Development and Characterization of a Synthetic DNA, NUversa, to Be Used as a Standard in All Quantitative PCR Reactions for Molecular Pneumococcal Serotyping

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Results. 210 urine samples were tested. After 3 hours of incubation on the BacterialIScan, 70 (33.3%) and 140 (67.7%) urine samples were reported as positive and negative for bacterial growth, respectively. 136/140 (97.1%) of the negative samples were either no growth (67.6%) or insignificant (32.4%) growth by culture. The remaining 4 (2.9%) were catheter (3) or surgical (1) samples that grew <10K CFU/mL without urease while the assay LOD was 4,000 CFU/mL. Comparing RAT plus CS to RAT alone, the addition of CS did not significantly increase the odds of culture positive GAS pharyngitis for young age group were 2.00 (CI 1.06–3.88, P = 0.023). RAT alone was 75.4% sensitive and 88.0% specific. Comparing adults 18–44 years and ≥ 45 years, odds of culture positive GAS pharyngitis was detected one day prior to blood culture in one patient. These 30 days prior to targeted testing in a second patient. These two cases highlight the potential of plasma NGS to detect pathogens in SCT patients early when used as a monitoring tool.

Conclusion. Karius has developed a novel NGS plasma test that can simultaneously identify pathogens in SCT patients. The test had 100% concordance with CMV qPCR above the lower level of quantitation. Further work is ongoing to determine the lower limits of detection for the plasma NGS test. Using NGS to monitor SCT patients for infection could permit earlier detection of pathogens, enabling earlier targeted therapy for this vulnerable population.

2094. Futility of Center Score (CS) for Predicting Group A Streptococcal (GAS) Pharyngitis in an Adult Hyper-endemic Native American (NA) Population Ryan Close, MD, MPH1 and James M. McAuley, MD, MPH, DTM&H, FIDSA1,2 1Indian Health Services, Whiteriver, Arizona; Pediatrics, University of Pennsylvania, Philadelphia, Pennsylvania, 2Rush Medical College, Chicago, Illinois

Disclosures. All authors: Employee, Salary; Ryan Close, MD, MPH1; James M. McAuley, MD, MPH, DTM&H, FIDSA2

Methods. A prospective study was conducted in a retrospective cohort of American Indian and Alaska Native youth aged 6–18 years between 2016 and 2018. GAS pharyngitis was defined as positive GAS culture and/or a positive lateral flow test for GAS. Positive GAS culture for adults was defined as ≥ 100 colony forming units/mL of throat swab, while ≥ 10 colony forming units/mL was considered positive for children. A CS was assigned to each patient with GAS pharyngitis if present on file:

- Low Risk: < 1
- Moderate Risk: ≥ 1 – < 6
- High Risk: ≥ 6

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