

Table 3. Recommended antibiotic treatment options for carbapenem-resistant Enterobacterales (CRE), assuming *in vitro* susceptibility to agents in table

Source of Infection	Preferred Treatment	Alternative Treatment (first-line options not available or tolerated)
Cystitis	Ciprofloxacin, levofloxacin, trimethoprim-sulfamethoxazole, nitrofurantoin, or a single-dose of an aminoglycoside Meropenem ¹ (standard-infusion): only if ertapenem resistant, meropenem susceptible, AND carbapenemase testing results are either not available or negative.	Ceftazidime-avibactam, meropenem-vaborbactam, imipenem-cilastatin-relebactam, and cefiderocol Colistin (only when no alternative options are available)
Pyelonephritis or cUTI ²	Ceftazidime-avibactam, meropenem-vaborbactam, imipenem-cilastatin-relebactam, and cefiderocol Meropenem ¹ (extended-infusion): only if ertapenem resistant, meropenem susceptible, AND carbapenemase testing results are either not available or negative.	Once-daily aminoglycosides
Infections outside of the urinary tract Resistant to ertapenem, susceptible to meropenem, AND carbapenemase testing results are either not available or negative	Meropenem ¹ (extended-infusion)	Ceftazidime-avibactam
Infections outside of the urinary tract Resistant to ertapenem, meropenem, AND carbapenemase testing results are either not available or negative	Ceftazidime-avibactam, meropenem-vaborbactam, and imipenem-cilastatin-relebactam	Cefiderocol Tigecycline, eravacycline (intra-abdominal infections)
KPC identified (Or carbapenemase positive but identity of carbapenemase unknown ³)	Ceftazidime-avibactam, meropenem-vaborbactam, imipenem-cilastatin-relebactam	Cefiderocol Tigecycline, eravacycline (intra-abdominal infections)

Metallo- β -lactamase (i.e., NDM, VIM, or IMP) carbapenemase identified	Ceftazidime-avibactam + aztreonam, cefiderocol	Tigecycline, eravacycline (intra-abdominal infections)
OXA-48-like carbapenemase identified	Ceftazidime-avibactam	Cefiderocol Tigecycline, eravacycline (intra-abdominal infections)

¹The majority of infections caused by CRE resistant to ertapenem but susceptible to meropenem are caused by organisms that do not produce carbapenemases.

²cUTI: Complicated urinary tract infections are defined as UTIs occurring in association with a structural or functional abnormality of the genitourinary tract, or any UTI in a male patient.

³The vast majority of carbapenemase producing Enterobacterales infections in the United States are due to bacteria that produce *Klebsiella pneumoniae* carbapenemase (KPC). If a disease-causing Enterobacterales is carbapenemase-producing but the specific carbapenemase enzyme is unknown, it is reasonable to treat as if the strain is a KPC-producer. If a patient is infected with a CRE strain with an unknown carbapenemase status and the patient has recently traveled from an area where metallo- β -lactamases are endemic (e.g., Middle East, South Asia, Mediterranean), treatment with ceftazidime-avibactam plus aztreonam, or cefiderocol monotherapy are recommended. Preferred treatment approaches for infections caused by metallo- β -lactamase producers also provide activity against KPC and OXA-48-like enzymes.