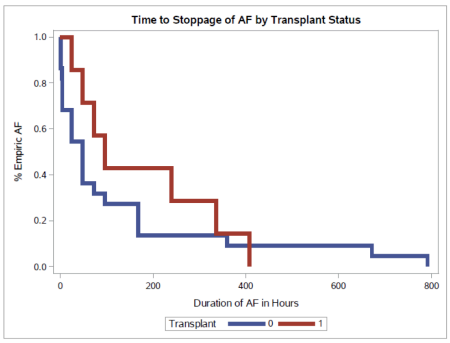
Figure 2:



Disclosures. **All authors:** No reported disclosures.

248. Thirty-Day Mortality Among Patients with Candidemia Diagnosed by T2Candida Assay Alone: Influence of Risk Factors and Candida Species

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Background. Candidemia is a common cause of healthcare-associated bloodstream infection with high mortality rates despite antifungal therapy. Risk factors include prolonged ICU stay, immunosuppression, and exposure to broad-spectrum antibiotics. Blood cultures (BC) remain the gold standard for diagnosis but lack sensitivity and can take days to result. T2Candida (T2C) is a rapid diagnostic test utilizing PCR and magnetic resonance technology to detect five *Candida* species in whole blood in less than 6 hours. In this study we examined characteristics of patients with positive T2C assays in the absence of positive BC including risk factors and 30-day mortality rates.

Methods. We conducted a retrospective analysis of positive T2C cases at UAB Medical Center from 2016 to 2018 with either negative or no BC. For each patient we determined if clinical signs (e.g., hypotension, leukocytosis) and risk factors for candidemia were present at the time of collection. Our primary outcome of interest was 30-day mortality. Data were compared by multivariate analysis.

Results. A total of 173 patients with T2C positivity alone were included in the analysis. The most common risk factor was the use of broad-spectrum antibiotics followed by CVC (Table 1). The mean number of risk factors per patient was 3.6 (Figure 1). Overall 30-day mortality was 41%. Patients with a T2C result of *C. albicans*/*C. tropicalis* were almost 2.5 times more likely to die at 30 days (aOR 2.401, CI 1.159–4.974) compared with those with other positive results. Increasing number of risk factors (aOR 1.457, CI 1.126–1.886) and increasing age (aOR 1.052, CI 1.026–1.079) were significantly associated with increased odds of death at 30 days (Table 2).

Conclusion. In this study we demonstrate a significant association between increasing number of risk factors, older age, and *A*/*T* result with higher odds of 30-day mortality among patients with T2C positivity alone. While concern for false-positives exists when using T2C, our data suggest that this is an acutely ill population which warrants early and aggressive antifungal therapy. The lower limit of detection of T2C (1 cfu/mL) as compared with BC may explain lack of paired positive cultures in these patients despite clinical signs of and risk factors for candidemia.

Table 1. Demographics and risk factors

Age – yr.	
Mean (SD)	54.1 (15.8)
Median (IQR)	58 (22)
Range	19 - 86
Gender – no. (%)	
Male	107 (62)
Female	66 (38)
Race or ethnic group – no. (%)	
White	101 (59)
Black	66 (38.6)
Hispanic	1 (0.5)
Other	3 (1.8)
Location type – no. (%)	
ICU	112 (65)
Floor	61 (35)
T2C result – no. (%)	
C. albicans/C. tropicalis	74 (42.8)
C. parapsilosis	67 (38.7)
C. krusei/C. glabrata	17 (9.8)
Polyfungemia	15 (8.7)
Clinical signs – no. (%)	
Fever/hypothermia	112 (65)
Leukocytosis	109 (63)
Hypotension	97 (56)
Risk factors – no. (%)	
Broad-spectrum antibiotics	149 (86)
Central venous catheter	132 (76)
ICU >72 hrs.	90 (52)
Mechanical ventilation	75 (43)
Steroids/immunosuppression	74 (43)
Dialysis	47 (27)
Intra-abdominal surgery	30 (17)
Total parenteral nutrition	19 (11)
Necrotizing pancreatitis	2 (1)

