**Supplemental Table 1** Baseline Characteristics of Patients and Clinical Isolates CP-CRE and Non-CP-CRE Bacteremia

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | CP-CRE (n=13, 13.1%) | Non-CP-CRE (n=86, 86.9%) | P Value |
| Age< 65≥ 65 | 8 (61.5)5 (38.5) | 25 (29.1)61(70.9) | 0.029 |
| SexMaleFemale | 9 (69.2)4 (30.8) | 48 (55.8)38 (44.2) | 0.362 |
| Preexisting Medical ConditionsDiabetesEnd-Stage Renal DiseaseLiver Cirrhosis | 3 (23.1)4 (30.8)1 (8.3) | 40 (46.5)16 (18.6)6 (7.0) | 0.130.320.86 |
| ImmunocompromisedSolid TumorHematologic Malignancies | 4 (30.8)0 (0.0) | 33 (38.4)5 (5.9) | 0.60> 0.999 |
| Respiratory Failure after onset of BSI | 8 (61.5) | 27 (31.4) | 0.04 |
| Steroid use within 3 days prior to BSI | 1 (7.7) | 21 (25) | 0.20 |
| Chemotherapy within 3 days prior to BSI | 0 (0.0) | 5 (5.9) | > 0.999 |
| Intravascular catheter within 3 days prior to BSI | 7 (53.8) | 45 (52.3) | 0.92 |
| Mechanical ventilation (invasive or non-invasive) at time of BSI | 7 (53.8) | 20 (23.3) | 0.03 |
| Prior use of broad-spectrum antibiotics within 30 days of BSIFluoroquinoloneCarbapenemCephalosporineTigecyclineColistinAmikacinPiperacillin/TazobactamAmoxicillin/Clavulanate OR Ampicillin/Sulbactam | 6 (50.0)6 (50.0)8 (58.3)3 (25.0)2 (16.7)0 (0.00)5 (41.7)6 (50.0) | 27 (31.8)31 (36.5)54 (62.8)9 (10.6)10 (11.8)2 (2.4)13 (15.3)24 (28.2) | 0.220.370.790.170.63> 0.9990.040.60 |
| Treated with ≥ 1 active empirical antibiotic treatment (post-blood culture collection) | 3 (25.0) | 28 (32.9) | 0.746 |
| Treated with ≥ 1 active empirical antibiotic culture results available (within 3 days) | 6 (50) | 65 (77.4) | 0.073 |
| Length of hospitalization (median, IQR) | 44 (42) | 29 (47) | 0.24 |
| 7-Day Mortality Rate | 3 (23.1) | 16 (18.6) | 0.710 |
| 28-Day Mortality Rate | 5 (38.5) | 33 (38.4) | > 0.999 |

Abbreviations: BSI: Bloodstream infection; CP-CNSE: Carbapenemase-producing carbapenem nonsusceptible Enterobacteriaceae isolates containing carbapenemase producing genes: *bla*KPC, *bla*VIM, *bla*IMP, *bla*OXA-48 and *bla*NDM; IQR: inter-quartile range.

**Supplemental Table 2** Identification of β-Lactamase Genes in CRE Bloodstream Isolates

|  |  |  |  |
| --- | --- | --- | --- |
| Ambler Class | Type of Plasmid-Mediated β-Lactamase | CP-CRE Isolates (n = 13) | Non-CP-CRE Isolates (n = 86) |
| Class A*bla*TEM*bla*TEM *bla*ACT/MIR*bla*SHV*bla*SHV *bla*ACT/MIR*bla*SHV *bla*DHA*bla*CTX-M *bla*SHV*bla*TEM *bla*SHV*bla*TEM *bla*CTX-M *bla*SHV*bla*CTX-M *bla*SHV *bla*DHA*bla*SHV *bla*TEM *bla*DHA*bla*CTX-M *bla*SHV *bla*TEM *bla*DHA*bla*CTX-M *bla*TEM *bla*DHA*bla*CTX-M *bla*SHV *bla*TEM*bla*DHA*bla*CTX-M*bla*KPC*bla*KPC *bla*TEM *bla*CTX-M *bla*SHV*bla*KPC *bla*CTX-M *bla*SHV*bla*KPC *bla*TEM *bla*SHV*bla*KPC *bla*DHA *bla*CTX-M *bla*SHV*bla*KPC *bla*ACT/MIR*bla*KPC *bla*ACT/MIR *bla*TEM*bla*KPC *bla*ACT/MIR *bla*CMY-II *bla*SHV *bla*TEM*bla*KPC *bla*TEM*bla*KPC *bla*SHV *bla*DHA | Narrow spectrum β-LactamaseESBL + AmpCNarrow spectrum β-LactamaseESBL + AmpCESBL + AmpCNarrow spectrum β-Lactamase + ESBLNarrow spectrum β-LactamaseNarrow spectrum β-Lactamase + ESBLNarrow spectrum β-Lactamase + ESBL + AmpCESBL + AmpCNarrow spectrum β-Lactamase + ESBL + AmpCNarrow spectrum β-Lactamase + ESBL + AmpCNarrow spectrum β-Lactamase + ESBLAmpCNarrow spectrum β-LactamaseCarbapenemaseESBL + CarbapenemaseESBL + CarbapenemaseESBL + CarbapenemaseESBL + Carbapenemase + AmpCCarbapenemase + AmpCESBL + Carbapenemase + AmpCESBL + Carbapenemase + AmpCESBL + CarbapenemaseESBL + Carbapenemase + AmpC | ----------------2211----1 | --4-8521241191132---------- |
| Class B*bla*NDM*bla*NDM *bla*CTX-M*bla*NDM *bla*TEM *bla*CTX-M *bla*SHV*bla*NDM *bla*DHA *bla*CTX-M *bla*SHV*bla*IMP *bla*SHV*bla*IMP *bla*TEM*bla*IMP *bla*SHV *bla*TEM *bla*CMY-II*bla*IMP *bla*SHV *bla*TEM *bla*DHA*bla*VIM *bla*SHV *bla*DHA | CarbapenemaseESBL + CarbapenemaseESBL + CarbapenemaseESBL + Carbapenemase + AmpCESBL + CarbapenemaseESBL + CarbapenemaseESBL + Carbapenemase + AmpCESBL + Carbapenemase + AmpCESBL + Carbapenemase + AmpC | ----11111 | --------- |
| Class C*bla*CMY-II*bla*CTX-M *bla*CMY-II*bla*CTX-M *bla*TEM *bla*CMY-II*bla*TEM *bla*CMY-II*bla*CTX-M *bla*SHV *bla*CMY-II*bla*ACT/MIR | AmpCESBL + AmpCESBL + AmpCESBL + AmpCESBL + AmpCAmpC | ------ | 23361- |
| Class D*bla*OXA-48 *bla*CTX-M *bla*SHV *bla*TEM |  | 1 | - |
| Abbreviations: CP, carbapenemase-producing; CRE, carbapenem-resistant *Enterobacteriaceae*; ESBL, extended-spectrum β-lactamases. |