Ceftaroline

Ceftaroline is a new broad-spectrum cephalosporin with a spectrum of activity similar to ceftriaxone, but with activity against MRSA. Ceftaroline demonstrates in vitro activity against resistant Gram-positive pathogens including methicillin-susceptible Staphylococcus aureus (MRSA) and vancomycin-resistant Enterococcus faecalis (not E. faecium) as well as common Gram-negative pathogens such as Haemophilus influenzae and enteric Gram-negative bacilli, such as Escherichia coli and Klebsiella pneumoniae. Ceftaroline does not have activity against extended-spectrum beta-lactamase producing or AmpC-derepressed Enterobacteriaceae or most nonfermentative Gram-negative bacilli, such as Pseudomonas and Acinetobacter. Ceftaroline demonstrates limited activity against anaerobes such as Bacteroides fragilis.

Ceftaroline is FDA-approved for treatment of skin/skin structure infections (including cases caused by MRSA) and community-acquired pneumonia (including cases caused by penicillin-resistant S. pneumoniae). While there are animal models and case reports of successful use of ceftaroline for the treatment of osteomyelitis, bacteremia, and endocarditis, ceftaroline is not FDA approved for these indications.

Acceptable uses (Infectious Disease or ASP approval required)
- Complicated skin/skin structure infections*
- Community-acquired bacterial pneumonia*
- Salvage for sustained MRSA bacteremia/endocarditis*

*All must meet the following criteria for use:
- Where MRSA is highly suspected or documented AND vancomycin is not an option
- MRSA with a vanco MIC ≥ 2
- Sustained difficult in achieving appropriate vancomycin levels despite clinical pharmacy assistance with pharmacokinetics or where a vancomycin continuous infusion is not an option.
- Treatment of mixed infections requires documentation of susceptibility
- Will be the first consideration over daptomycin and tigecycline when appropriate

Unacceptable uses
- Selected over vancomycin in patients with renal failure solely as a reason to avoid vancomycin
- Convenience

Dose
- 600 mg IV q12h
- MRSA bloodstream infections/endocarditis may require higher dosing and should only be undertaken with Infectious Diseases or Antimicrobial Stewardship Program input.

Toxicity
- Similar to other cephalosporins, generally well-tolerated.