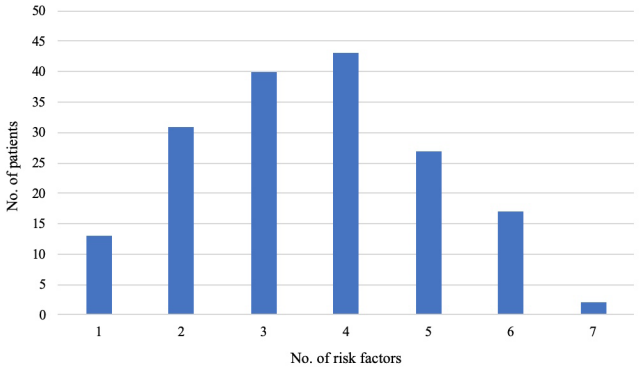

Figure 1. Number of risk factors per patient

Table 2. Multivariate analysis of factors associated with 30-day mortality

Variable	aOR (95% CI)	P-value
Sum of risk factors	1.457 (1.126-1.886)	0.004
Age	1.052 (1.026-1.079)	<0.001
A/*T* positive	2.401 (1.159-4.974)	0.018
Gender	0.920 (0.447-1.895)	0.822

Disclosures. **All authors:** No reported disclosures.

249. Limited Diagnostic Utility of Extended Aerobic Blood Culture Incubation for Fungal Pathogen Detection

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Background. Blood cultures are an important diagnostic tool for the detection of fungemia. At our institution, fungal blood cultures consist of aerobic blood culture with incubation extended from the standard 5 days to 14 days. Orders for fungal blood cultures exist in multiple electronic order sets for selected populations, including oncology and bone marrow transplant services.

Methods. To determine the yield of fungal blood cultures at our institution, a 570-bed tertiary-care referral center, we extracted all fungal blood culture results over a 4.5-year period (January 1, 2014–May 15, 2018) from a Laboratory Information System.

Results. Of the 21,657 fungal blood cultures performed, only 202 (0.9%) demonstrated growth and 189 (0.9%) grew fungal organisms. The majority (90%, $n = 182/202$) of positive fungal blood cultures grew a *Candida* or other yeast species. 96% ($n = 174/182$) of the fungal cultures that grew yeast would have been detected with standard bacterial blood culture. Eight of these cultures became positive during the extended hold period and grew a *Candida* species. All 8 cultures were collected from patients who had previous positive cultures for the same *Candida* species detected by standard incubation. Five fungal blood cultures from 4 patients turned positive after 5 days of incubation. Among these, two additional fungal pathogens were identified including 2 cases of *Lomentospora prolificans* and 2 cases of *Fusarium*. In both cases of *L. prolificans* and one case of *Fusarium,* the patients had previous positive blood cultures that detected the same organism with standard incubation. One patient with *Fusarium* had no previous positive blood cultures, but had multiple tissue cultures positive for *Fusarium.* The remaining cultures that turned positive after 5 days of incubation contained bacterial organisms, a number of which were considered clinically insignificant (e.g., *Cutibacterium* species).

Conclusion. These data suggest that extended incubation of aerobic blood culture bottles has limited diagnostic utility beyond standard bacterial blood culture for detection of fungemia. Fungal blood cultures represent an opportunity for improved diagnostic test stewardship, and use should be restricted to selected situations in consultation with Infectious Diseases or Laboratory Medicine.

Disclosures. **All authors:** No reported disclosures.

250. Comparison of T2Candida Assay with Blood Culture, Candida Sepsis Score and Serum β-D-glucan in Diagnosis of Candidemia

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Background. Although blood cultures are the clinical diagnostic standard for candidemia, their delay in results and low sensitivity has lead to increasing the use of alternate tests and diagnostic algorithms. The T2Candida magnetic resonance assay