**Methods.** A multiplex assay targeting C. auris, C. lusitaniae, and C. haemulonii was developed using cultured cells spiked in KEDTA anticoagulated blood from healthy human donors. C. auris isolates received from the CDC were cultured overnight, automated cell counting was used to determine concentration. From this stock, the culture was diluted to a target titer, and inoculated into whole blood, followed by centrifugation plating to confirm cell titer. Four mL spiked blood samples were processed on the T2Dx Instrument.

**Results.** Sensitive and specific detection of C. auris was achieved direct from blood in less than 4 hours on the T2Dx Instrument. A Limit of Detection (LoD) for C. auris was demonstrated to be ≤10 CFU/mL. T2MR signals of samples spiked with target were approximately 30 times higher than samples with no target present, and no cross reactivity was observed between C. auris, C. haemulonii, C. lusitaniae and C. krusei. 

**Conclusion.** Low concentrations of Candida cells can be detected and identified by T2MR. This prototype assay potentially allows for the rapid screening and identification of patients infected with Candida auris with high specificity and sensitivity, aiding in the hospital management and targeted therapy of this emerging multi-drug resistant pathogen.

**Disclosures.** B. Manning, T2 Biosystems: Employee and Shareholder, Salary; J. L. Snyder, T2 Biosystems: Employee and Shareholder, Salary; B. Chang, T2 Biosystems: Employee and Shareholder, Salary; C. Wong, T2 Biosystems: Employee and Shareholder, Salary; R. Shivers, T2 Biosystems: Employee and Shareholder, Salary; T. J. Lowery, T2 Biosystems: Employee and Shareholder, Salary

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**2072. Comparison of One vs. Two BACTEC Myco/F Lytic Bottles for Recovery of Fungi and Mycobacteria**

Poonimima Ramanan, MD1; Cathy Schleich, BSEE2; William Harmsen, MD3; Emily Vetter, BSc1 and Nancy L. Wengenack, PhD, FIDSA1; 1Division of Clinical Microbiology, Mayo Clinic, Rochester, Minnesota, 2Division of Biomedical Statistics, Mayo Clinic, Rochester, Minnesota, 3Division of Infectious Diseases, Mayo Clinic, Rochester, Minnesota

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**Background.** BACTEC Myco/F Lytic bottle (Becton Dickinson), along with the Wampole Isolator lys centrifugation tube (Alere) are used to enhance recovery of fungal and mycobacterial organisms from blood. At our institution, one Isolator tube and one Myco/F Lytic bottle are inoculated for each suspected case of fungemia or mycobacteremia. A retrospective analysis of 7518 cultures over 6 years was performed to determine whether one or two Myco/F Lytic bottles were required for optimal recovery of these organisms.

**Methods.** Blood was collected by a phlebotomy team and distributed into three blood culture receptacles: 2 Myco/F Lytic bottles each with 4 mL of blood and one Isolator tube with 8 mL of blood. The sediment from the processed Isolator tube was inoculated onto Inhibitory Mold Agar, Emmons Sabouraud Dextrose Agar, and Vitek Myco/F Select Agar. The Myco/F Lytic bottles were incubated for 42 days on the BACTEC FX instrument and the plated media was incubated for 30 days. We compared the recovery of fungal and mycobacterial organisms from one vs. two Myco/F Lytic bottles at our institution from April, 2004 through October, 2010.

Myco/F Lytic bottles were randomly assigned as the first or second bottles and additional culture positivity results for the second bottle was compared with that of the first bottle and the Isolator tube together.

**Results.** 171 (2.3%) cultures were positive with fungal or mycobacterial isolates from a total of 7518 cultures. Among 171 positive cultures, 28 (16.4%) grew only in the second Myco/F Lytic bottles. A total of 207 fungi and mycobacteria were isolated. Five fungi and mycobacteria were isolated in the first bottle and second bottle. Of the 5 species, 4 were not recovered in the first bottle. A wide variety of fungi were isolated in the second bottle (e.g. Cryptococcus neoformans, 119; Pneumocystis jirovecii, 1; Fusarium oxysporum, 1; Aspergillus niger, 1).

**Conclusion.** The use of two Myco/F Lytic bottles increases the recovery of certain fungal and mycobacterial organisms from blood as compared with one Myco/F Lytic bottle.

