



Candidemia Management and Associated Clinical Outcomes in Hospitalized Patients: An Opportunity for Antifungal Stewardship

Saloni Patel, PharmD; Stephanie Shulder, PharmD; Travis B. Dick, PharmD, MBA, BCPS
University of Rochester Medical Center, Rochester, NY

Contact Information:
Saloni Patel, PharmD
P. 585.275.3015
saloni_patel@urmc.rochester.edu

Background

- Candidemia is the 4th most common nosocomial bloodstream infection associated with significant morbidity, mortality, and healthcare costs^{1,2}
- Optimal candidemia management using a multifaceted and multidisciplinary approach is crucial
- Antifungal stewardship (AFS) efforts together with IDSA candidemia management guidelines may play major roles in improving patient care and outcomes³
- Overall adherence rates to best practices and antifungal use recommendations is as low as 40%⁴
- Institution-specific guidelines for candidemia management do not exist nor is it an automatic infectious diseases (ID) consultation

Objective

- Evaluate current candidemia management practices and review associated clinical outcomes to identify potential targets for AFS

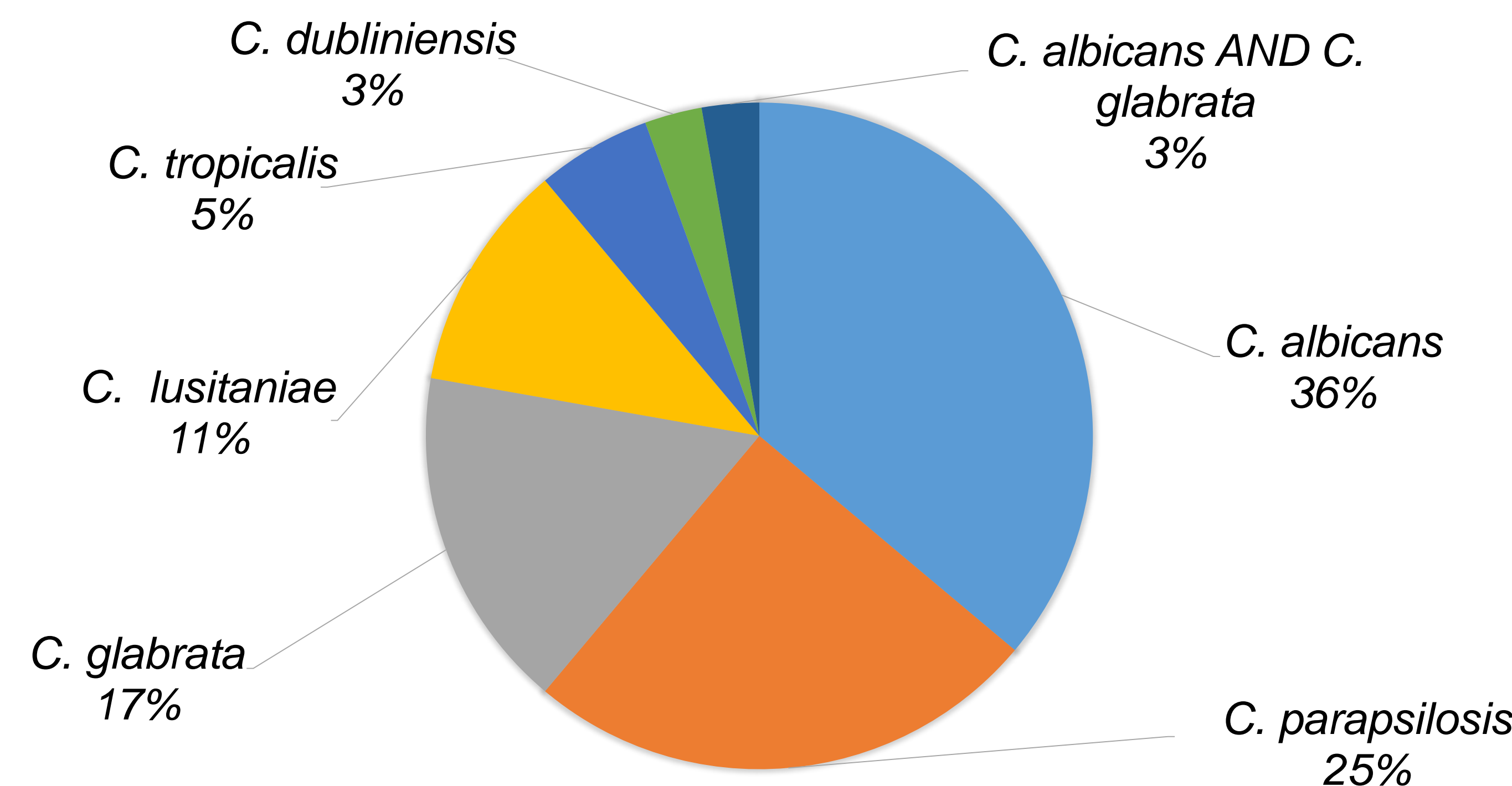
Methods

- IRB-approved, retrospective, observational study
- Patients with positive blood culture for *Candida* spp. between July 2016-June 2017
 - Exclusions: *Candida* spp. clinically judged by provider team to be a contaminant; death before positive blood culture; not hospitalized at time of positive culture; admitted or transferred on optimal antifungal therapy
- Descriptive statistics were used to summarize data
- Primary Outcome**
 - Time to effective therapy: time (hours) from first positive blood culture to start of an antifungal with *in vitro* susceptibility
- Secondary Outcomes**
 - Time to clearance of candidemia: time (hours) from specimen collection to first negative blood culture
 - All-cause in-hospital mortality

