ii) NACR. ACR included patients who received AMP at any time during treatment; other antimicrobials were permitted. NACR patients did not receive AMP at any time. The primary outcome compared desirability of outcome ranking (DOOR) between ACR and NACR at day 14. The DOOR consisted of six hierarchical levels: 1 - death; 2 - inpatient without microbiological cure (MC) and with acute kidney injury (AKI); 3 - inpatient without MC and without AKI; 4 - inpatient admitted with MC and with AKI; 5 - inpatient with MC and without AKI; 6 - alive and discharged. Comparison of DOORs between ACR and NACR was performed using inverse probability of treatment weighted (IPTW) ordered logistic regression.

Results: Seventy-one patients were included (ACR, n = 35; NACR, n = 36). No difference was seen in DOORs at day 14 between ACR and NACR (odds ratio [OR] 1.14, 95% Confidence Interval [CI] 0.45 – 2.92, p=0.78). No difference was observed for all-cause mortality at day 14 (OR 0.6, 95% CI 0.09 – 3.77, p=0.58) or day 30 (OR 0.42, 95% CI 0.09 – 1.94, p=0.27). Patients treated with ACR received a lower median duration of other antibiotics at any point during treatment compared to NACR: daptomycin (2 v 4 days) vancomycin (2 v 4 days), and linezolid (1 v 2 days).

Conclusion: Patients with cancer and *Efc* bloodstream infections had similar outcomes when treated with ACR and NACR. ACR were associated with less use of broad-spectrum antimicrobials. Future research should focus on the ecologic impact of use of NACR.

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274. Comparison of Cefazolin Susceptibilities of Enterobacterales with an Automated Susceptibility Testing Platform versus In Vitro Antimicrobial Testing

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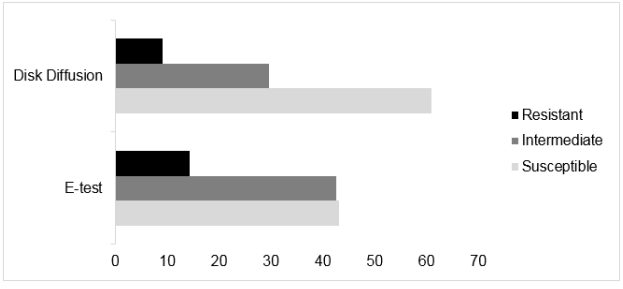
Session: P-9. Bacteremia

Background: The Clinical and Laboratory Standards Institute (CLSI) revised breakpoints for cefazolin (CFZ) may be difficult to implement with current automated susceptibility testing (AST) platforms and *Enterobacterales* may be falsely reported as susceptible to CFZ. The possibility remains that CFZ may then be inappropriately used as definitive therapy.

Methods: This was a retrospective observational cohort of adult patients with *Enterobacterales* bloodstream infections (BSI) reported CFZ susceptible per Vitek®2 (bioMerieux, Durham NC). The primary outcome was the percentage of CFZ susceptible *Enterobacterales* isolates using three different susceptibility testing methods: Vitek®2 automated testing, ETEST® (bioMerieux, Durham NC), and disk diffusion. Secondary outcomes included treatment failure defined as a composite outcome of 30-day all-cause inpatient mortality, 30-day recurrent BSI, 60-day recurrent infection, or infectious complications.

Results: In 195 isolates reported CFZ susceptible per Vitek®2, 84 (43.1%) were CFZ susceptible using E-test vs.119 (61%) using disk diffusion (Figure 1). Rates of treatment failure were similar in both CFZ and non-CFZ groups (33.3% vs. 38.5% respectively; p=0.57). Both groups had high rates of ID consult involvement (>60%) and source control (>80%) with urinary tract being the most reported source. No difference was noted in 30-day all-cause mortality, secondary infectious complications, 30-day readmissions, or 60-day recurrent infections. A subgroup analysis of patients receiving CFZ vs. ceftriaxone suggests treatment failure was significantly less likely to occur in the setting of source control (adjusted OR 0.06; 95% CI, 0.13–0.32) and ID consult

Figure 1: CFZ Susceptibilities by Testing Method



Conclusion: There was a large discrepancy among testing methods; additional confirmatory CFZ susceptibility testing beyond AST platforms should be considered prior to definitive use of CFZ for systemic *Enterobacterales* infections.

