

Micafungin (Mycamine™)

Spectrum of Activity:

- Micafungin has fungicidal activity against *Candida* spp., including *C. glabrata* and *C. krusei*
- Minimal activity against *Aspergillus* spp. has been demonstrated *in vitro*. This agent should not be used as monotherapy for this pathogen.
- Coverage gaps:
 - *C. parapsilosis*
 - *C. lusitaniae*

Acceptable uses

- Prophylaxis
 - Neutropenia (AML, ALL, MDS)
 - Azole intolerance:
 - Elevated LFTs (AST and ALT > 3x upper limit of normal)
 - Required by clinical trial protocol
 - Significant drug interaction
 - Prolonged QTc > 500
 - Febrile neutropenia ≥ 96 hrs on appropriate therapy
 - Prolonged neutropenia > 10 days
 - Increased risk of veno-occlusive disease in stem cell transplant (start of conditioning through engraftment)
- Treatment
 - *C. krusei* or *C. glabrata* candidiasis
 - *C. albicans* or other *Candida* species usually susceptible to azoles IF one of the following criteria are met:
 - Confirmed candidal infection in non-urinary sites resistant to azoles
 - Empiric treatment in patient with sepsis at high risk for invasive candidiasis due to azole-resistant species
 - Prolonged QTc (>500)
 - Febrile neutropenia > 96 hours on appropriate therapy
 - Invasive aspergillosis in a patient failing/intolerant of voriconazole AND amphotericin B
 - Serious drug/drug interaction

Unacceptable uses

- First line for aspergillosis or zygomycosis (*Mucor*, *Rhizopus*, *Cunninghamella*)
- CNS, ocular, or urinary tract infections (poor penetration)

Dosing

- Prophylaxis
 - Neutropenia (alternate): 50-100 mg IV daily
- Treatment
 - Candidiasis: 100mg IV daily
 - Esophageal candidiasis or *Candida* endocarditis: 150mg IV daily
- Dose Adjustments:
 - No dosing adjustments recommended for renal or hepatic impairment

Monitoring

- Adverse Reactions: Infusion-related histamine reaction (may slow infusion rate), QTc *shortening*
- Labs/Tests: AST/ALT at baseline and every 1-2 weeks after, renal function, baseline ECG

Notes

- Micafungin is restricted infectious disease services approval within VUH.