Title: Impact of Ceftolozane-tazobactam vs. Best Alternative Therapy on Clinical Outcomes in Patients with Multidrug-Resistant and Extensively Drug-Resistant *Pseudomonas aeruginosa* Lower Respiratory Tract Infections

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Table S1. Bivariate Comparison of Baseline Demographics and Clinical Criteria Between Patients with and without Clinical Failure

| Characteristics                          | No Clinical Failure (n = 135) | Clinical Failure (n = 71) | P value |
|------------------------------------------|------------------------------|--------------------------|---------|
| Demographics                             |                              |                          |         |
| - Age in years, median (IQR)             | 60 (22.0)                    | 64 (18.0)                | .029    |
| - Age over 60 years                      | 65 (48.1)                    | 43 (60.6)                | .090    |
| - Male sex                               | 97 (71.9)                    | 47 (66.2)                | .400    |
| - BMI, median (IQR)                      | 24 (9.3)                     | 24 (8.9)                 | .573    |
| - XDR P. aeruginosa                      | 58 (43.0)                    | 28 (39.4)                | .626    |
| Race                                     |                              |                          |         |
| - African American                       | 72 (53.3)                    | 45 (63.4)                | .167    |
| - Caucasian                              | 51 (37.8)                    | 21 (29.6)                | .241    |
| - Hispanic                               | 3 (2.2)                      | 0 (0.0)                  | .553    |
| - Asian                                  | 0 (0.0)                      | 1 (1.4)                  | .345    |
| - Other/unknown                          | 9 (6.7)                      | 4 (5.6)                  | 1.000   |
| Severity of illness factors              |                              |                          |         |
| - Index culture collected in ICU         | 93 (69.4)                    | 45 (63.4)                | .382    |
| - SOFA score, median (IQR)               | 5 (3.0)                      | 7 (4.0)                  | .002    |
| - APACHE II score, median (IQR)          | 23 (10.0)                    | 27 (10.0)                | <.001   |
| - CCI, median (IQR)                      | 2.0 (3.0)                    | 2.0 (2.0)                | .001    |
| - AKI on admission                       | 40 (31.5)                    | 25 (38.5)                | .334    |
| Co-morbid conditions                     |                              |                          |         |
| - COPD                                   | 40 (29.6)                    | 30 (42.3)                | .069    |
| - Moderate to severe CKD                 | 30 (22.2)                    | 24 (33.8)                | .072    |
| - Chronic dialysis                       | 11 (8.1)                     | 9 (12.7)                 | .297    |
| - AKI                                    | 30 (22.2)                    | 20 (28.2)                | .344    |
| - MI                                     | 5 (3.7)                      | 5 (7.0)                  | .318    |
| - PVD                                    | 14 (10.4)                    | 8 (11.3)                 | .843    |
| - HF                                     | 27 (20.0)                    | 17 (23.9)                | .512    |
| - HIV                                    | 1 (0.7)                      | 2 (2.8)                  | .273    |
| - CVD                                    | 31 (23.0)                    | 23 (32.4)                | .144    |
| - Dementia                               | 15 (11.2)                    | 7 (9.9)                  | .782    |
| - Asthma                                 | 13 (9.6)                     | 2 (2.8)                  | .093    |
| - Connective tissue disease              | 13 (9.6)                     | 6 (8.5)                  | .781    |
| - Moderate or severe liver disease       | 2 (1.5)                      | 1 (1.4)                  | 1.000   |
| - Diabetes                               | 21 (15.6)                    | 13 (18.3)                | .613    |
| - Diabetes (with end-organ damage)       | 31 (23.0)                    | 19 (26.8)                | .546    |
| - Hemiplegia                             | 16 (11.9)                    | 6 (8.5)                  | .453    |
| - Tumor without metastasis               | 4 (3.0)                      | 3 (4.2)                  | .635    |
| - Tumor with metastasis                  | 8 (5.9)                      | 8 (11.3)                 | .173    |
| - Leukemia                               | 0 (0.0)                      | 1 (1.4)                  | .345    |
| - IV drug use                            | 7 (5.2)                      | 2 (2.8)                  | .722    |
| Immunosuppression factors                |                              |                          |         |
| - Neutropenia                            | 2 (1.5)                      | 15 (21.1)                | <.001   |
| - Solid organ transplant                 | 0 (0.0)                      | 1 (1.4)                  | .345    |
| - Chemotherapy within 90 days*           | 4 (3.0)                      | 6 (8.5)                  | .096    |
| - High dose corticosteroids              | 3 (2.2)                      | 2 (2.8)                  | 1.000   |
| MDR risk factors                         |                              |                          |         |
| - Antimicrobials within 90 days*         | 91 (67.4)                    | 45 (63.4)                | .562    |
| - Hospitalization within 90 days*       | 83 (61.5)                    | 46 (64.8)                | .653    |
| - Admitted from nursing home/LTCF       | 52 (38.5)                    | 30 (42.3)                | .603    |
| - Chronic dialysis within last 30 days*  | 10 (7.4)                     | 8 (11.3)                 | .351    |
| - Home wound care                        | 4 (3.0)                      | 2 (2.8)                  | 1.000   |
| - Surgery within 30 days*               | 13 (9.6)                     | 6 (8.5)                  | 1.000   |
| Treatment (≥48h)                         |                              |                          |         |
| - Ceftolozane/tazobactam                 | 90 (66.7)                    | 28 (39.4)                | <.001   |
| - Amikacin                               | 10 (7.4)                     | 6 (8.5)                  | .790    |
| - Colistin (IV)                          | 5 (3.7)                      | 5 (7.0)                  | .318    |
| - Gentamicin                             | 0 (0.0)                      | 1 (1.4)                  | .345    |
- Polymyxin B       8 (5.9)  5 (7.0)  .769
- Tobramycin        34 (25.2) 8 (11.3)  .018
- Combination therapy 34 (25.2) 14 (19.7)  .378

Infection characteristics
- VABP            63 (46.7) 33 (46.5)  1.000
- Polymicrobial    53 (39.3) 33 (46.5)  .318

Resistance characteristics
- Resistant ≥ 1 carbapenem 102 (78.5) 58 (81.7)  .587
- Resistant ≥ 1 aminoglycoside 16 (12.1) 7 (10.0)  .652
- Resistant ≥ 1 polymyxin 8 (18.6) 6 (24.0)  .596

Interventions
- ID consult        121 (89.6) 63 (88.7)  .843
- Surgery consult   12 (9.0) 8 (11.4)  .573

Data are presented as “number (%)” unless stated otherwise. Abbreviations: ICU, intensive care unit; COPD, chronic obstructive pulmonary disorder; CKD, chronic kidney disease; moderate to severe CKD, KDOQI CKD Stage III-V or GFR < 60 ml/min or on chronic dialysis; MI, myocardial infarction; PVD, peripheral vascular disease; HF, heart failure; CVD, cerebrovascular disease; PUD, peptic ulcer disease; HIV, human immunodeficiency virus; AIDS, acquired immunodeficiency syndrome (CD4 < 200); IV, intravenous; MDR, multidrug resistant; LTCF, long term care facility; CCI, Charlson comorbidity index.

*From time of index culture

**Neutropenia (ANC or WBC < 500)