Lab Dept: Microbiology/Virology

Test Name: RESPIRATORY PATHOGEN PANEL PCR, BRONCHOSCOPY (BAL OR WASHING)

General Information

Lab Order Codes:	RPP
Synonyms:	N/A
CPT Codes:	0099U – Respiratory pathogen, multiplex reverse transcription and multiplex amplified probe technique, multiple types or subtypes, 20 targets
Test Includes:	Rapid detection of respiratory infections caused by the following: Adenovirus, Coronavirus (serotypes HKU1, NL63, 229E, OC43), Human metapneumovirus, Human rhinovirus/enterovirus, Influenza A (H1, H1-2009, H3), Influenza B, Parainfluenza virus (serotypes 1-4), Respiratory syncytial virus (RSV), Bordetella pertussis, Chlamydophilia pneumoniae, Mycoplasmoides (Mycoplasma) pneumoniae **Note:** This assay is not predicted to detect SARS-coronavirus (CoV), MERS-CoV, or the virus (SARS-CoV-2) causing coronavirus disease-2019 (COVID-19).

Logistics

Test indications:	Diagnose respiratory infections qualitatively detecting DNA or RNA of 20 pathogens (bacteria and viruses) rapidly in bronchoalveolar lavage (BAL) or bronchial washings. See organism list under Test Includes above.
Lab Testing Sections:	Microbiology/Virology - Sendouts
Referred to:	Mayo Clinic Laboratories – Mayo test: RESLR
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	1 – 2 days
Special Instructions:	This test is only for BAL or bronchial washings. It is not appropriate for nasopharyngeal swab specimens.

Specimen

Specimen Type:	Bronchoalveolar lavage (BAL) or bronchial washings
Container:	Sterile container
Draw Volume:	1 mL (Minimum: 0.5 mL) fluid
Processed Volume:	Same as Draw Volume
Collection:	Routine BAL or bronch washing collection
Special Processing:	Lab Staff: Aliquot 1 mL (Minimum: 0.5 mL) fluid to sterile container. Store and send refrigerated.
Patient Preparation:	None
Sample Rejection:	Mislabeled or unlabeled specimens

Interpretive

Reference Range: Negative for all targets

Interpretation: Results of the panel are intended to aid in the diagnosis of illness and are meant to be used in conjunction with other clinical and epidemiological findings.

A negative result should not rule-out infection in patients with a high pretest probability for a respiratory infection. The assay does not test for all potential infectious agents of respiratory disease. Samples collected too early or too late in the clinical course may not yield the organism causing disease. Negative results should be considered in the context of a patient's clinical course and treatment, if applicable.

Positive results do not distinguish between viable/replicating organism and the presence of non-viable organism or nucleic acid, nor do they exclude the potential for co-infection by organisms not contained within the panel. Nucleic acid may persist in some patients for days to weeks, even following appropriate therapy. Detection of 1 or more organisms suggest that the virus/bacterium is present in the clinical sample; however, the test does not distinguish between organisms that are causing disease and those that are present but not associated with a clinical illness. Co-infections (eg, detection of multiple viruses or bacteria or viruses and bacteria) may be observed with this test. In these situations, the clinical history and presentation should be reviewed thoroughly to determine the clinical significance of multiple pathogens in the same specimen.

Critical Values: N/A

Limitations: The detection of microbial DNA or RNA is dependent upon proper sample collection, handling, transportation, storage, and preparation. There is a risk of false-negative results due to the presence of strains with sequence variability or genetic rearrangements in the target regions of the assays.

Repeat testing should not be performed on samples collected less than 7 days apart.

This test is not intended for otherwise healthy, immunocompetent patients that are likely to have a mild, self-limited respiratory infection. If testing is desired, these should be tested by more targeted diagnostic assays based on their exposure history and clinical presentation.

Methodology: Multiplex Polymerase Chain Reaction (PCR)

References:

Mayo Clinic Laboratories (June 2020)