Table 1 - Univariate survival analysis calculated using a Cox proportional-hazards regression model among patients who developed IMI after HSCT and patients who developed IMI after acute leukemia diagnosis

	Hazard Ratio	95% CI	p-value
HSCT Group			
Age >55	0.399	[0.145, 1.098]	0.075
Male sex	1.839	[0.524, 6.455]	0.342
BMI (continuous)	0.916	[0.926, 1.016]	0.613
Neutropenia	0.680	[0.194, 2.387]	0.741
ICU admission in 7 days prior to IMI diagnosis	1.839	[0.524, 6.456]	0.342
Karnofsky performance score ≥ 70	0.317	[0.110, 0.914]	0.033
CMV reactivation	0.324	[0.074, 1.426]	0.136
Active graft versus host disease	1.344	[0.488, 3.698]	0.567
Acute Leukemia Group			
Age >55	1.630	[0.460, 5.778]	0.449
Male sex	1.338	[0.426, 4.205]	0.618
BMI (continuous)	1.051	[1.001, 1.103]	0.047
Neutropenia	1.488	[0.336, 6.595]	0.601
ICU admission in 7 days prior to IMI diagnosis	6.469	[1.779, 23.530]	0.005
Karnofsky performance score ≥ 70	0.310	[0.038, 2.518]	0.273

Conclusion. IMIs are associated with significant mortality in HSCT recipients and AL patients; patients at higher risk for mortality include those with lower baseline Karnofsky scores, recent ICU admissions, and higher BMI at time of IMI diagnosis.

Disclosures. **Wissam El Atrouni, MD**, **ViiV** (Advisor or Review Panel member)

1154. Characterizing fungemic outcomes among adult inpatients at a community teaching hospital: a retrospective cohort study

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Session: P-52. Medical Mycology

Background. Fungemia is among the highest causes of mortality and length of stay (LOS) within the inpatient setting. We aim to characterize outcomes in adult inpatients with fungemia at our institution.

Methods. Adult inpatients with at least one positive blood culture with yeast between January 1st, 2017 and December 31st, 2018 were retrospectively identified via an electronic health record report. Outcome measurements were stratified into three categories: demographic, infectious, and antifungal-related.

Results. Forty-five patients were identified for review. The mean age was 62 years (SD 16.8) while the prevalence of fungemia among men and women was comparable (48.9 versus 51.1%). Diabetes (24.4%) and past malignancy (22.2%) were among the top comorbidities. One in five patients received total parenteral nutrition at the time of positive blood culture results. Central lines were present in 66.7% of patients and were implicated as the source of infection in the majority of cases (31%). Intensive care unit (ICU) admission, 30-day mortality, and 30-day hospital readmission occurred in 66.7%, 24.4%, and 26.7% of patients, respectively. The median time to culture positivity and time to antifungal therapy after positive culture results were 42.5 (IQR 36.5 - 63) and 6.5 hours (IQR 2.75 - 12.5), respectively. *Candida albicans* was found to be the primary fungal pathogen identified among cases reviewed, isolated in 53.3% of patients. ID consultation occurred in 86.7% of cases. Caspofungin was the predominant empiric antifungal agent prescribed (50.8%). Median total duration of therapy was 14 days (IQR 11.5 - 19).

Conclusion. This analysis successfully identified key high-risk areas of attention in the clinical management of adult inpatients with fungemia at our institution. Central lines and ICU admission were predominant characteristics identified, suggesting the complexity of the management of these patients. Although 30-day mortality and readmission rates were found to mirror current national averages for this population, further risk-assessment of these outcomes would be appropriate to evaluate in a larger study cohort.

