for ACM or CR; this was not unexpected, since the trial showed non-inferiority of the two HABP/VABP therapies. No interactions between the significant predictors and treatment arm were observed.

Conclusion. This analysis validated known predictors for mortality and clinical outcomes in pts with HABP/VABP and supports the main study results by showing no interactions between predictors and treatment arm.

Table 1. Candidate baseline variables pre-selected for inclusion

Treatment arm: IMI/REL vs. PIP/TAZ	Concurrent bacteremia with any pathogen: Yes vs. no
Patient age: <65 vs. ≥65 years old	Number of LRT pathogens: Monomicrobial vs. polymicrobial vs. none
Patient sex: Female vs. male	Renal impairment: None[a] vs. mild[b] vs. moderate/severe[c]
Patient race: White vs. non-White vs. missing	Renal function: Augmented renal clearance[d] vs. normal[e] vs. impaired[f]
Region patient was enrolled in: Americas vs. Asia-Pacific vs. Europe	Treatment duration: ≥7 vs. <7 days
Type of pneumonia: Nonventilated HABP vs. ventilated HABP/VABP	*K. pneumoniae*: Present vs. not detected
APACHE-II score: <15 vs. ≥15	*P. aeruginosa*: Present vs. not detected
CPIS: ≤5 vs. ≥6	*E. coli*: Present vs. not detected
Hospital service unit: Neurology vs. other	*A. calcoaceticus-baumannii* complex: Present vs. not detected
In ICU: Yes vs. no	

[a]Creatinine clearance ≥90 mL/min. [b]Creatinine clearance ≥60 to <90 mL/min. [c]Creatinine clearance ≥15 to <60 mL/min. [d]Creatinine clearance ≥150 mL/min. [e]Creatinine clearance ≥90 to <150 mL/min. [f]Creatinine clearance ≥15 to <90 mL/min.

Figure 1. Independent predictors of greater Day 28 all-cause mortality (MITT population; N=531)

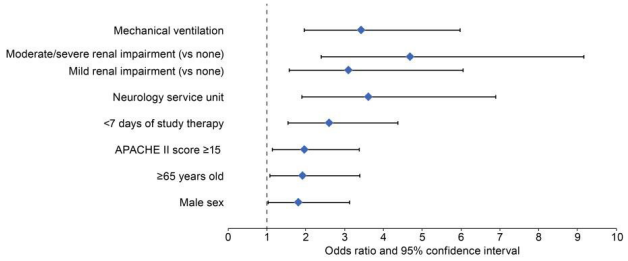
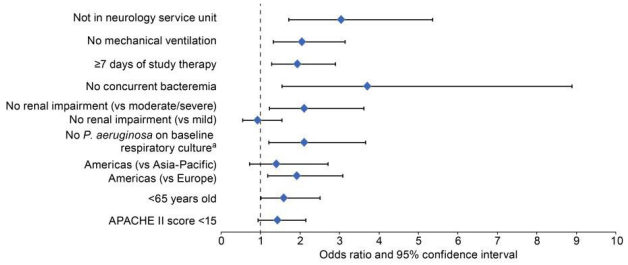


Figure 2. Independent predictors of favorable clinical response at EFU (MITT population; N=531)



[a]A total of 98 pts had no lower respiratory tract culture results.

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1575. Predictors of Negative Clinical Outcomes among Patients treated with Meropenem-Vaborbactam for Serious Gram-Negative Bacterial Infections: Impact of Delayed Appropriate Antibiotic Selection

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Session: P-71. Treatment of Antimicrobial Resistant Infections

Background. Numerous number of studies have found a positive correlation between delayed appropriate antibiotic therapy and negative clinical outcomes (NCO) in Gram-negative bacterial infections (GNBI). The combination of meropenem with vaborbactam (MVB) received Food and Drug Administration approval for the treatment of complicated urinary tract infections and acute pyelonephritis caused by susceptible organisms in August 2017. We sought to determine the impact of delayed appropriate therapy with MVB on NCO among patients with GNBI.

Methods. Multi-center, retrospective cohort study from October 2017 to March 2020. We included adult patients treated with MVB for >72 hours. We excluded patients who received alternative appropriate antibiotics for GNB prior to MVB and patients with unknown dates for index culture. NCO were defined as 30-day mortality and/or microbiological recurrence. All outcomes were measured from MVB start date. Classification and regression tree analysis (CART) was used to identify the time breakpoint (BP) that delineates the risk of NCO. Multivariable logistic regression analysis (MLR) was used to examine the independent association between the CART-derived-BP and NCO. Variables were retained in the model if P< 0.2 and removed in a backward stepwise approach.

Results. A total of 86 patients were included from 13 institutions in the United States: median(IQR) age 55 (37-67) years, 67% male, and 48% Caucasian. Median(IQR) APACHE II and Charlson Comorbidity index scores were 18(11-26) and 4(2-6), respectively. Common sources of infection were respiratory (37%) and intra-abdominal (21%). The most common pathogens were *carbapenem-resistant Enterobacterales* (83%). CART-derived BP between early and delayed treatment was 48 hours, where NCO was increased (36% vs.7%; P=0.04). Delayed MVB initiation was independently associated with NCO in the MLR (aOR=7.4, P=0.02).

Results of Regression Analysis of Variables Associated With Negative Clinical Outcomes and Delayed Appropriate Therapy with Meropenem-vaborbactam

Variable	Odds ratio, 95% confidence interval (CI)	Adjusted Odds Ratio
Respiratory infection source	7.6, [0.94 – 61.1]	11.2, [2.4 – 52.1]
Intensive care at index culture	11.2, [1.7-82.2]	14.4, [3.2 – 65.0]
Delayed MVB initiation (> 48 hours)	15.6, [1.5 – 165.6]	7.4, [1.4 – 40.3]

Conclusion: Our results suggest that delaying appropriate antibiotic therapy with MVB for >48 hours significantly increases the risk of NCO in patients with GNBI. Clinicians must ensure timely administration of MVB to assure best outcomes in patients with GNBI.

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1576. Re-Evaluation of cefepime or piperacillin-tazobactam to Decrease Use of Carbapenems in ESBL-Producing *Enterobacterales* BloodStream Infections (REDUCE-BSI)

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Session: P-71. Treatment of Antimicrobial Resistant Infections

Background. The ideal therapy for treatment of bloodstream infections (BSI) due to ESBL-producing organisms is widely debated. Although prior studies have demonstrated efficacy of non-carbapenems (CBPNs) for ESBL infections, results from the MERINO study group found increased mortality associated with piperacillin/tazobactam (PT) when compared with meropenem for treatment of ESBL BSI. The goal of this study was to investigate patient outcomes associated with the use of CBPN-sparing therapies (PT and cefepime (CEF)) for ESBL BSI. The primary outcome was in-hospital mortality between non-CBPN (PT and CEF) and CBPN groups. Secondary outcomes included clinical cure, microbiologic cure, infection recurrence, and development of resistance.

Methods. This was a retrospective observational study of patients admitted to the hospital from May 2016 - May 2019 with a positive blood culture for an ESBL-producing organism. Patients receiving meropenem, ertapenem, PT, or CEF were