

Simplified Guide to Diagnosis and Treatment of Invasive Fungal Infections in Immunocompromised Patients

Yeasts (Unicellular)			Endemic Fungi (Dimorphic) Blastomycosis Histoplasmosis Coccidioidomycosis Paracoccidioidomycosis	Molds (Multicellular)	
Non-Albicans Candida	Cryptococcus	Candida Albicans		Aspergillosis	Mucormycosis
		Fluconazole			
		Itraconazole			
		Voriconazole			
		Posaconazole			
		-Fungins			
* Amphotericin					
		1,3 β-Glucan	?		
				Galactomannan	

Rx

Dx

Notes on 1,3 Beta-Glucan:

1. Pneumocystis Carinii (PCP) is a yeast that is not depicted on this chart that will cause an elevated 1,3 beta glucan level
2. Cryptococcus and Mucor species do not express 1,3 beta glucan
3. False positive beta glucan elevations can occur with IVIG, albumin, and beta lactamase inhibitors
4. The precise role of 1,3 beta glucan in the diagnosis of endemic fungal infections is still being investigated. They should be considered as possible etiologies for an elevated 1,3 beta glucan level.

***Amphotericin** is effective against *almost* all invasive fungal infections with the following rare exceptions (don't memorize)

- Yeast: *Candida lusitanae* (susceptible to -fungins),
- Dimorphic: *Chromoblastomycosis* (susceptible to itraconazole)
- Molds:
 - A. terreus*, an uncommon aspergillus species (susceptible to voriconazole),
 - Scedosporium* (effective therapy unclear)
 - Some *Fusarium* species (effective therapy unclear)

Common Clinically Significant Toxicities

	-Azoles	-Fungins	Amphotericin
Hepatotoxicity	++	+	+
Nephrotoxicity			+++
Cyp450 interactions	++		

Disclaimer: This handout is for teaching purposes only. It is not intended for direct translation into clinical practice. Consult an updated reference before making any treatment decision. The opinions are the author's own and do not reflect the viewpoints of the infectious disease or hematology/oncology divisions of BIDMC.