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

1155. Clinical and Epidemiological Characteristics of Patients with Paracoccidioidomycosis in Asuncion Paraguay

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Session: P-52. Medical Mycology

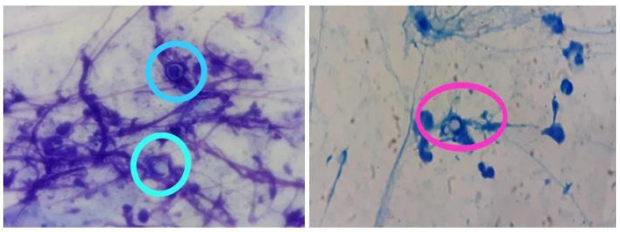
Background. Paracoccidioidomycosis (PCM) is an endemic systemic fungal disease caused by *Paracoccidioides brasiliensis*. It is obtained exclusively in Latin American countries, and presents with a greater prevalence in South America. It is acquired through inhalation and spreads by lympho-hematogenous dissemination. Once the fungus has established itself in the body, it can affect any organ or tissue, but most commonly the skin, mucous membranes and lungs. It is a neglected disease, without mandatory notification, its impact is unknown.

Methods. Descriptive, observational, retro-prospective study with analytical components, The patients were adults (>18 years), diagnosed with paracoccidioidomycosis who were hospitalized at the Instituto De Medicina Tropical Asunción-Paraguay during 2010-2019.

Results. There were 33 patients included in this study. Most patients were male (90%) and 10% were female, the mean age of 48. The main reason for consult was: oral lesion(s) (21%), difficulty swallowing (15%), and skin lesions (15%). The geographic regions with the highest prevalence rates (Fig1) were: Central, Cordillera and Caaguazú. The major risk factors for acquiring Paracoccidioidomycosis were farming (51%), smokers (66%) and alcoholism (42%). Only one patient was co-infected with HIV. The diagnosis was made either by culture or by biopsy results (Fig 2). All the patients were started on treatment with amphotericin B deoxycholate, with an average dose of 1,020 mg for induction and continued maintenance treatment with imidazoles. The mortality rate was 9.09%. The outpatient clinic follow up was low at 15% and 12 patients (80%) were treated successfully.

Figure 1: Paraguay Coutnry Map showing the most affected areas with Paracoccidioidomycosis.

Figure 2: Culture result.



Conclusion. This study suggests that paracoccidioidomycosis mainly affects men, farmers, associated with high tobacco consumption in Paraguay. Common clinical manifestations were oral lesion, skin lesions, and difficulty swallowing. There are no current IDSA guidelines for treatment thus we use the national Paraguayan treatment guidelines. This study highlights the need to further study PCM and establish global guidelines.

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

1156. Clinical and epidemiological features and outcomes of Blastomycosis in a tertiary hospital in Kentucky

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Session: P-52. Medical Mycology

Background. Blastomycosis is an endemic dimorphic fungal infection caused by *Blastomyces dermatitidis*. The risk factors associated with severe presentation are not well defined.

Methods. Retrospective study of patients treated for blastomycosis at the University of Kentucky Hospital from 2004-2019. Statistical analyses were performed with STATA version 12.0 (College Station, Texas). Logistic regression was used to identify variables associated with severe infections.

Results. Among 82 patients, median age was 48 years old (range: 16 - 89); 66 (80.5%) were male and 71 (92.2%) were white, 25/77 (32.4%) were obese, 24 (29.2%) were diabetic, 21 (25.6%) had COPD, 26 (31.7%) had at least one immunosuppressive condition. The median duration of illness was 86 (3-365) days. 37 (45.1%) had cough and 35 (42.6%) had dyspnea 19 (23.1%) patients were treated in the ICU, 42 (51.3%) in non-ICU inpatient wards, and 21 (25.6%) in an outpatient setting. Cultures were obtained in 69 cases, 59 (85.5%) reported as positive, KOH stain positive in 30/61 (49.1%). Histopathology was positive in 48/66 (72.7%) samples. Urine *Histoplasma or Blastomyces* antigen was positive in 41/58 (70.6%), and Serum *Histoplasma or Blastomyces* antigen was positive in 22/34 (64.7%). Among 64 (78.0%) patients with pulmonary blastomycosis, acute and chronic pneumonia were 16 (25.0%) and 12 (18.7%) cases respectively, and nodular lung lesions were reported in 36 (56.2%). Initial antifungal treatment was amphotericin B liposomal in 38/80 (47.5%), overall mortality was 11 (13.4%). A multivariable analysis was performed to find predictors of severe blastomycosis infection, no association was seen with factors as male sex (IRR 1.96; 95%CI 0.84 – 4.55), and was confirmed that significant independent associated risk factors for severe infection were age older than 50 (IRR 3.5; 95%CI 1.42-8.83), obesity (IRR 3.1; 95% CI 1.41-6.87), diabetes (IRR 2.5; 95% CI 1.16-5.50), leukocytosis (IRR 1.03; 95%CI 1.00-1.07) and anemia (IRR 3.0; 95% CI 1.55-5.85).

