Results. 210 urine samples were tested. After 3 hours of incubation on the BacterioScan, 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 growth on the assay's LOD. 33/70 (47.1%) samples were tested on the 216R AST System; 37/52.9% samples omitted by curve analysis showed no or questionable significant growth by culture. Comparator data were available for 26/33 samples. Amplification and ceftriaxone demonstrated categorical agreement of 100%, while ceftazidime and ciprofloxacin had 96% and 88% agreement, respectively, with 4% major errors for cefazolin and 12% minor errors for ciprofloxacin.

Conclusion. The 216R AST System could be used as a screening platform to rule out UTIs within 3 hours, with AST available after an additional 2-6 hours for suspect UTI positive samples. This could potentially prevent unnecessary antibiotic therapy. Preliminary data are promising but testing of additional clinical samples is warranted.

Disclosures. A. Tomaras, BacterioScan, Inc: Employee, Salary; Aachoeng, Consultant, Consulting fee Spero Therapeutics: Consultant, Consulting fee Spero Therapeutics: Consultant, Consulting fee Spero Therapeutics: Consultant, Consulting fee Spero Therapeutics: Consultant

2092. Development and Characterization of a Synthetic DNA, NVersus, to Be Used as a Standard in All Quantitative PCR Reactions for Molecular Pneumococcal Serotyping

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Session: 237. Diagnostics - Novel Diagnostics Saturday, October 7, 2017: 12:30 PM

Background. Identification of Streptococcus pneumoniae (Snp) and its more than 90 serotypes is routinely conducted by culture and Quellung reactions. Quantitative (q)PCR was developed for molecular detection, including for lyt assay, and assays targeting 78 serotypes. Reactions require genomic DNA from every target to prepare standards, which can be time consuming. In this study we developed a synthetic DNA molecule as a surrogate for genomic DNA and present new single-plex qPCR reactions to increase molecular detection to 94 pneumococcal serotypes.

Methods. Single-plex qPCR reactions (N=11) that detect 16 pneumococcal serotypes/serogroups were developed and concentration of primer and probe optimized for the obtained limit of detection (LOD) was between 2 and 20 genome equivalents/mL. Specificity of these new reactions was confirmed, and after optimization, a synthetic DNA (pNUversa, ~8.2 kb) was then engineered to contain all available qPCR targets for serotyping and lyt assay, and assays targeting 78 serotypes. Samples. Ampicillin and ceftriaxone demonstrated categorical agreement of 100%, while ceftazidime and ciprofloxacin had 96% and 88% agreement, respectively, with 4% major errors for cefazolin and 12% minor errors for ciprofloxacin.

Conclusion. The 216R AST System could be used as a screening platform to rule out UTIs within 3 hours, with AST available after an additional 2-6 hours for suspect UTI positive samples. This could potentially prevent unnecessary antibiotic therapy. Preliminary data are promising but testing of additional clinical samples is warranted.

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2094. Futility of Centor Score (CS) for Predicting Group A Streptococcal (GAS) Pharyngitis in an Adult Hyper-endemic Native American (NA) Population

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Background. Prevalence of GAS pharyngitis among adults is 5% to 15% in the general population. Methods using clinical criteria and laboratory to diagnose GAS have not been evaluated in Native American (NA) populations with a higher prevalence than the general population.

Methods. Prompted by an apparent increase (10–15× above national rates) in incidence of GAS among adults in 2016 in an urban NA tribe, we began a prospective epidemiologic study of GAS. Part of this evaluation included GAS pharyngitis. From January to March 2017, we collected a Centor score (CS), throat swab for culture and rapid antigen test (RAT) for all adults ≥18 years presenting with sore throat. For comparison, we also reviewed our electronic health record (EHR), identifying all adults with RAT on file from July to December 2016.

Results. From July to December 2016, 224 (33.5%) adults with sore throat had a positive RAT. From January to March 2017, 268 adults had RAT and culture performed: 86 (32.1%) and 85 (31.7%) were positive by RAT and culture, respectively. Comparing adults 18–44 years and ≥ 45 years, odds of culture positive GAS pharyngitis for young age group were 2.00 (CI 1.6–3.88, P = 0.023). RAT alone was 75.4% sensitive and 88.0% specific. Comparing adults18–44 years to ≥ 45 years, RAT alone was less sensitive (70.1% vs. 94.4%) and less specific (86.6% vs. 90.6%) in the younger group. Comparing RAT plus CS to RAT alone, the addition of CS did not significantly change specificity (91.3% vs. 88.0%) or sensitivity (74.7% vs. 75.3%). A higher CS increased the odds of a positive GAS culture. Tonsillar exudates (89.9%) and fever (51.9%) were the most and least sensitive criteria, respectively. Absence of cough (50%) and age ≥ 45 years (33.9%) were the least and most specific criteria, respectively.

Conclusion. GAS was confirmed in > 30% of cases by RAT on both retrospective review of the EHR and prospectively via RAT or culture. These rates are significantly higher than what is reported in general population. Young age was associated with culture positive GAS. The high sensitivity of exudates and high specificity of absence of cough indicates these criteria may be helpful in deciding which adults are most likely to have GAS. Higher CS did increase odds of GAS positive culture, but the addition of CS to RAT did not significantly alter sensitivity or specificity in this population.

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2095. How Can We Do Better? Experience of Hepatitis C Testing for Baby Boomers (1945–1965) in Six Primary Care Clinics

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Background. Non-interferon based treatment regimens have transformed the therapeutic paradigm for hepatitis C infection. Universal one-time hepatitis C anti-body testing is recommended by the Centers for Disease Control (CDC) Guidelines.