

Vancomycin

At UCLA in 2013, 34% of *S. aureus* isolates in inpatients were resistant to oxacillin. These data suggest that empiric use of vancomycin is advisable for an ill patient with suspected *S. aureus* infection. However, vancomycin should be stopped if culture data do not indicate a need for continued definite therapy (see below). **Limiting prolonged or inappropriate use of vancomycin is essential.** Presently vancomycin is the single most used antibiotic at UCLA, with approximately 15% of all inpatients receiving at least one day of therapy. There are few instances when continued use of vancomycin is appropriate in the absence of positive cultures. The following are recommendations for empiric, definitive, and prophylactic vancomycin therapy.

Acceptable empiric use

Note: therapy should be discontinued within 72 hours if criteria for definitive therapy (see below) are not met:

- Treatment of suspected community- or nosocomial-acquired bacterial meningitis
- Treatment of ventilator-associated pneumonia
- Treatment of peritoneal dialysis-related peritonitis in a severely ill patient
- Treatment of sepsis in a patient at risk for MRSA bacteremia [catheter in place, indwelling hardware, known MRSA colonization, transfer from a nursing home or subacute facility, recent (within 3 months) or current prolonged hospitalization >2 weeks]
- Treatment of surgical-site infection following placement of hardware
- Treatment of severe diabetic foot infection in a patient at risk for MRSA
- Treatment of necrotizing fasciitis
- Treatment of suspected endocarditis in a moderately or severely ill patient after appropriate blood cultures are obtained
- Treatment of gram-positive cocci in clusters in ≥ 1 set of blood cultures in a moderately or severely ill patient
- Treatment of gram-positive cocci in clusters or chains in ≥ 2 sets of blood cultures in any patient

Acceptable use of definitive intravenous therapy

- Proven infection with beta-lactam resistant organisms
 - MRSA
 - Methicillin-resistant coagulase-negative staphylococcus
 - Ampicillin-resistant enterococcus (if susceptible)
 - Ceftriaxone-resistant *S. pneumoniae* (CSF only)
- Treatment of infections caused by gram-positive organisms in patients who have serious allergies to beta-lactam agents (see discussion of penicillin allergy)

Acceptable use for definitive oral therapy

- *Clostridium difficile* infection (see CDI section)

Acceptable use for prophylaxis

- Prophylaxis for cardiac, vascular, or orthopedic (joint replacement, spinal fusion, ORIF only) surgery with a documented reason in the chart or in patients with severe PCN allergy (no more than one pre-op and one post-op dose)

Unacceptable uses for vancomycin

- Continued empiric use for presumed infection with negative cultures
- Treatment of a single-positive blood culture for coagulase-negative staphylococci
- Routine surgical prophylaxis except as above
- Empiric treatment for first fever in neutropenic patients without evidence of catheter-related bloodstream infection, severe mucositis, or history of MRSA
- Prophylaxis for infection or colonization of indwelling intravascular or intracranial catheters
- Selective decontamination of the digestive tract
- Eradication of MRSA colonization
- Routine prophylaxis for patients on continuous ambulatory peritoneal dialysis or hemodialysis
- When chosen only for convenience of dosing for treatment of infections caused by beta-lactam susceptible organisms in patients who have renal failure
- Topical application or irrigation

Dosing

- Goal trough of 10-20 mcg/mL. See vancomycin dosing section.
http://www.asp.mednet.ucla.edu/pages/publicview/guidebook/Adult_Anti-Infective_Dosing_Guide.pdf