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 continued 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.

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

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Background. The BACTEC Myco/F Lytic bottle (Becton Dickinson), along with the Wampole Isolator lytic centrifugation tube (Alere) are used to enhance recovery of fungal and mycobacterial organisms from blood. At our institution, one Isolator tube and two Myco/F Lytic bottles 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 Myco/F Lytic 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 bottle. Among these, 20 were fungi (Histoplasma capsulatum, n = 7, Candida sp., n = 7, filamentous fungi, n = 4, Cryptococcus neoformans, n = 1, other yeast, n = 1), 7 were mycobacterial species (Mycobacterium avium complex, n = 7) and 1 was an aerobic actinomycete (Streptomyces sp.). 7/15 (46.7%) of H. capsulatum isolates, 7/15 (46.7%) of M. avium complex isolates and 1/17 (5.9%) of C. neoformans isolates grew in the second Myco/F Lytic bottle only.

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.

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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

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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 empiric therapy at earliest clinical suspicion of IC. Excessive use of antifungals worsen selection pressure for resistance. Thus, alternative ways to aid antifungal stewardship are highly