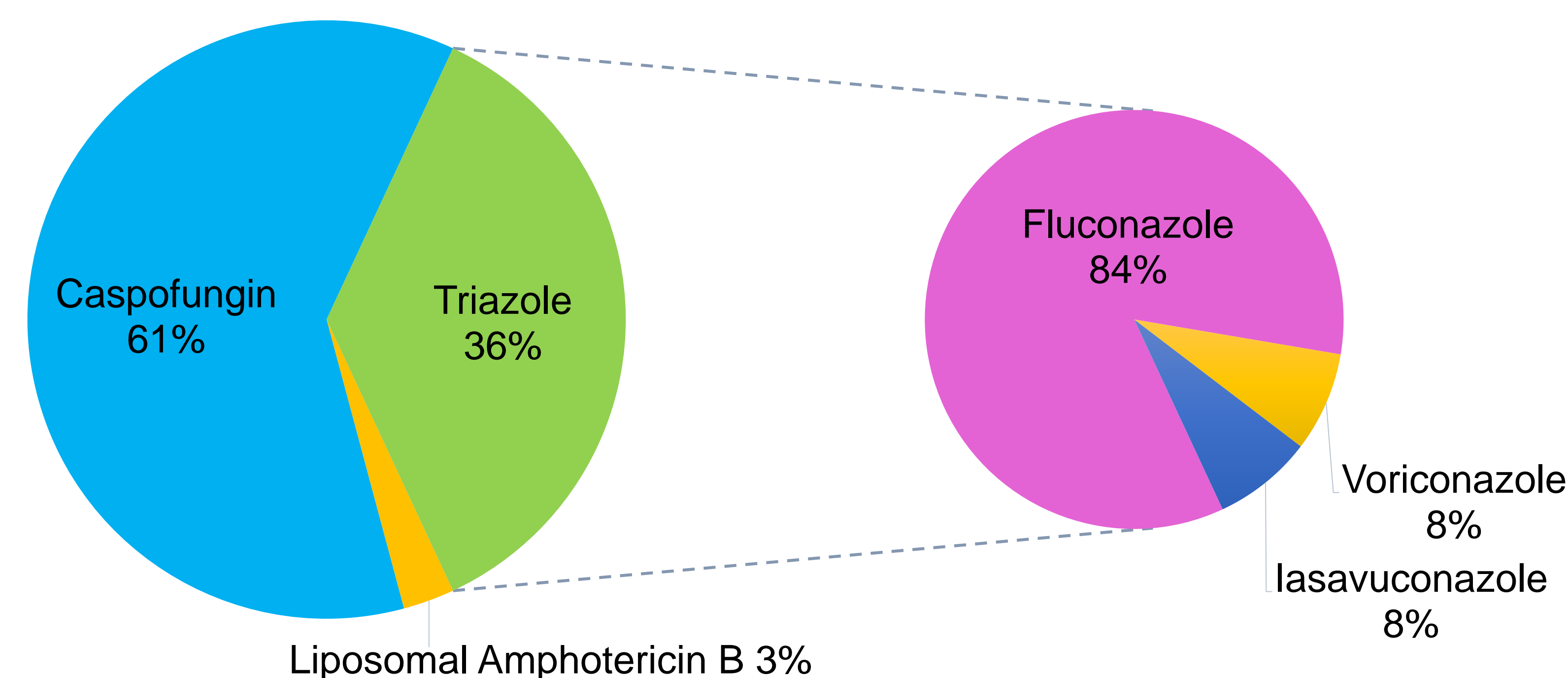
Baseline Characteristics	N = 36
Age – Median (IQR)	
Adults (N = 33)	61 (47 – 70)
Gender, Male – N (%)	19 (53)
Likely Source^a – N (%)	
Venous access	15 (42)
Intra-abdominal	5 (14)
Urine	4 (11)
Skin/burns	2 (6)
VAD ^b / cardiac surgery complications	2 (6)
Unknown	7 (19)
Underlying Condition^a – N (%)	
Immunosuppressed	22 (61)
Heart disease / VAD ^b recipient	13 (36)
Chronic kidney disease	10 (28)
Diabetes mellitus	10 (28)
End-stage liver disease	5 (14)
Other	8 (22)

^aPatient could have more than one likely source or underlying condition
^bVAD: ventricular assist device

