***Conclusion.*** We are describing six cases of acute pulmonary coccidioidomycosis with unique reactive skin manifestation described as erythema sweetobullosum. The acknowledgment of skin findings assists in prompt clinical suspicious to make diagnosis and initiate treatment.

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

### 165. Outcomes Comparing Initial Short vs Long Course Echinocandin Therapy in Patients with Candidemia Caused by Fluconazole Susceptible Strains

Jennifer L. Small-Saunders, MD, PhD[1]; Angela Loo, PharmD BCPS (AQ-ID)[2]; Deborah Theodore, MD[3]; Amrita Singh, PharmD[2]; Magdalena Sobieszczyk, MD, MPH[4] and Christine J. Kubin, PharmD BCPS (AQ-ID)[4]; [1]Medicine, Columbia University Medical Center, New York, New York, [2]NewYork-Presbyterian Hospital, New York, New York, [3]Medicine, NewYork-Presbyterian Hospital, New York, New York, [4]Columbia University Medical Center, New York, New York

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***Background.*** Guidelines for candidemia (CAND) treatment recommend initial echinocandin (ECHINO) therapy with transition to fluconazole (FLUC) after 5–7 days in patients with clinical stability, FLUC-susceptibility, and negative cultures; however, optimal timing for transition is unknown. In the era of rapid diagnostics and antimicrobial stewardship programs (ASP), studies are needed to evaluate the impact of earlier transition in CAND due to routinely FLUC-susceptible species.

***Methods.*** Retrospective study of adult patients at NewYork-Presbyterian Hospital from 2012 to 2014. Inclusion criteria included ≥1 blood culture with *C. albicans*, *C. tropicalis* or *C. parapsilosis*, ≥1 dose ECHINO initial therapy, ≥3 days total treatment, and no prior episode of CAND within 30 days. Patients with polymicrobial bloodstream infection excluded. Patients de-escalated from ECHINO at ≤3 days (short-course; SC-ECH) were compared with those who received ≥4 days of ECHINO (long course; LC-ECH). The primary outcome was 14-day complete response (CR), defined as survival with clinical improvement and sterilization of blood cultures. Secondary outcomes included day 7 microbiological success (MicroS) and 28-day survival (SURV).

***Results.*** 76 patients included: 21 in SC-ECH, 55 in LC-ECH groups. *C. albicans* (58%) most common species. Majority were male (59%) with median age 64 years (IQR 49–74), 62% were in ICU at time of CAND, 50% had recent surgery. No significant baseline differences between SC-ECH and LC-ECH groups, including in PITT bacteremia score ≥4 (43% vs. 42%; $P = 0.4$) or median APACHE (20 vs. 20; $P = 0.684$). There was no difference between SC-ECH vs. LC-ECH in CR (52% vs. 49%; $P = 1.0$), early MicroS (81% vs. 87%; $P = 0.484$), or SURV (62% vs. 73%; $P = 0.523$). On multivariable analysis with duration of ECHINO therapy forced into the model, only PITT bacteremia score <4 remained an independent predictor of CR (OR 6.1, 95% CI 2.1, 17.9; $P = 0.001$).

***Conclusion.*** In adult patients with CAND due to routinely FLUC-susceptible species, early de-escalation from ECHINO was associated with similar outcomes, including day 7 MicroS. Early de-escalation based on early species identification has the potential to be a target for ASPs to optimize antifungal therapy without compromising clinical outcomes.

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

### 166. Breakthrough Invasive Candidiasis in Children

Sara Dong, MD[1]; Stella Antonara, PhD[2]; Joseph Stanek, MS[3] and Monica I. Ardura, DO, MSCS[4]; [1]Department of Pediatrics, The Ohio State University & Nationwide Children's Hospital, Columbus, Ohio, [2]Department of Pathology & Microbiology, Nationwide Children's Hospital, Columbus, Ohio, [3]Division of Hematology/Oncology, Nationwide Children's Hospital, Columbus, Ohio, [4]Pediatrics, Infectious Diseases and Immunology, Host Defense Program, The Ohio State University and Nationwide Children's Hospital, Columbus, Ohio

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***Background.*** Breakthrough invasive candidiasis (bIC) has been described in adults, but the epidemiology and outcomes in children are unknown.

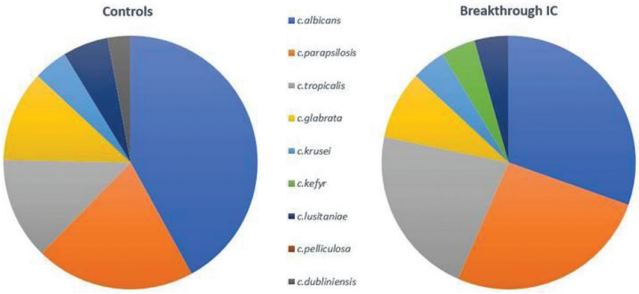
***Methods.*** Retrospective cohort analysis of children diagnosed with IC from 9/1/09 to 1/30/17. bIC was defined as isolation of *Candida* spp. from sterile site despite receiving ≥3 doses of antifungal (AF) to which isolate is susceptible. Clinical and microbiological data, management, and outcomes were collected. Non-parametric and logistic regression statistics were applied.