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

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**2073. Utility of Serial β-D-Glucan Levels in Patients with High Risk for Invasive Candidiasis: A Potential Tool for Antifungal Stewardship**

Alvin Qiqa Chua, BSc (Pharm) (Hons)1; Sarah Si Lin Tang, BSc (Pharm) (Hons)1; Shun Yi Ng, MBBS, FCP3; Winnie Lee, BPharm (Hons), MSc (Epi)4; Eleanor Jing Yi Cheong, BSc (Pharm) (Hons)1; Liwen Loo, BSc (Pharm) (Hons)1; Yovonne Puan Zhe Zhou, BSc (Pharm) (Hons)1; Nathalie Grace Sy Chua, BSc (Pharm) (Hons)1; Cheryl Li Ling Lim, MSc Infectious Diseases1; Maciej Piotr Chlebicki, MBBS, ABIM2; Ban Hock Tan, MBBS, FRCP (UK) and Andrea L. Kwa, PharmD1,4; Pharmacy, Singapore General Hospital, Singapore, Singapore, 2Department of Anaesthesiology, Singapore General Hospital, Singapore, Singapore, 3Department of Infectious Diseases, Singapore General Hospital, Singapore, Singapore, 4Duke-National University of Singapore Medical School, Singapore, Singapore, 5Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore, Singapore

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**Background.** Invasive candidiasis (IC) is a severe infection in which diagnosis is challenging and often made late in the course of infection. Patients with delayed initiation of antifungals have high mortality risk; physicians tend to start empirical therapy at earliest clinical suspicion of IC. Excessive use of antifungals worsens selection pressure for resistance. Thus, alternative ways to aid antifungal stewardship are highly
relevant. We aimed to evaluate performance of (1–3)-β-D-glucan (BDG) serial testing for antifungal stewardship to improve antifungal prescribing and to stop unnecessary use without compromising care.

Methods. This was a prospective observational study on patients at high risk of IC. Adults with recent intra-abdominal surgery, admitted to surgical intensive care unit (ICU), and prescribed an antifungal for suspected IC were included. Blood samples were taken at start of and days 3, 7, 10, 14, and weekly thereafter until antifungal is stopped, for BDG quantification with Fungitell assay. Medical records were reviewed for patient characteristics, antifungal regimen and outcomes. BDG was evaluated against clinical and microbiological outcomes. Sensitivity, specificity, positive and negative predictive values of BDG and Candida score were evaluated.

Results. We included 15 patients and 74 BDG levels. Patients with confirmed IC from cultures had a median BGD of >500 pg/mL and Candida score of 5, compared with 55.5 pg/mL and score of 2 in those without confirmed IC. BDG assay anticipated diagnosis of IC with a sensitivity and specificity of 100% and 96%, with a positive and negative predictive value of 84% and 100% respectively. Of the five patients with confirmed IC, two had declining BDG, corresponding to clinical response to therapy. Their BDG were <80 pg/mL on day 7 and 14 of therapy, respectively, and were discharged from ICU, but one later had septic shock with Klebsiella pneumoniae bacteremia and died. Repeat fungal cultures were negative. The remaining three had persistently high BGD of >500 pg/mL and eventually died. No obvious trend was observed in those without confirmed IC.

Conclusion. We were able to characterise BDG levels in patients at high risk of IC. There is utility in BGD serial testing as a tool for antifungal stewardship, however more data is required to confirm findings.

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2074. Frequent False-positive Bronchoalveolar Lavage Galactomannan Values in a Real-world Setting

Audrey Le, MD1; Nour Ismail, MD2; David Kubasik, PharmD3; Dimitrios Farmakiotis, MD4 and Sophia Koo, MD, FIDSA5

1 Internal Medicine, Warren Alpert Medical School of Brown University, Providence, Rhode Island, 2 Division of Infectious Diseases, Brigham and Women’s Hospital, Harvard Medical School, Boston, Massachusetts, 3 Division of Infectious Diseases, Warren Alpert Medical School of Brown University, Providence, Rhode Island

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Background. Galactomannan (GM) is a major component of the fungal cell wall. BAL GM is one of the mycologic criteria for diagnosis of probable IA, but it is frequently positive in patients with Aspergillus airway colonization, and its specificity has not been well-studied. We aimed to estimate the specificity of a positive BAL galactomannan value in a contemporary cohort of patients with BAL GM checked as part of their workup for potential IA.

Methods. We reviewed clinical and microbiological data of patients who had at least one positive BAL GM (≥0.5), at Brigham and Women’s Hospital from November 2009 to March 2016. We applied EORTC/MSG IMI definitions to classify patients as having possible, probable or proven IMI, excluding BAL GM result as mycologic criterion.

Results. We studied 134 patients. Median age was 58; 49% were women. 54% had hematologic malignancy (HM), 26% solid organ (SOT) and 34% hematologic malignancy (HM). 10% were SOT and 34% hematologic malignancy (HM). 6 patients (16%) died (38%, 6/16, Fischer’s test). Our goal was to estimate the specificity of a positive BAL galactomannan value in adults with recent intra-abdominal surgery, admitted to surgical intensive care unit (ICU).

Conclusion. We were able to characterize BDG levels in patients at high risk of IC. There is utility in BGD serial testing as a tool for antifungal stewardship, however more data is required to confirm findings.