Conclusion. Pulmonary Blastomycosis is the most common presentation. Culture and histopathology are more sensitive than antigen assay. Independent factors associated to severe disease were older age, obesity, diabetes, and anemia at admission.

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

1157. Clinical Safety, Efficacy, and Pharmacokinetics of Fosmanogepix, a Novel First-in-class Antifungal, in Patients with Renal Insufficiency: Subset Analysis from a Phase 2 Candidemia Trial

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Session: P-52. Medical Mycology

Background. Fosmanogepix (FMGX) is a first-in-class antifungal agent, with a unique MOA targeting the fungal enzyme Gwt1, and broad-spectrum activity against yeasts and molds, including fungi resistant to other antifungal agents. Patients with candidemia often have underlying renal insufficiency or are receiving medications that affect renal function. This analysis evaluated outcomes in patients with varying degrees of renal insufficiency.

Methods. This global, multicenter, open-label, non-comparative study evaluated the safety and efficacy of FMGX for first-line treatment of candidemia. Patients with a recent diagnosis of candidemia defined as positive blood culture for *Candida* spp within 96 hrs prior to study entry with ≤ 2 days of prior antifungal treatment were eligible, including those with renal insufficiency. Patients with neutropenia, *C. krusei* infection, deep-seated *Candida* infections or receiving hemodialysis were excluded. Subjects were treated with FMGX for up to 14 days: 1000 mg IV BID for 1 day, then 600 mg IV QD for at least 2 days, followed by either 600 mg IV QD or 700 mg PO QD. Patients requiring antifungal treatment beyond 14 days received fluconazole. The primary efficacy endpoint was outcome at end of study treatment (EOST) as determined by an independent data review committee. Successful outcome was defined as survival with clearance of *Candida* from blood cultures with no additional antifungal treatment.

Results. 14/21 (66%) subjects had some degree of renal insufficiency: 7 had mild renal insufficiency (GFR:60-89), 5 had moderate renal insufficiency (GFR:30-59), and 2 had severe renal insufficiency (GFR:15-29). 12/14 (86%) completed study treatment, and treatment was successful at EOST in 12/14 (86%) subjects. Decline in renal function was not observed at EOST. 4 had worsening of renal function during the follow-up period; none required dialysis. Renal impairment did not increase exposure of FMGX. There were no treatment-related adverse events.

Conclusion. FMGX demonstrated high level treatment success with no evidence of drug-related nephrotoxicity, with no dose adjustments required. These preliminary data support the continued evaluation of FMGX in patients with candidemia and renal dysfunction as an alternative to potentially nephrotoxic antifungal agents.

Disclosures. **Pierre Bulpa, MD**, **Amplyx Pharmaceuticals** (Scientific Research Study Investigator) **Galia Rahav, MD**, **AstraZeneca** (Scientific Research Study Investigator) **Mickaël Aoun, MD**, **Amplyx Pharmaceuticals** (Scientific Research Study Investigator) **Peter Pappas, MD**, **SCYNEXIS, Inc.** (Consultant, Advisor or Review Panel member, Research Grant or Support) **Bart Jan Kullberg, MD, FRCP, FIDSA**, **Amplyx** (Advisor or Review Panel member) **Sara Barbat, BSN, RN**, **Amplyx Pharmaceuticals** (Employee) **Pamela Wedel, BSc**, **Amplyx Pharmaceuticals** (Employee) **Haran T. Schlamm, MD**, **Amplyx** (Consultant) **Michael Hodges, BSc. MD**, **Amplyx Pharmaceuticals Inc.** (Employee)