***Results.*** There were 92 patients with IC, 23 of which were bIC (Table 1). Underlying conditions included GI ($n = 26$), hem/onc ($n = 17$), prematurity ($n = 16$), cardiac ($n = 15$), HCT ($n = 4$), SOT ($n = 5$), and other ($n = 9$). Patients received an azole ($n = 17$), micafungin ($n = 5$), or amphotericin B ($n = 1$) for median of 20 days [3–522] before bIC as: prophylaxis ($n = 8$), targeted therapy ($n = 5$), or empiric fever driven therapy ($n = 10$). bIC was caused by non-albicans *Candida* in 16/23 (70%) cases. Compared with IC controls, children with bIC had increased ICU admission, vasopressor use, mechanical ventilation, and renal failure (all with $P < 0.01$). In multivariate analysis, immunosuppression was an independent risk factor for bIC (OR 39.4, 95% CI 7.5–205). Death attributable to IC occurred in bIC group ($n = 3$, $P = 0.04$).

***Conclusion.*** bIC in our cohort was caused most frequently by non-albicans *Candida* spp. and associated with significantly worse outcomes, including mortality.

| Variable (*N*, %) | *Controls* (*N* = 69) | *bIC* (*N* = 23) | *P-value* |
|---|---|---|---|
| Age, in years; median (range) | 3 (4 days–32 years | 2 (11 days–28 years] | 0.78 |
| Male | 33 (47) | 16 (11) | 0.09 |
| Indwelling catheter | | | |
| Central venous | 35 (51) | 14 (61) | 0.03 |
| Peripherally inserted central | 27 (39) | 14 (61) | 0.09 |
| Neutropenia (ANC < 500) | 4 (6) | 5 (22) | 0.04 |
| Corticosteroids[a] | 6 (9) | 19 (83) | <0.01 |
| Chemotherapy | 7 (10) | 8 (35) | 0.01 |
| TPN | 41 (59) | 17 (74) | 0.32 |
| Antibiotics | 37 (53) | 18 (78) | 0.03 |
| Days prior to IC | 4 [1–109] | 12 [1–56] | 0.02 |
| Clinical diagnosis | | | |
| Primary site[b] + Candidemia | 1 (1) | 4 (17) | |
| Isolated candidemia + catheter | 48 (70) | 13 (57) | |
| Isolated candidemia NO catheter | 6 (9) | 0 | |
| CNS | 4 (6) | 0 | |
| Peritoneal | 8 (11) | 2 (9) | |
| Osteomyelitis | 2 (3) | 0 | |
| Disseminated | 0 | 4 (17) | |
| Days of IC | 2 [1–8] | 2 [1–61] | 0.25 |

[a]Total dose >20 mg/d or >2 mg/kg/d of prednisone equivalent for ≥2 weeks preceding IC.
[b] Pneumonia ($n = 3$), endocarditis ($n = 1$), esophagitis ($n = 1$).

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### 167. Comparing Diagnostic-Driven Approaches to Empiric Therapy in the Treatment of Invasive Aspergillosis in Patients with Hematologic Malignancy

Rita Wilson Dib, MD[1]; Anne-Marie Chaftari, MD[2]; Fady Ghaly, MD[1]; Ying Jiang, MS[3]; Ray Y. Hachem, MD[2] and Issam Raad, MD[3]; [1]UT MD Anderson Cancer Center, Houston, Texas, [2]University of Texas MD Anderson Cancer Center, Houston, Texas, [3]Department of Infectious Diseases, Infection Control and Employee Health, The University of Texas M.D. Anderson Cancer Center, Houston, Texas

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***Background.*** Early antifungal therapy of invasive aspergillosis (IA) has been shown to be associated with improved outcome. Given the difficulty to establish the diagnosis of IA based on conventional methods, early initiation of empiric antifungal therapy has been used in patients with clinically suspected IA. Diagnostic-driven approach (DDA) relies on using novel diagnostic methods (e.g., early galactomannan testing). In this current study, we compared the outcomes of hematological malignancy (HM) patients with IA who were treated with Voriconazole using the DDA (DDA-Vori) vs. empiric therapy with a non-Voriconazole containing regimen (EMP-non-Vori) or empiric therapy with Voriconazole (EMP-Vori).

***Methods.*** We retrospectively reviewed the medical records of 604 HM patients with documented, proven or probable IA (according to EORTC/MSG criteria) diagnosed between July, 1993 and February, 2016 at our center. We included 346 patients with underlying host factors, a suggestive CT findings of IA, and positive biopsy, fungal culture or galactomannan indicative of IA, and who received at least 7 days of DDA-Vori, EMP-Vori, or EMP-non-Vori. Outcome assessment included response to therapy (clinical and radiographic), all causing mortality and IA attributable mortality.

***Results.*** The patients' median age was 54 years and 59% were males. By multivariate analysis, factors that were predictive of a favorable response included: localized/sinus IA vs. disseminated/pulmonary IA ($P < 0.0001$), not receiving WBC transfusion ($P < 0.01$), and DDA-VORI vs. EMP-non-Vori ($P < 0.0001$). On the other hand, predictors of mortality within 6 weeks of initiation of IA therapy included disseminated/pulmonary infection vs. localized/sinus IA ($P < 0.01$), not having stem-cell transplant within 1 year prior of IA ($P = 0.01$) and EMP-non-Vori vs. DDA-Vori ($P < 0.001$).