analyzed. Relevant FCI results of the corresponding bone marrow biopsy samples were also retrieved and analyzed. All FCI was performed using BD FACSCalibur/ FACSCanto with a four-color antibody panel, and the listmode data were analyzed by BD FACSDiva.
Results: FCI was performed on a total of 1,621 HPC-A samples in our laboratory from 02/01/2012 to 02/02/2018. A total of 58 HPC-A samples were positive for a monoclonal plasma cell population (3.8% of the total sample). Among those positive samples, 55 had bone marrow biopsy done before or after HPC-A collection: 38 within a month, 8 between 1 and 2 months, and 9 between 3 and 6 months. Fifty-four of 55 bone marrow samples were positive for a monoclonal plasma cell population by FCI.
Conclusion: The utility of FCI in the quality assessment of HPC-A products from patients with multiple myeloma is a very limited when FCI is performed on a bone marrow biopsy obtained within 6 months of HPC-A collection.

Verification of a Novel Multiplex PCR Respiratory Virus Panel in a US Biocontainment Unit

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Emerging infectious diseases carry unique logistical, financial, and clinical ramifications. Rapid diagnostic testing methods can alleviate some of these challenges by providing definitive diagnoses earlier in the clinical course, leading to appropriate targeted therapy, cost savings, and improved patient outcomes. The BioFire FilmArray Respiratory Panel 2 *plus* (RP2*plus*; bioMérieux, Marcy l'Etoile, France) is a multiplexed nucleic acid test for detection of Middle East respiratory syndrome coronavirus (MERS-CoV) and 14 common viral and 4 bacterial respiratory pathogens in nasopharyngeal swabs obtained from those meeting MERS-CoV epidemiological criteria. The aim of this study was to verify the FilmArray RP2*plus* for use in our biocontainment unit. Of note, the RP2*plus* is FDA approved but not currently available for sale in the United States. Eight patient samples were tested with known results (GenMark Respiratory Virus Panel [RVP] or Cepheid Xpert Flu/RSV). We had concordant results between the platforms for samples containing influenza A, respiratory syncytial virus (RSV), parainfluenza virus 2, rhinovirus, and a negative sample. We evaluated two influenza B samples from two different patients. The FilmArray RP2*plus* did not detect influenza B in one of the patient samples. The sample was exhausted and repeat testing could not be performed. A second rhinovirus sample was not detected by the RP2*plus*, but Coronavirus 229E was detected in this sample, a virus not detected by the RVP. The sample was repeated and again did not detect rhinovirus. Further investigation into this discrepancy revealed that rhinovirus was originally detected by RVP at a signal of 34.4 nA (repeat of 46.9 nA). The concordant rhinovirus sample had a signal of 226.7 nA by RVP, which was much higher than the discrepant sample. Because of the low signal by RVP in the discrepant sample, perhaps the viral load was below the limit of detection of the RP2*plus*. All other quality control sample pools passed verification testing, including day-to-day and operator variance. It is not uncommon for a person under investigation (PUI) for a highly communicable disease to be evaluated in our facility. The performance of the RP2*plus* test on clinical samples showed acceptable concordance with our current means of testing for respiratory pathogens. The RP2*plus* will eliminate challenges implicated in storing and transporting specimens to an off-site lab, facilitate quicker turnaround time, and streamline the often cumbersome, complex protocols and practices required to work up a serious communicable disease.

Differences of Ionized Calcium Concentrations in Continuous Renal Replacement Therapy Among Three Analyzers

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Continuous renal replacement therapy (CRRT) is a standard of care for critically ill patients according to the guidelines for Kidney Disease Improving Global Outcomes Clinical Practice. Within the CRRT dialysis instrument, blood requires anticoagulation with citrate with a goal to have ionized calcium (iCa) <0.4 mmol/L. In our hospital system, nephrologists who manage the therapy rotate through these hospitals, although in each of the hospitals, instruments that measure iCa are different. The objective of this study was to demonstrate the differences in measurement by these instruments.
Method: Twelve patient samples were drawn in triplicate and compared in the three different analyzers: RAPIDPoint, Nova Biomedical, and GEM4000 analyzers. One of the analyzers uses whole blood while the other two measure iCa in plasma. In one of the facilities, samples were spun, decapped, sent to the automated line outlet, and tested after having been exposed to air, and thus an experiment in another facility decapped the specimens for an hour and retested.
Results: Postfilter iCa measurements ranged from 0.18 to 0.64 mmol/L; however, range was different for each of the instruments: The Nova measurements averaged 0.55 mmol/L (range 0.42-0.64), the Rapid Point 0.36 (0.28-0.45), and the GEM 0.30 (0.18-0.39). The average difference between results of the Nova and GEM was 0.25 mmol/L, between Nova and RAPIDPoint

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