

# 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  $\geq 2$
- 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.