1158. D-index as a Novel Index to Predict Invasive Fungal Disease in High-Risk Neutropenic Pediatric Cancer Patients and Hematopoietic Stem Cell Transplantation

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Session: P-52. Medical Mycology

Background. Prolonged and profound neutropenia are risk factors for invasive fungal disease (IFD) during febrile neutropenia (FN) episodes. The D-index combines both depth and duration of neutropenia in a single assessment and has been proposed as a useful tool to exclude or predict IFD in high-risk adult patients. We assessed the D-index as a predictor of IFD in pediatric cancer patients.

Methods. We conducted a retrospective study of pediatric oncology patients with FN at UCM Comer Children's Hospitals. IFD was stratified as possible, probable, and proven according EORTC/MSG criteria. Patients considered high risk of IFD were receiving intensive chemotherapy with expected prolonged neutropenia >7 days, including, but not limited to, AML, high-risk acute ALL, and hematopoietic stem cell transplantation (HSCT). The D1-index was equal to $2t_1 + 3t_2$, where t_1 and t_2 are the number of days from the first day of neutropenia < 500mm^3 and < 100/ mm^3 respectively, until the development of IFD. The D2-index approximates the area over the neutrophil curve during neutropenia. A cumulative D-index (c-D-index) was also calculated using the first day of neutropenia until the date of the first clinical manifestation of IFD. We compared duration of neutropenia vs D-index vs c-D-index as a predictor of IFD using receiver operating characteristic curve (ROC)/ AUC analysis.

Figure 1

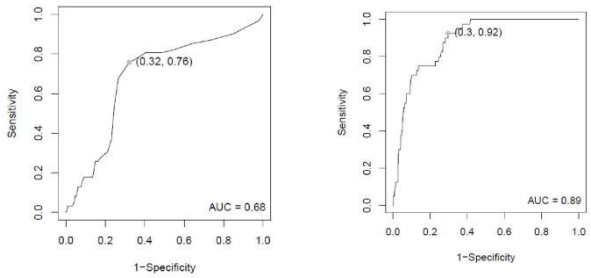

Figure 1. A Receiver operating characteristic curves comparing D-index with the days of neutropenia (<500 mm3), from fever onset through first clinical manifestation of IFD. A)AUC/D-index 0.89, sensitivity 92%, specificity 70%, NPV 98%. B) AUC/duration of neutropenia 0.68, sensitivity 76%, specificity 68%, NPV 80%.

Figure 2

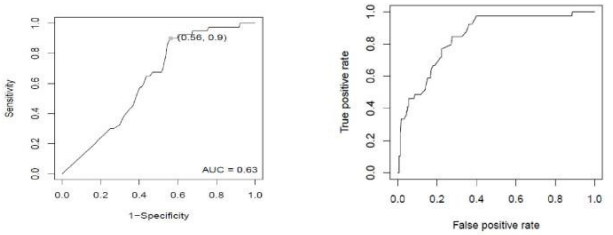

Figure 2. A Receiver operating characteristic curves comparing cD-index with the cumulative days of neutropenia (<500 mm3) from onset neutropenia before fever through first clinical manifestation of IFD. A)AUC/cD-index 0.82, sensitivity 82%, specificity 70%, NPV 92%. B) AUC/duration of neutropenia 0.63, sensitivity 90%, specificity 56%, NPV 81%.

Results. We identified 455 FN episodes in 203 high-risk patients. 53/455 (11.6%) had IFD, 12 (2.6%) proven, 23 (5%) probable, and 18 (4%) possible. The median of D1, D2 indexes and c-D-index were significantly higher in patients developing IFD (38, 5225, 7352) compared to the non-IFD group (26, 3857, 5169) (P=.001, P=.001, and P=.01) respectively. The ROC curve of D-index and c-D-index (figure 1,2,3) showed better performance (AUC of 0.85,0.89, 0.81) respectively compared to the duration of neutropenia alone. The ROC was highest when D-index was combined with prolonged fever >5 days (AUC 0.94)