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275. Comparison of Cefazolin versus Nafcillin for Methicillin-Susceptible Staphylococcus aureus Bacteremia with a Deep-Seated Source

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Session: P-9. Bacteremia

Background: Historically, anti-staphylococcal penicillins have been the treatment of choice for methicillin-susceptible *Staphylococcus aureus* (MSSA) infections. However, cefazolin may have advantages over these agents including convenience and tolerability. Despite several studies finding similar rates of clinical efficacy using cefazolin with fewer adverse drug events, some prescribers remain hesitant to use this agent due to concern for an inoculum effect in deep-seated infections. The purpose of this study was to compare cefazolin and nafcillin for the treatment of MSSA bacteremia with exclusively deep-seated sources.

Methods: Adult patients who were admitted with MSSA bloodstream infections (BSI) treated with cefazolin or nafcillin between March 2017 and October 2019 were identified. Patients were included if their BSI had a deep-seated source, defined as endocarditis, osteomyelitis, septic arthritis, pneumonia, prosthetic material, mediastinitis, or abscess. Patients were excluded if they had polymicrobial BSI, central nervous system infection, or received less than 7 days of therapy. The primary efficacy outcome (PEO) was a composite of treatment failure, 60-day mortality, and 60-day infection relapse, and was assessed using multivariate logistic regression. The primary safety outcome (PSO) was discontinuation of therapy due to adverse drug events, which was assessed with a chi-square test.

Results: A total of 164 patients were included in this analysis (141 treated with cefazolin and 23 with nafcillin). There were no significant differences in the baseline characteristics collected (Table 1), and the most common deep-seated sources were prosthetic material and endocarditis. Treatment with nafcillin was not found to be protective against the PEO in multivariate analysis (aOR, 1.19; 95% CI, 0.42 to 3.39; $P = 0.75$), and the PSO was reached significantly more often among nafcillin recipients compared to those treated with cefazolin (7/23 [30.4%] versus 8/141 [5.7%], $P < 0.0001$).

Table 1. Characteristics of patients treated with cefazolin or nafcillin for MSSA BSI.

Characteristic	Cefazolin (n=141)	Nafcillin (n=23)	*P* value
Male, n (%)	84 (59.6)	15 (65.2)	0.608
Median age, years (IQR)	58 (21)	58 (23)	0.602
Race, %			0.133
White	61 (43.3)	13 (56.5)	
Black/African American	66 (46.8)	6 (26.1)	
Other/Unknown	14 (9.9)	4 (17.4)	
Source, %[a]			0.259
Endocarditis	37 (26.2)	11 (47.8)	
Osteomyelitis	24 (17.0)	3 (13.0)	
Pneumonia	20 (14.2)	1 (4.3)	
Abscess	22 (15.6)	3 (13.0)	
Prosthetic material	52 (36.9)	7 (30.4)	
Septic arthritis	25 (17.7)	3 (13.0)	
Mediastinitis	3 (2.1)	2 (8.7)	
Source control, n (%)	128 (90.8)	20 (86.9)	0.474
Adjunct therapy, n (%)	13 (9.2)	4 (17.4)	0.264
ID consult, n (%)	140 (99.2)	23 (100.0)	1.00

[a]Patients may have more than one source; total number of sources was 213.

Conclusion: Though the sample size was smaller than desired, cefazolin and nafcillin appeared to have similar efficacy for the treatment of MSSA BSIs with deep-seated sources. Nafcillin was associated with significantly more adverse drug events leading to discontinuation of therapy.

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276. Comparison of Ceftaroline in Combination with Either Vancomycin or Daptomycin for the Treatment of Methicillin-resistant Staphylococcus aureus Bacteremia

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Session: P-9. Bacteremia

Background: Recent studies have suggested that combination therapy may be preferred to monotherapy for select patients with methicillin-resistant *Staphylococcus aureus* bacteremia (MRSA-B); however, direct comparison between various combination regimens is lacking.

Methods: This was a multicenter, retrospective cohort study evaluating adult patients with MRSA-B who received vancomycin/ceftaroline (VAN+CPT) or daptomycin/ceftaroline (DAP+CPT) for at least 48 hours between April 1, 2017 and June 30, 2019. Patients with primary respiratory or central nervous system infections were excluded. The primary endpoint was rate of clinical success, defined as survival at 90 days, sterilization of blood cultures within 96 hours of combination therapy initiation, no perceived clinical failure requiring a change in MRSA-active therapy, and absence of recurrence. Secondary endpoints included time to culture clearance from combination therapy initiation, 30-day and in-hospital mortality, adverse events prompting antibiotic discontinuation, and hospital and intensive care unit length of stay.

Results: A total of 54 patients were included in the VAN+CPT group and 25 patients in the DAP+CPT group. Baseline characteristics were generally similar