BC collection time and the start of the first IV antibiotic dose. We considered *S. aureus*, all Gram-negative rods, β-hemolytic Streptococci and Enterococci as significant pathogens and coagulase negative Staphylococci, *S. viridans*, *Propionibacterium* sp., *Micrococcus* sp. and *Bacillus* sp. as contaminants hospital ransfers.

Results. The percentage of BC with significant growth was unchanged during the first hour after starting IV antibiotics, but declined significantly in the period 1–12 hours after IV antibiotics were started. The overall positivity rate before starting IV antibiotics was 1,646/20,867 (7.9%) of patients and declined to 112/3,490 (3.2%), $P < 0.0001$, in the 1–12 hour period afterwards, but did not decline to 0. Septic patients averaged 1,143/4,923 (23.2%) positive and declined to 65/728 (8.9%), $P < 0.0001$, while nonseptic patients averaged 503/15,944 (3.15%) positive before antibiotics and declined to 47/2,762 (1.7%) $P < 0.0001$, 1–12 hours after. It should be pointed out that these are group averages from different patient groups at each hourly time, rather than individual patients with blood cultures drawn serially.

Conclusion. We conclude that IV antibiotics dramatically reduce the likelihood of getting a positive blood culture, but not during the first hour of administration; however, the residual positivity rate remains high enough that blood cultures are still clinically worthwhile.

S. aureus%   GNR %   All Other significant bacteria%
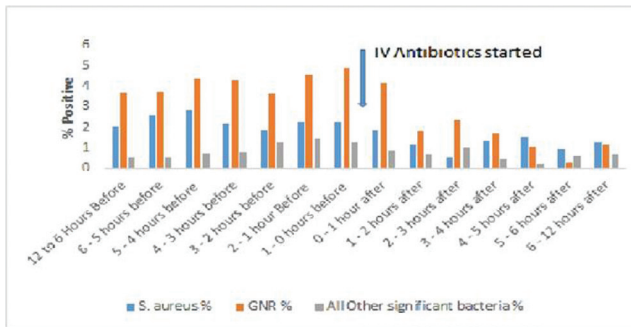
Disclosures. **All authors:** No reported disclosures.

1014. Microbiology and Outcome of Bloodstream Infections in Children With Intestinal Failure

Talal Seddik, MD[1]; Yvonne Maldonado, MD, FIDSA, FPIDS[1]; Colleen Nespor, RN, CNS[2]; John Kerner, MD[1] and Hayley Gans, MD, FPIDS[1]; [1]Pediatrics, Stanford University School of Medicine, Stanford, California, [2]Pediatrics, Stanford Health Care, Stanford, California

Session: 131. Bacteremia and Endocarditis
Friday, October 5, 2018: 12:30 PM

Background. Children with intestinal failure (IF) represent 20% of bloodstream infection (BSI) pediatric hospitalizations. We studied the microbiology and associated outcomes of this population.

Methods. Retrospective cohort study of children ≤18 years with IF dependent on parenteral nutrition (PN), with ≥1 BSI from January 2007 to December 2016. Organisms causing BSI were divided into skin or GI bacteria and fungi based on human habitat and kingdom. The impact of ethanol lock therapy (ELT) and clinical diagnosis of small intestine bacterial overgrowth (SIBO) on the type of these organisms was evaluated. Antimicrobial utilization and outcome measures for BSI were collected.

Results. There were 254 BSIs in 54 children resulting from GI bacteria (58%), skin bacteria (39%), and fungi (16%) with 11% containing >1 group. The proportion of skin bacteria was significantly higher on ELT (27% off vs. 45% on ELT; $P = 0.003$), while the proportion of GI bacteria was lower (67% off vs. 52% on ELT; $P = 0.018$). Significantly more fungal BSIs were seen in older children: mean age 4.2 years (95% CI: 2.9–5.5) vs. 2.7 years (95% CI: 2.3–3) with other organisms; $P = 0.014$. Fungal BSIs were more common with SIBO (18% vs. 5% with and without SIBO; $P = 0.013$). Twenty-eight organisms were resistant to ceftazidime, and five to cefepime. Hospitalization days totaled 2,432 (median 8 days), with 21 pediatric critical care admissions totaling 156 days. There were six deaths, none related to BSI, 18/54 children were weaned off PN, and four had liver and intestinal transplants. Median course of antimicrobial therapy was 14 days.

