American Association for Bronchology and Interventional Pulmonology (AABIP) Statement on the Use of Bronchoscopy and Respiratory Specimen Collection in Patients With Suspected or Confirmed COVID-19 Infection

To the Editor:

Considering the global spread of COVID-19 infection and the increased number of confirmed COVID-19 cases across the United States, the American Association for Bronchology and Interventional Pulmonology (AABIP) is issuing this statement on the safe and effective use of bronchoscopy in patients with suspected or confirmed COVID-19 infection. The main purpose of this statement is to ensure the safety of our patients, health care team and community at large.

We are releasing these urgent recommendations to guide clinicians around the world with the understanding that new information may subsequently modify or impact these current recommendations. We will strive to update this statement as needed in a timely fashion. This document is based on the latest Centers for Disease Control (CDC) recommendations March 9, 2020 and expert consensus of the AABIP COVID-19 Task Force.

General Recommendations for collection of respiratory specimen collection for suspected COVID-19:[1–4]

- Collection of upper respiratory samples via nasopharyngeal and oropharyngeal swabs is the primary and preferred method for diagnosis.
- Respiratory specimen collection is recommended in suspected COVID-19 regardless of time of onset of symptoms.
- Induced sputum collection is NOT recommended.
- Because it is an aerosol generating procedure that poses substantial risk to patients and staff, bronchoscopy should have an extremely limited role in the diagnosis of COVID-19 and only be considered in intubated patients if upper respiratory samples are negative and other diagnosis is considered that would significantly change clinical management.
- Alternative respiratory specimen collection in the intubated patient can include tracheal aspirates and nonbronchoscopic alveolar lavage.
- If bronchoscopy is being performed for COVID-19 sample collection, a minimum of 2-3 mL of specimen into a sterile, leak proof container for specimen collection is recommended.[4]
- Only essential personnel should be present when performing any specimen collection.
- Alert laboratory personnel regarding COVID-19 specimen processing and testing.

Additional Considerations for Respiratory Evaluation:

- Constellation of fever, respiratory symptoms, and radiographic evidence of ground glass opacities and pneumonitis should raise clinical suspicion of COVID-19.[5,6] Patients demonstrating such symptoms or findings should be queried about personal history of recent travel to any country with a CDC level 2 or higher travel warning (currently China, Italy, Iran, South Korea, and Japan), contact with a confirmed COVID-19 person or contact with others with such travel history.
- Clinicians should consider the local prevalence of COVID-19 cases when evaluating the clinical risk for COVID-19 infection, understanding that a travel or exposure history will become increasingly ineffective in identifying patients at risk for infection.
- Guidelines for respiratory and contact isolation should be followed in all known or suspected cases of COVID-19 infections.
- Evaluate for influenza and respiratory syncytial virus as well as other respiratory pathogens and additional diagnoses as clinically indicated.
- For all suspected COVID-19 cases notify internal institutional infection control personnel and state or local public health department.

General Personnel Preparation if Bronchoscopy is needed in patients with suspected or confirmed COVID-19 infection:

- Place patient in Airborne Infection Isolation Room negative pressure room isolation.
- All personnel should wear a powered, Air-Purifying Respirator or N95 mask and eye protection.

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- All personnel should wear standard Personal Protective Equipment which includes gown, gloves, respiratory protection, and eye protection.
- Follow CDC instructions for proper donning and doffing of all protective equipment and disposable devices (www.cdc.gov/hai/prevent/ppe.html).
- Disposable bronchoscopes should be used first line when available.
- Follow standard disinfection protocol of durable reusable video monitors.
- Follow standard high-level disinfection for reusable bronchoscopes.
- Limit to essential medical personnel during the procedure and specimen collection.

General Precautions for performing non-urgent bronchoscopy among patients WITHOUT suspected COVID-19 infection:

- All patients presenting for previously scheduled bronchoscopy should be asked about their recent travel history before entering the bronchoscopy suite. Bronchoscopy should be postponed if the patient has a history of recent travel to any country with a CDC level 2 or higher travel warning (currently China, Italy, Iran, South Korea, and Japan).
- All patients should be asked about any fever or ongoing infectious or respiratory symptoms before bronchoscopy. Procedures should be postponed if possible until such symptoms have resolved or testing (if available) is negative. If procedures cannot be postponed as determined by the clinical indication, the procedure should be performed using the precautions as outlined above for bronchoscopy in suspected COVID-19 infection.
- In communities with high prevalence of COVID-19 infections, even for routine bronchoscopies in asymptomatic patients, proper isolation precautions should be adhered to while also limiting the number of personnel to essential personnel present in either the bronchoscopy suite or operating room suite with negative pressure room settings or designated isolation room (Airborne Infection Isolation Room).

Indications for Bronchoscopy in patients with suspected or confirmed COVID-19 infections:

- Bronchoscopy is relatively CONTRAINDICATED in patients with suspected and confirmed COVID-19 infections. The only role for bronchoscopy would be when less invasive testing to confirm COVID-19 are inconclusive, suspicion for an alternative diagnosis that would impact clinical management is suspected, or an urgent life-saving intervention as cited below.
- Bronchoscopy for any elective reason should be postponed until after full recovery and the patient is declared free of infection. Elective indications include a lung mass, bronchial mass, mediastinal or hilar lymphadenopathy, lung infiltrates, and mild to moderate airway stenosis.
- If immediate testing is not available, bronchoscopy should be deferred if possible.
- Bronchoscopy (flexible and rigid) for urgent/emergent reasons should be considered only if a lifesaving bronchoscopic intervention is deemed necessary. Indications include massive hemoptysis, benign or malignant severe airway stenosis or suspicion of an alternative or secondary infectious etiology or malignant condition with resultant significant endobronchial obstruction.

Information contained in this document will be updated regularly as new information becomes available. For the latest version, please visit https://aabronchology.org/.

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