Piperacillin/tazobactam and Cefepime Use Guide for Common Infections

Indication	Appropriate Use	Inappropriate Use
Pneumonia	● Hospital-acquired[1] ● Hospitalization with IV antibiotics in past 90 days and severe pneumonia ● History of resistant gram negatives from respiratory culture in past 1 year or chronic bronchiectasis ● Significant immunocompromise (ex: neutropenia)	● Patients from long term care facility with no other risk factors (see column on the left for risk factors) ● Community-acquired pneumonia
Gram-negative rod bacteremia	● Hospital-acquired bacteremia while awaiting biofire ● History of resistant gram negatives in past 1 year ● Significant immunocompromise (ex: neutropenia) ● Biofire identified: E. cloacae complex (cefepime), K. aerogenes (cefepime), S. marcescens (cefepime), Pseudomonas (piperacillin/tazobactam or cefepime)	● Community-acquired gram negative rod bacteremia ○ For critically ill patients, please use ceftriaxone + 1x dose of tobramycin ● Biofire identified: any other gram negative organisms not on column on the left
UTI	● Hospital-acquired ● History of resistant gram negatives in past 1 year ● Significant immunocompromise (ex: neutropenia)	● Community-acquired UTI[2] ○ For critically ill patients, please use ceftriaxone + 1x dose of tobramycin
Intra-abdominal infection	● Hospital-acquired ● History of resistant gram negatives in past 1 year ● Severe sepsis/septic shock ● Significant immunocompromise (ex: neutropenia)	● Community-acquired, no severe sepsis/shock (consider ceftriaxone + metronidazole)
Skin and Soft Tissue Infection	● Complicated deep tissue infection with severe sepsis/septic shock ● History of resistant gram negatives in past 1 year from source ● Necrotizing fasciitis ● Significant immunocompromise (ex: neutropenia)	● Rapid onset cellulitis (consider cefazolin) ● Abscess (consider vancomycin or PO agent for MRSA) ● New diabetic foot ulcer without significant antibiotic exposure in past 90 days not meeting sepsis criteria (consider amp/sulbactam or ceftriaxone/metronidazole +/- MRSA coverage)
Empiric for fever/ leukocytosis of unknown origin	● Hospital-acquired ● Severe sepsis/septic shock ● Significant immunocompromise (ex: neutropenia)	● Community-acquired, no severe sepsis/septic shock

[1]**Hospital-acquired:** Occurs ≥ 48 hours after hospitalization; of note, resistant organisms are more commonly seen ≥ 5 days post hospitalization

[2]**Community-acquired UTI:** For a lower UTI, in patients with no history in the past one year of resistant organisms, consider IV cefazolin 1g q8h (the most common organisms we isolate in urine cultures are cefazolin sensitive; see urinary antibiogram) or an oral equivalent