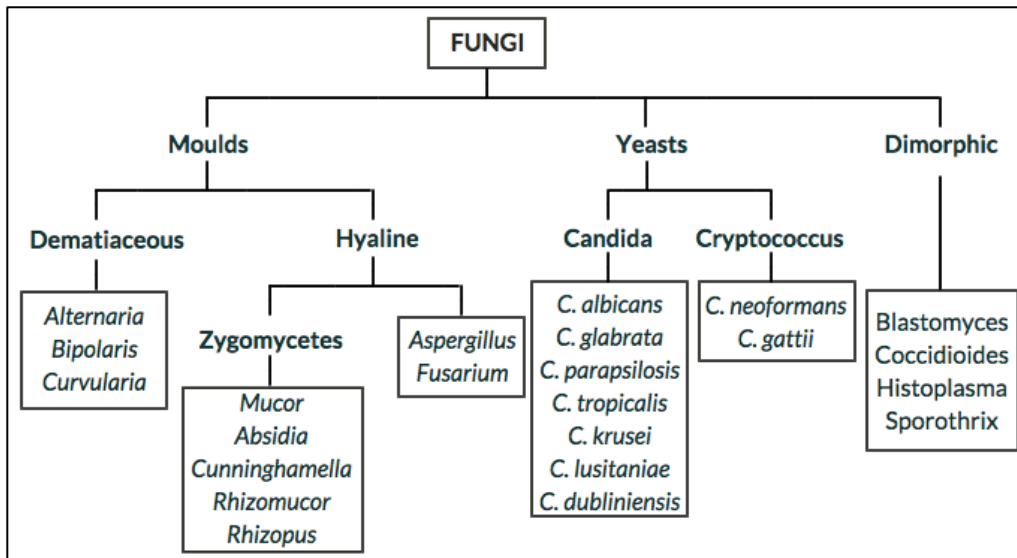


# Antifungal Study Cheat Sheet

Generalized Antifungal Spectrum of Activity							
Organism	Polyenes	Azoles					Echinocandins
	Ampho B	Flu	Itra	Vori	Posa	Isavu	Mica/Anid/Caspo
<i>Aspergillus sp.</i>	+/-	-	+	+	+	+	+
<i>Candida albicans</i>	+	+	+	+	+	+	+
<i>Candida glabrata</i>	+	+/-	+/-	+	+	+	+
<i>Candida krusei</i>	+	-	+/-	+	+	+	+
<i>Candida lusitaniae</i>	-	+	+	+	+	+	+
<i>Candida parapsilosis</i>	+	+	+	+	+	+	+/-
<i>Cryptococcus neoformans</i>	+	+	+	+	+	+	-
<i>Coccidioides spp.</i>	+	+	+	+	+	+	-
<i>Blastomyces</i>	+	+	+	+	+	+	-
<i>Histoplasma spp.</i>	+	+	+	+	+	+	-
<i>Fusarium spp.</i>	+/-	-	-	+/-	+/-	+/-	-
Zygomycetes	+/-	-	-	-	+	+	-



Class	Mechanism
Polyenes	Binds to ergosterol, disrupts cell membrane permeability
Azoles	Interferes with ergosterol synthesis
Echinocandins	Inhibits 1,3-beta-D-glucan synthesis

Potential Amphotericin B Pre-Medications
Acetaminophen
NSAID
Hydrocortisone
Diphenhydramine
Meperidine (PRN rigors)
NS / hydration

Drug	Brand Name(s)	IV	PO
Amphotericin B	Fungizone (conventional) Abelcet (lipid) Ambisome (liposomal)	✓	No
Ketoconazole	-	No	✓
Fluconazole	Diflucan	✓	✓
Itraconazole	Sporanox	✓	✓
Voriconazole	VFEND	✓	✓
Posaconazole	Noxafil	✓	✓
Isavuconazole	Cresemba	✓	✓
Micafungin	Mycamine	✓	No
Anidulafungin	Eraxis	✓	No
Caspofungin	Cancidas	✓	No

Drug	Goal Level	When To Monitor
Itraconazole	0.5 - 1	4-7 days after starting
Posaconazole	> 0.7	≥ 7 days of therapy
Voriconazole	1 - 5	≥ 5 days of therapy

Drug/Class	Beware...
Azoles	Hepatotoxicity, QT prolongation, drug-drug interactions
-Voriconazole	Hallucinations & visual disturbances w/ high levels
-Itraconazole	Boxed warning with heart failure
Polyenes	Nephrotoxicity, infusion reactions (less with Abelcet and Ambisome), hypo-K, hypo-Mg

- Azoles are inhibitors of CYP-450, so they will **INCREASE** levels of other drugs metabolized by this pathway
  - Beware contraindications due to drug-drug interactions and Azole antifungals
- Ketoconazole is not frequently prescribed orally due to potential hepatotoxicity
- Fluconazole requires dose adjustments for renal function
- Voriconazole is the go-to drug for *Aspergillus sp.* infections
- Echinocandins do not penetrate the CSF or the urine
- Conventional amphotericin B has more nephrotoxicity associated with it than the lipid or liposomal formulations

**Abbreviations:** Ampho B = Amphotericin B, Anid = anidulafungin, Caspo = caspofungin, Flu = fluconazole, Isavu = isavuconazole, Itra = itraconazole, Mica = micafungin, Posa = posaconazole, Vori = voriconazole