DISTRIBUTION OF CANDIDA ISOLATES



EMPIRIC ANTIFUNGAL THERAPY

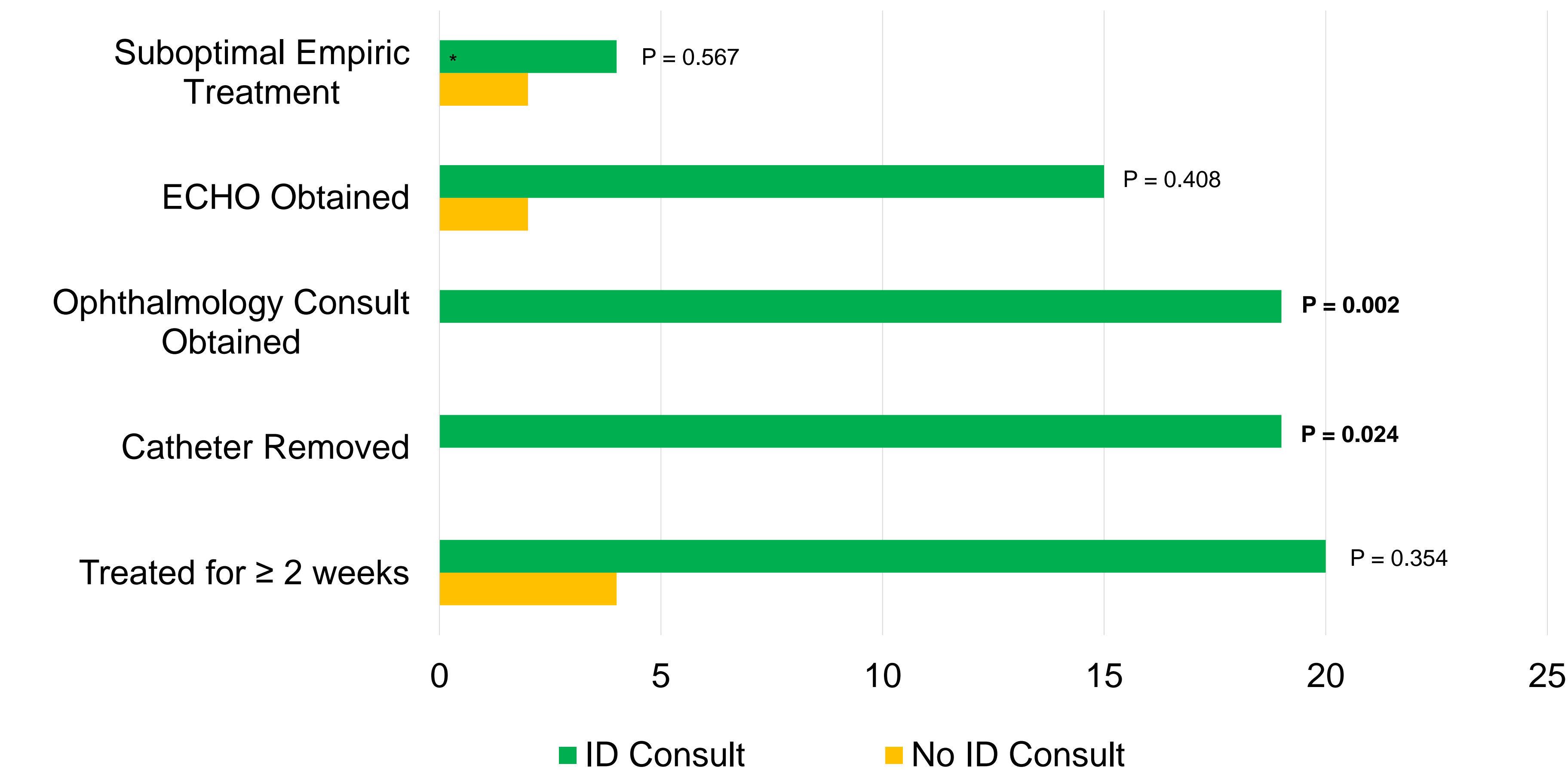


Results

Primary Outcome	
Time (h) to effective therapy – Median (IQR)	0.30 (0.12 – 9.95)
Secondary Outcomes	
Time (h) to clearance of candidemia – Median (IQR)	58 (46.4 – 95.6)
All-cause in-hospital mortality – N (%)	11 (31)
Fluconazole initial choice (N=11) (deemed suboptimal ^a) – N (%)	6 (55)

^aSuboptimal treatment based on national guidelines and/or local standards of practice

CLINICAL OUTCOMES BASED ON ID CONSULT RECEIVED



*ID consulted after day 3

Conclusion

- Most patients were started on effective antifungal therapy once candidemia was identified
- ID consult patients were more likely to have catheters removed, receive ≥2 weeks of treatment, ophthalmology consults and ECHOs
- AFS efforts geared towards establishment of institutional guidelines, candidemia treatment bundles, or mandatory ID consult may be considered to improve current practices of candidemia management

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DISCLOSURES

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.
Saloni Patel: Nothing to disclose Stephanie Shulder: Nothing to disclose Travis B. Dick: Nothing to disclose