Results. A total of 134 participants were randomized to each treatment group. Demographics and baseline characteristics were generally well balanced between treatment groups (Table 1). The median (range) age in the ITT population was 50 (18-75) years and 61% were men. The most frequent sites of infection were the appendix (C/T + MTZ, 50.0%; MEM + pbo, 49.3%) and gallbladder (C/T + MTZ, 27.6%; MEM + pbo, 28.1%). Overall, the most frequently isolated pathogens were Escherichia coli (61.4%) and Klebsiella pneumoniae (17.3%); few anaerobes were isolated (Table 1). C/T + MTZ was non-inferior to MEM + pbo for clinical cure in the CE population (C/T + MTZ, 95.2%; MEM + pbo, 93.1%; difference, 2.1% [95% CI, −0.7% to 8.8%]). Results for key secondary endpoints were comparable between treatment groups (Table 2). Rates of AEs were generally similar between treatment groups (Table 3).

Conclusion. C/T + MTZ was non-inferior to MEM + pbo in the treatment of adult Chinese participants with cIAI and demonstrated a favorable safety profile.

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111. Duration of Antibiotic Therapy after Debridement and Implant Retention in Patients with Periprosthetic Joint Infections
Don Bambino Geno Tai, MD, MBA,1 Elie Berbari, MD,1 Matthew P. Abdel, MD,1 Brian Lahr, MS,2 Aaron J. Tande, MD,1 1Mayo Clinic, Rochester, Minnesota Session: O-23. New Developments in Antibiotic Efficacy Background. Debridement, antibiotics, and implant retention (DAIR) is appropriate for select acute postoperative and hematogenous periprosthetic joint infections (PJIs). However, the optimal duration of antimicrobial therapy in patients treated with DAIR has not been defined. Therefore, we aimed to identify the ideal duration of parenteral and oral antibiotics after DAIR.

Methods. We performed a retrospective study of patients >18 years of age with hip or knee PJI managed with DAIR between January 1, 2008, and December 31, 2018, at Mayo Clinic. PJI was defined using criteria adapted from the International Consensus Meeting on PJI. The outcome was defined as either PJI recurrence or unplanned reoperation due to infection. Joint-stratified Cox proportional hazards regression models with time-dependent covariates were used to assess nonlinear effects of antibiotic duration. Hazard ratios were computed based on prespecified time points for comparison, whereas p-values represented the overall effect across the entire range of durations.

Results. There were 247 unique episodes of PJI in 237 patients during the study period. Parenteral antibiotics were given in 99.2% of cases (n=245). This was followed by chronic oral antibiotic suppression in 92.2% (n=226) with a median duration of 2.2 years (1.0-4.1).

DAIR failed in 65 cases over a median follow-up of 4.4 years, with a 5-year cumulative incidence of 28.1%. After adjustment for risk factors, there was no significant association between duration of parenteral antibiotics and treatment failure (p=0.203), with no difference between four versus six weeks (HR 1.11; 95% CI 0.71-1.75) (Figure 1). However, both use and longer duration of oral antibiotic therapy was associated with a lower risk of failure (p=0.006). To account for the possibility that this association was driven by results during early follow-up, conditional analyses at one- and two-year follow-up were performed. Both showed a significantly lower risk for a longer duration of antibiotics (Figure 2).
Conclusion. After DAIR, efficacy from four weeks of parenteral antibiotics was no different from six weeks when followed by chronic oral antibiotic suppression. Our results could not establish an optimal duration but suggested that continuing suppression portends a lower risk of failure of DAIR.

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112. A Rapid Host-Protein Signature Based on TNF-related Apoptosis-Induced Ligand (TRAIL), Interferon Gamma Induced Protein-10 (IP-10) and C-Reactive Protein (CRP) Accurately Discriminates Between Bacterial and Viral Infection in Febrile Children: Apollo Sub-Study

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Session: O-24. New Developments in Infectious Diseases Diagnostics

Background. Identifying infectious etiology is essential for appropriate patient management, including antibiotic use. A host protein signature for differentiating bacterial from viral infection has exhibited robust performance (AUC of 0.9, 95% CI 0.86-0.95) in prior studies. Performance data was lacking for a broad pediatric population recruited in emergency departments (EDs) and urgent care centers (UCCs).

Methods. Non-immunocompromised children were recruited prospectively from 5 EDs and 3 UCCs in the U.S. and 1 ED in Israel between May 2019 and August 2020. Eligibility required physician’s clinical suspicion of acute infection and reported fever. Reference standard etiology was adjudicated by experts based on clinical, laboratory, radiological, microbiological and follow-up data. For the primary analysis, experts blinded to one another, to the host-signature results and also to procollagen III, CRP, classified cases as bacterial or viral. For the secondary analysis, experts blinded to one another and the host signature results, were permitted to classify cases as bacterial, viral or indeterminate; indeterminates were removed from the secondary analysis. Host signature (comprising TRAIL, IP-10 and CRP; MeMed BV®) was measured using a rapid platform (MeMed Key®) generating a bacterial likelihood score (0-100) in 15 minutes.

Results. The study cohort comprised 162 children (median age, 5.5 yrs; interquartile range, 8.5), of whom 69 (43%) presented within 2 days of symptom onset and 37 (23%) were hospitalized for a median of 3 days. Respiratory trac infection was the predominant syndrome (11% lower and 44% upper). Host signature attained AUC 0.87 (0.74-1) and 0.92 (0.79-1) in the primary and secondary analysis, respectively. With higher the signature score, there was a significantly higher likelihood of bacterial infection (p< 0.001; Table 1). The 3 bacterial infections assigned score < 35 (false negative) would have been identifiable by physical examination (Table 2).

Conclusion. The host-protein signature measured using a rapid platform attained robust performance in differentiating bacterial vs viral infection in children with acute febrile illness, supporting its potential to enhance rational use of antibiotics in the ED and UCC.

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113. Reliability of Nasopharyngeal PCR for the Detection of Oto pathogens in Children with Uncomplicated Acute Otitis Media

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