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2075. First Nine Cases of Candida auris Infection Reported in Central America: Implications of Acute Diagnosis and Susceptibility Testing

Ana Belen Arauz Rodriguez, MD1; Diego H. Caceres, MSc2; Erika Santiago, Microbiologist1; Paige Armstrong, MD MHS3; Amalia Rodriguez French, MD4; Susan Arosena, MD4; Carolína Ramos, RN1; Andrea Espinosa-Bode, MD4; Jovanna Borace, Microbiologist1; Lizbeth Hayer, MD4; Israel Cedeño, MD4; Nestor Sosa, MD5; Elizabeth L. Berkow, PhD6; Shawn R. Lockhart, PhD6; Brendan R. Jackson, MD, MPH47 and Tom Chiller, MD, MPH7; 8 Hospital Santo Tomas, Panama City, Panama, 9 Centers for Disease Control and Prevention, Atlanta, Georgia, 10 Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, Tennessee, 11 Ministry of Salud de Panama, Panama City, Panama, 12 Instituto Comemorativo Gorgias de Estudios de la Salud, Panama City, Panama

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Background. Candida auris is an emerging multidrug-resistant pathogen associated with high infections and mortality. This report describes the first 9 cases of C. auris in Central America in a hospital in Panama City, Panama, and highlights the challenges of accurate identification and methods for susceptibility testing.

Methods. Isolates initially identified at a Panama City acute care hospital during July–October 2016 as Candida haemulonii (a common misidentification for C. auris) or Candida species by Vitek 2 automated system (bioMérieux) were further characterized by molecular methods. Antifungal susceptibility testing was performed and results were compared between standard and reference methodologies. Patient demographic, clinical, and laboratory data were collected from the medical record.

Results. A total of 14 isolates from 9 hospitalized patients were confirmed as C. auris. Isolates were from urine (11), blood (1), catheter tip (1) and pleural fluid (1). Results of susceptibility testing were highly discrepant between automated and reference techniques for fluconazole (92% resistant vs. 77%, respectively) and amphotericin B (100% vs. 8%). Six (67%) patients were male, and the mean age was 53 years (range 28–72). All patients were admitted to the intensive care unit and were mechanically ventilated. Seven (78%) patients died.

Conclusion. C. auris is present in Central America. Healthcare facilities in the region should be vigilant for this concerning pathogen, particularly given challenges in its identification and need for infection control precautions. Although automated testing overestimated amphotericin B resistance, most initial isolates were susceptible by reference testing.

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2076. Low Yield of Routine Fungal Culture from Periprosthetic Joint Specimens

Lori Bourassa, PhD MPH1 and Andrew Bryan, MD, PhD2

1 Laboratory Medicine, University of Washington Medical Center, Seattle, Washington, 2 Department of Laboratory Medicine, University of Washington Medical Center, Seattle, Washington

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Background. Prosthetic joints may fail for a variety of reasons, including infection, which are estimated to occur in 1–2 percent of joint replacements. Bacterial and fungal cultures are commonly ordered on the same specimens, despite the rarity of fungal prosthetic joint infections. To evaluate the yield of fungal cultures from specimens collected from prosthetic joint revision procedures, we performed a retrospective analysis of culture positivity for orthopedic surgical specimens submitted for culture at our institution.

Methods. Microbiology culture results for all orthopedic surgical specimens collected from January 2016 through February 2017 were obtained from a laboratory information system. Bacterial and fungal culture results for each patient were matched by patient, date of specimen collection and accession number. Culture positivity was defined as growth of any microorganism on any piece of media used for fungal or bacterial media per each specimen submitted for culture.

Results. Over a 14-month period at our institution, the yield of fungal cultures from specimens collected from prosthetic joint revision procedures was evaluated. Over 800 specimens were submitted for culture, and only 1 of 861 fungal cultures ordered was positive for fungal growth (0.1%). One specimen from a shoulder revision grew Aurobasidium pullulans, a ubiquitous fungus that is a rare human pathogen. Direct exam of the specimen revealed no PMNs or organisms. No A. pullulans was isolated from eight other cultures from the same procedure. This organism was likely viewed as a contaminant as no anti-fungal therapy was initiated.

Conclusion. Over a recent 14-month period at our institution, the yield of fungal culture of orthopedic surgical specimens was exceedingly low (0.1% positivity). Importantly, yeasts such as Candida species, can readily grow on bacterial culture media, especially if incubation times are extended. Therefore, fungal culture from periprosthetic joint specimens should be limited unless there is strong clinical suspicion of fungal infection.

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2077. Experience with β-D-Glucan Assay for Diagnosis of Invasive Candidiasis in ICU Patients: Pilot Study from India

Nitin Bansal, MD1; Ram Gopalakrishnan, MD, MRCP AB (Internal Medicine), AB (Infectious Diseases), FIDSA1 and Nandini Sethuraman, MD2

1 Infectious Diseases, Apollo Hospitals, Chennai, India, 2 Microbiology, Apollo Hospitals, Chennai, India

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