This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.

**INITIAL EVALUATION AND MANAGEMENT**

- Blood culture positive for *Candida* species
  - Obtain Infectious Diseases consult regardless of colony count or presumed source
  - Remove all indwelling central lines unless absolutely contraindicated
  - Consult Ophthalmology to perform a dilated funduscopic exam (evaluating for *Candida* endophthalmitis)
  - Order daily follow-up blood culture until two negative blood cultures have been documented

- Suspected echinocandin resistance?
  - Yes
    - First line: Liposomal amphotericin (AmBisome®) 3-5 mg/kg IV daily
  - No

- Is the patient clinically stable?
  - Yes
    - Susceptible to fluconazole?
      - Yes
        - Negative repeat blood cultures?
          - Yes
            - Continue therapy for 2 weeks from first negative blood culture
          - No
            - Re-evaluate current therapy and optimize on case-by-case basis
        - No
          - De-escalate therapy by changing to:
            - Fluconazole susceptible:
              - Voriconazole 6 mg/kg IV or PO twice a day
            - Fluconazole susceptible, dose-dependent:
              - Voriconazole 6-4 mg/kg IV or PO twice a day
            - Fluconazole resistant:
              - Voriconazole 6 mg/kg IV or PO twice a day
  - No
    - First line: Caspofungin 70 mg IV once, then 50 mg daily

**Notes:**
- Doses indicated are for patients with normal renal/hepatic function. If organ dysfunction is present, dose adjustments may be necessary
- Therapy duration may need to be extended in the setting of prolonged neutropenia, persistence of symptoms or endophthalmitis

**ON-GOING MANAGEMENT**

- Yeast / fungus in blood does not imply *Candida*, particularly in patients with hematologic malignancy. Carefully consider the possibility of non- *Candida* yeast (e.g., *Trichosporon*, *Cryptococcus*) or mold based on clinical scenario and consultation with the microbiology lab. Infectious Diseases consultation is strongly encouraged for any patient with yeast or fungus in the blood
- Echinocandin resistance should be suspected in patients with a history of prolonged recent echinocandin exposure
- If patient’s weight is greater than or equal to 80 kg, the caspofungin dose should be adjusted to 150 mg once followed by 70 mg IV daily; further weight-based adjustments for morbid obesity should be considered on a case-by-case basis
- Weight-based dosing of fluconazole (based on total body weight) should always be used in candidemia
- Fluconazole should not be used empirically in patients with prior azole use or in patients with prolonged neutropenia
- Adjusted body weight should be used to dose voriconazole in patients who exceed 20% of ideal body weight

---

**Candidemia Management**

**INITIAL EVALUATION AND MANAGEMENT**

- Blood culture positive for *Candida* species
  - Obtain Infectious Diseases consult regardless of colony count or presumed source
  - Remove all indwelling central lines unless absolutely contraindicated
  - Consult Ophthalmology to perform a dilated funduscopic exam (evaluating for *Candida* endophthalmitis)
  - Order daily follow-up blood culture until two negative blood cultures have been documented

- Suspected echinocandin resistance?
  - Yes
    - First line: Liposomal amphotericin (AmBisome®) 3-5 mg/kg IV daily
  - No

- Is the patient clinically stable?
  - Yes
    - Susceptible to fluconazole?
      - Yes
        - Negative repeat blood cultures?
          - Yes
            - Continue therapy for 2 weeks from first negative blood culture
          - No
            - Re-evaluate current therapy and optimize on case-by-case basis
        - No
          - De-escalate therapy by changing to:
            - Fluconazole susceptible:
              - Voriconazole 6 mg/kg IV or PO twice a day
            - Fluconazole susceptible, dose-dependent:
              - Voriconazole 6-4 mg/kg IV or PO twice a day
            - Fluconazole resistant:
              - Voriconazole 6 mg/kg IV or PO twice a day
  - No
    - First line: Caspofungin 70 mg IV once, then 50 mg daily

**Notes:**
- Doses indicated are for patients with normal renal/hepatic function. If organ dysfunction is present, dose adjustments may be necessary
- Therapy duration may need to be extended in the setting of prolonged neutropenia, persistence of symptoms or endophthalmitis

---

**ON-GOING MANAGEMENT**

- Yeast / fungus in blood does not imply *Candida*, particularly in patients with hematologic malignancy. Carefully consider the possibility of non- *Candida* yeast (e.g., *Trichosporon*, *Cryptococcus*) or mold based on clinical scenario and consultation with the microbiology lab. Infectious Diseases consultation is strongly encouraged for any patient with yeast or fungus in the blood
- Echinocandin resistance should be suspected in patients with a history of prolonged recent echinocandin exposure
- If patient’s weight is greater than or equal to 80 kg, the caspofungin dose should be adjusted to 150 mg once followed by 70 mg IV daily; further weight-based adjustments for morbid obesity should be considered on a case-by-case basis
- Weight-based dosing of fluconazole (based on total body weight) should always be used in candidemia
- Fluconazole should not be used empirically in patients with prior azole use or in patients with prolonged neutropenia
- Adjusted body weight should be used to dose voriconazole in patients who exceed 20% of ideal body weight

---

Copyright 2018 The University of Texas MD Anderson Cancer Center

Approved by Executive Committee of the Medical Staff 02/27/2018

Department of Clinical Effectiveness V1

Approved by Executive Committee of the Medical Staff 02/27/2018
SUGGESTED READINGS


This practice consensus statement is based on majority opinion of the Candidemia Management Management workgroup at the University of Texas MD Anderson Cancer Center for the patient population. Theses experts included:

- Javier Adachi, MD (Infectious Disease)
- Samuel Aitken, PharmD (Pharmacy Clinical Programs)
- Farnaz Foolad, PharmD (Pharmacy Clinical Programs)
- Dimitrios Kontoyiannis, MD, ScD, PhD (Hon) (Infectious Disease)
- Patrick McDaneld, PharmD (Pharmacy Clinical Programs)
- Victor Mulanovich, MD (Infectious Diseases)
- Frank P. Tverdek, PharmD (Pharmacy Clinical Programs)
- Anita M. Williams, BS (Clinical Effectiveness)
- Sonal Yang, PharmD (Clinical Effectiveness)

† Core Development Team
* Clinical Effectiveness Development Team

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. This algorithm should not be used to treat pregnant women.