

Cryptococcus gattii : Information for Health Care Providers

❑ WHAT IS IT?

- ✓ *C. gattii* is a fungus closely related to *C. neoformans* that can infect the pulmonary and central nervous systems of both animals and humans.
- ✓ Until recently, *C. gattii* was only found in certain subtropical and tropical environments. In 1999 it emerged on Vancouver Island, British Columbia (BC), Canada. Between 1999 and 2006, 176 cases were reported in BC. *C. gattii* has been isolated from native tree species on Vancouver Island and from the surrounding soil and air, primarily from the east coast of Vancouver Island. Cases have also occurred on the lower BC mainland. The exact geographic distribution of the fungus is not known, and may be expanding.
- ✓ In Oregon, *C. gattii* was first identified in humans in 2004; since that time dogs, cats and alpacas have also been found to be infected.

❑ CLINICAL FEATURES

- ✓ The incubation period is long and variable. Illness onset can be two to twelve months after exposure, with a median of six to seven months.
- ✓ Cases may have pulmonary infiltrates, nodules, or cavitory lesions; approximately twenty percent develop meningitis. A wide spectrum of illness from asymptomatic infection to respiratory failure is possible. Symptoms are nonspecific and include:

✓ Fever and chills	✓ Headache
✓ Night sweats	✓ Chest pain
✓ Weight loss	✓ Sensitivity to light
✓ Cough	✓ Decreased alertness
✓ Shortness of breath	✓ Neck pain/stiffness
- ✓ Most cases respond to antifungal medications – consult with an infectious disease specialist for treatment recommendations. The case-fatality rate is under 5%.

❑ HOW IS IT SPREAD?

- ✓ The infection is acquired by inhaling *C. gattii* spores. It is not transmitted from animal-to-person or person-to-person.
- ✓ No specific activities or exposures have been identified that increase the risk for infection.

❑ WHO IS AT RISK?

- ✓ Unlike *C. neoformans* which primarily affects immunocompromised persons, *C. gattii* usually causes disease in immunocompetent persons.
- ✓ Persons over sixty years of age and persons with underlying medical conditions, including lung disease or immune system compromise due to disease or medications may be at some increased risk. Pediatric cases have been rare.
- ✓ Because the risk is low even for people living in endemic areas, there are no special precautions or travel restrictions recommended.

❑ HOW IS IT DIAGNOSED?

- ✓ Suspect *C. gattii* in individuals with atypical pneumonia or fungal meningitis who live or travel in areas where *C. gattii* is found.
- ✓ Cryptococcal infections may be diagnosed by microscopic examination or culture of tissue or body fluids such as blood, CSF, or sputum. Rapid antigen tests can be performed on blood and CSF.
- ✓ **When cryptococcus is identified in a respiratory specimen or cerebrospinal fluid, do not assume that it is *C. neoformans* - additional testing is required for speciation.**
- ✓ To differentiate *C. gattii* from the more common *C. neoformans*, culture the isolate on canavanine-glycine-bromothymol (CGB) agar.
- ✓ If your laboratory does not currently use CGB agar for all cryptococcus isolates, consider adding this to your laboratory's protocol. Another option is to send isolates to the Oregon State Public Health Laboratory for speciation.
- ✓ After consultation with Public Health, isolates identified as *C. neoformans* should be submitted to the Oregon State Public Health Laboratory for *C. gattii* isolation and speciation.

***C. gattii* is not currently reportable in Oregon, however it is an Emerging Infection... Please notify the State Department of Health of any cases in humans or animals by contacting Public Health at (971)673-1111.**

Resources and additional information:

- ✓ Cryptococcal disease information from CDC:
 - http://www.cdc.gov/nczved/dfbmd/disease_listing/cryptococcus_gi.html
- ✓ British Columbia Cryptococcal Work Group
 - <http://www.cryptococcusgattii.ca/>