



World Health  
Organization

GUIDELINES



GUIDELINES FOR  
**THE DIAGNOSIS, PREVENTION AND  
MANAGEMENT OF CRYPTOCOCCAL  
DISEASE IN HIV-INFECTED ADULTS,  
ADOLESCENTS AND CHILDREN**

SUPPLEMENT TO THE 2016 CONSOLIDATED  
GUIDELINES ON THE USE OF ANTIRETROVIRAL DRUGS  
FOR TREATING AND PREVENTING HIV INFECTION

MARCH 2018

HIV TREATMENT





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Guidelines for the diagnosis, prevention and management of cryptococcal disease in HIV-infected adults, adolescents and children: supplement to the 2016 consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection.

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# DEFINITION OF KEY TERMS

Adult	Age older than 19 years
Adolescent	Age 10–19 years
Advanced HIV disease	For adults, adolescents and children five years or older, advanced HIV disease is defined as a CD4 cell count <200 cells/mm <sup>3</sup> or a WHO clinical stage 3 or 4 event at presentation for care. All children with HIV younger than five years old should be considered as having advanced disease at presentation
Child	Age 0–9 years
Cryptococcal antigen positivity	Positive serum, plasma, or cerebrospinal fluid cryptococcal antigen. A positive cerebrospinal fluid antigen test indicates cryptococcal meningitis
Cryptococcal disease	Infection with <i>Cryptococcus</i> species that impairs normal body function, detected by abnormal clinical symptoms or signs
Cryptococcal infection	Growth of <i>Cryptococcus</i> species in the body documented by direct growth of the organism (culture) or indirect detection (positive antigen test in a person without prior cryptococcal disease or India ink stain). A positive culture or first positive antigen test usually implies active disease
Cryptococcoma	Localized, solid, tumour-like mass caused by growth of cryptococcal organism and associated inflammatory response; can be intracranial or extracranial
<i>Cryptococcus</i> species	The most common species causing human disease in the context of HIV-infection is <i>Cryptococcus neoformans</i> ; infections from <i>Cryptococcus gattii</i> have been reported occasionally
Meningeal disease	Disease presenting with nervous system signs or symptoms, specifically involving the meningeal layer surrounding the brain
Non-meningeal disease	Disease that does not involve the brain but involves either only a single site in the body (localized) or involves two non-contiguous sites in the body (disseminated)
Persistent symptoms	Symptoms consistent with cryptococcal disease that fail to resolve after two weeks of initial antifungal induction treatment
Raised intracranial pressure	Cerebrospinal fluid opening pressure $\geq 20$ cm H <sub>2</sub> O
Recurrent symptoms	Symptoms consistent with cryptococcal disease that reappear after full resolution following treatment for the initial episode of cryptococcal meningitis
Suboptimal treatment	Treatment with inadequate drug regimen, dose or duration of induction, consolidation or maintenance therapy; may also result from drug interactions or drug resistance
Sustained clinical response	Resolution of clinical symptoms and signs of cryptococcal disease for at least two

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