Conclusion. The majority BSIs in children resulted from GI bacteria, suggesting intestinal translocation; these infections were not less common in older children despite increased intestinal mass, signifying continued translocation. BSI with GI organisms was not more common in children with SIBO despite increased intestinal bacterial load, possibly due to antibiotic suppressive therapy, which instead lead to more fungal BSIs. Prevention of BSI by ELT was less effective for skin bacteria which may require different regimens or strategies. BSI causes frequent and prolonged hospitalizations including need for intensive care, but deaths are rare.

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

1015. Enhanced Detection of Bloodstream Pathogens From Positive Blood Culture Specimens With an Improved Multiplex PCR Molecular Diagnostic System

Jeremy Green, BS; Caitlin Carter, BS; Craig Chandler, BS; Angela Clark, BS and Stephanie Thatcher, MS; BioFire Diagnostics, LLC, Salt Lake City, Utah

Session: 131. Bacteremia and Endocarditis
Friday, October 5, 2018: 12:30 PM

Background. Timely bloodstream infection (BSI) pathogen identification requires robust sample purification and testing methods that can accommodate the wide variety of blood culture media used for growing positive blood culture (PBC) specimens. Sensitive molecular methods are needed for identification of all organisms present in PBD, especially polymicrobial cultures which can be difficult to identify with standard methods. Multiple types of BD and BioMérieux blood culture media commonly used in hospital laboratories were used to evaluate the performance of a prototype BioFire® FilmArray® Blood Culture Identification 2 (BCID2) Panel with PBCs.

Methods. Fungi (seven) and bacteria (19) were independently seeded in blood samples, inoculated into as many as eight different types of blood culture bottles, and incubated on the recommended instrument. Time to positivity (TTP) was recorded for all PBCs. Subsets of PBCs were enumerated and tested on the BioFire BCID2 Panel and BioFire® FilmArray® Blood Culture Identification (BCID) panel. Polymicrobial testing was performed by seeding fast and slow growing organisms into the same bottles.

Results. Over 750 PBCs were enumerated; ~500 PBCs were tested on the BioFire BCID2, and over 200 were also tested on the BioFire BCID. 100% of seeded PBCs tested on the BioFire Panels resulted in correct pathogen identification. Across all bottle types, fungi grew to levels ranging from 8E+05 to 5E+07 CFU/mL, Gram-positive bacteria titers ranged from 7E+06 to 2E+09, and Gram-negative bacteria titers ranged from 9E+07 to 3E+09. Polymicrobial PBCs (30) had reduced titers of slow growing organisms when seeded with fast growing organisms but were detected by both BioFire BCID Panels at a rate of 99%.

Conclusion. This study demonstrates that a prototype BioFire BCID2 Panel, and the BioFire BCID Panel, robustly detect and identify (100%) BSI pathogens over a multitude of common blood culture media and systems. Results confirm PBC (single and polymicrobial) titers are above the levels of sensitivity for both BioFire panels. An expanded menu of targets (organism and resistance) and faster run time with the BioFire BCID2 Panel will offer a flexible and comprehensive aid in the diagnosis of BSIs. The BioFire® BCID2 Panel has not yet been evaluated by the FDA or other regulatory agencies for *in vitro* diagnostic use.

