, using an alcohol swab for lubrication.
1. Insert cytology brush with marker into the guide sheath until marker meets the white sheath connector. Adjust marker on cytology brush as necessary to make sure that the distal ends of the sheath and cytology brush sheath are in line.
3. Remove the marked cytology brush from the sheath and return to packaging. Seal the package and set aside for future use.

Figure 2.

Marking the Biopsy Forceps (Figure 3)**:**

1. Remove the biopsy forceps from its package and apply one white rubber ET stopper onto the forceps. While lubricating the forceps with an alcohol swab, move the marker along the length of the forceps towards the handle.
2. Insert the biopsy forceps with the marker into the guide sheath. With the forceps extended from the end of the sheath, open the forceps and then withdraw the open forceps back into the sheath. Ensure that the marker on the forceps is approximately 1 cm from the sheath connector with the forceps in the open and withdrawn position.
3. Remove the marked forceps from the sheath and return to packaging. Seal the package and set aside for future use.

Figure 3.

Preparation of the Radial Probe (Mini Probe):

1. Insert the US stopper onto the end of the radial probe as per Figure 4.

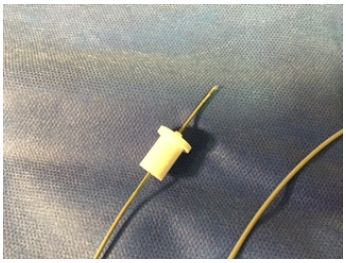

Figure 4.

2. Using an alcohol swab for lubrication, move the US stopper along the radial probe.
3. Insert the radial probe into the sheath and connect the US stopper to the sheath connector. Make any adjustments required to ensure that the distal tip of the radial probe extends just beyond the distal end of the sheath. Figure 5 below.

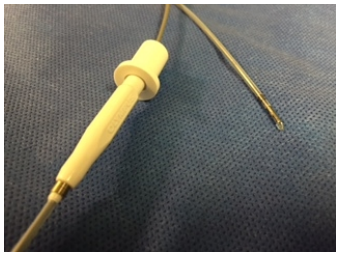

Figure 5.

4. Remove water-resistant cap from the radial probe and wrap the probe holder around the connector section of the radial probe. See Figure 6 below.

Figure 6.

5. Insert connector pipe of connector section of radial probe into probe driving unit making sure that the contact pin is upward.
6. Insert the radial probe into the holder and then loop the end of the probe so that the distal end is facing down. The radial probe is ready for use.

Documentation, Communication & Education:

1. Complete Bronchoscopy Suite Orientation Checklist with core respiratory therapist in the bronchoscopy suite.
2. Check all specimen laboratory requisitions for accuracy and completeness and pair with labeled specimens and initial the *Bronchoscopy Safety Checklist* that this has been done.
3. Complete practical portion of orientation that includes supervised standard bronchoscopy cases, as well as a minimum of 6 radial EBUS cases, or until competency is demonstrated.

References

1. Olympus. (2007). *Guide Sheath Kit*. Olympus. http://www.olympus-ural.ru/files/GuideSheathKit.pdf

Initial Effective Date:	01-JUN-2016
Posted Date:	14-APR-2021
Last Revised:	14-APR-2021
Last Reviewed:	
Approved By:	PHC
	Bronchoscopy Quality & Safety Team
Owners:	PHC
	Respiratory Therapy