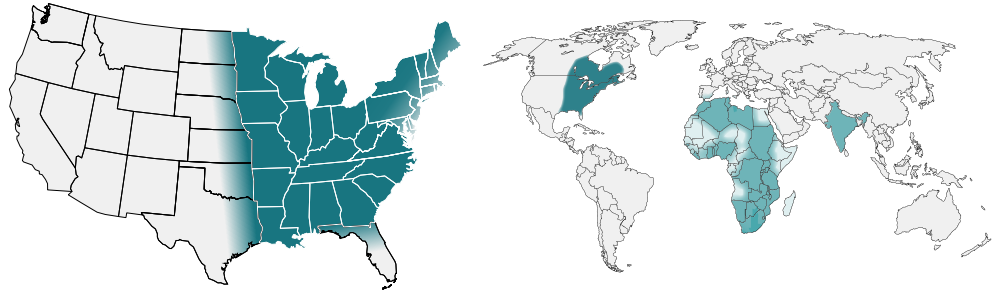


Community-Acquired Pneumonia (CAP) When to Think Fungus: Blastomycosis

Accessible version: <https://www.cdc.gov/fungal/diseases/blastomycosis/diagnosticalgorithms>

Patient living in or having traveled to a disease-endemic area



Areas *Blastomycosis* is more likely to live
 Potential range of *Blastomycosis*

These maps are approximations. *Blastomycosis* is not distributed evenly and may not be present everywhere within the shaded areas. It may also be present outside of the areas indicated.

CAP of unknown etiology not responding to a course of empiric antibiotics

OR

Initial CAP visit if:

- Skin lesions present* OR
- Link to known blastomycosis outbreak

Consider enzyme immunoassay (EIA) urine antigen testing

Antigen positive

Probable acute pulmonary blastomycosis[†]

Antigen negative

High degree of suspicion

Additional testing[‡]

Negative

Consider alternative diagnoses

Consider alternative diagnoses

Consider consulting infectious diseases or pulmonology

Positive

* Skin lesions could be indicative of late disease or traumatic inoculation rather than acute pulmonary blastomycosis.

[†] *Blastomycosis* antigen tests have extensive cross-reactivity with *Histoplasma*. However, both infections are typically treated in a similar manner for most clinical manifestations.

[‡] Sputum or bronchoalveolar lavage (BAL) culture and microscopy; skin biopsy (if lesion exists) for histopathology; or serologic antibody tests. Evaluation of other non-pulmonary manifestations in the bone, genitourinary tract, and central nervous system may be helpful in diagnosis.



U.S. Department of
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Test	Sensitivity	Specificity	Population studied
Antibody tests			
Complement fixation (CF) antibody ^{13,15,16}	9%–57%	30%–100%	Adult populations, outbreak settings
Immunodiffusion (ID) antibody ^{8,13–17}	28%–65%	100%	Adult populations, outbreak settings
Antigen tests			
EIA urine antigen ^{8–12}	76%–93%	High (but does cross-react with <i>Histoplasma</i>)	Adult populations
EIA serum antigen ^{8–12}	56%–82%	High (but does cross-react with <i>Histoplasma</i>)	Adult populations
Other tests			
Histopathology ¹⁸	81%	100%	Adult populations
Cytology ^{8,18}	38%–97%	100%	Adult populations, pregnancy