Disclosures. **J. Green**, BioFire Diagnostics, LLC: Employee, Salary. **C. Carter**, BioFire Diagnostics, LLC: Employee, Salary. **C. Chandler**, BioFire Diagnostics, LLC: Employee, Salary. **A. Clark**, BioFire Diagnostics, LLC: Employee, Salary. **S. Thatcher**, BioFire Diagnostics, LLC: Employee, Salary.

1016. Bloodstream Infection Survey in High-Risk Oncology Patients (BISHOP) With Fever and Neutropenia (FN): Predictors for Morbidity and Mortality

Alison G. Freifeld, MD[1]; Andrea Zimmer, MD[2]; Christopher Arnold, MD[3]; John W. Baddley, MD[4]; Pranatharthi Chandrasekar, MD[5]; Zeinab El Boghdadly, MBBCh[6]; Eileen K. Maziarz, MD[7]; Jose G. Montoya, MD, FIDSA[8]; Steven Pergam, MD, MPH, FIDSA[9]; Kenneth V. Rolston, MD[10]; Gowri Satyanarayana, MD[11]; Shmuel Shoham, MD[12]; Lynne Strasfeld, MD[13]; Randy Taplitz, MD[14]; Thomas J. Walsh, MD, PhD[15]; Jo-Anne Young, MD[16]; Yuning Zhang, PhD[17] and Jane Meza, PhD[2]; [1]Division of Infectious Diseases, University of Nebraska Medical Center, Omaha, Nebraska, [2]UNMC, Omaha, Nebraska, [3]Infectious Diseases and International Health, University of Virginia, Charlottesvill, Virginia, [4]University of Alabama at Birmingham, Birmingham, Alabama, [5]Infectious Diseases, Wayne State University, Detroit, Michigan, [6]Department of Internal Medicine, Division of Infectious Diseases, The Ohio State University Wexner Medical Center, Columbus, Ohio, [7]Division of Infectious Diseases, Duke University Medical Center, Durham, North Carolina, [8]Department of Medicine, Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, California, [9]Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, Washington, [10]Department of Infectious Diseases, Infection Control, and Employee Health, The University of Texas MD Anderson Cancer Center, Houston, Texas, [11]Infectious Diseases, Vanderbilt University Medical Center, Nashville, Tennessee, [12]Washington Hospital Center, Washington, DC, [13]Division of Infectious Disease, Oregon Health & Science University, Portland, Oregon, [14]Division of Infectious Diseases, University of California San Diego Health Centers, San Diego, California, [15]Department of Medicine, Division of Infectious Diseases, Weill Cornell Medicine of Cornell University, New York, New York, [16]University of Minnesota, Minneapolis, Minnesota, [17]University of Nebraska Medical Center, Omaha, Nebraska

Session: 131. Bacteremia and Endocarditis
Friday, October 5, 2018: 12:30 PM

Background. Blood stream infection (BSI) during neutropenia is associated with high risk for morbidity and mortality in patients with hematologic malignancies receiving chemotherapy or undergoing hematopoietic cell transplant (HCT). We sought to identify factors associated with increased risk for critical illness (CI) morbidities within 7 days of BSI with index FN following chemotherapy.

Methods. A prospective ongoing survey among 14 high-volume US cancer centers submitting clinical and microbiologic data from consecutive HM patients with blood stream infection (BSI) during first FN after cytotoxic chemotherapy or HCT. We evaluated factors influencing poor outcomes defined as critical illness (need for pressor support, mechanical ventilation, new pneumonia or new BSI) within 7 days of BSI with index FN. Concordance between antibiotic and BSI isolate was determined by investigator (AZ, AF) interpretation of susceptibility reports provided by each center compared with the initial antimicrobial regimen (IAR) used, for single organism bacteremias only.

Results. Among 294 FN bacteremic episodes (93 HCT) were 336 bacterial pathogens (48.5% Gram-negative [GN], 46.5% Gram-positive [GP], and 6% anaerobes). Death occurred in 11/294 (4%) and 41/294 (14%) had CI by day 8. At FN presentation,